

Cyberbullying Experiences on Social Media and Suicide Risk Among Adolescents

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ABSTRACT

The increasing intensity of social media use among adolescents in the digital era has also increased the risk of exposure to cyberbullying, which has fatal impacts on mental health, including the emergence of suicide risk. Adolescents who experience cyberbullying tend to have a higher likelihood of suicidal ideation compared to adolescents who are not exposed to cyberbullying. Globally, suicide has become one of the leading causes of death among individuals aged 15–19 years, with more than 700,000 deaths annually. This study aimed to systematically analyze experiences of cyberbullying on social media and suicide risk among adolescents. This study employed a systematic literature review approach. The literature search was conducted through the ScienceDirect, PubMed, and Google Scholar databases for publications from 2016–2026. Articles identified through the search process were screened based on predetermined inclusion and exclusion criteria. Eligible articles were analyzed using narrative synthesis. Based on 14 included articles, the forms of cyberbullying experiences among adolescents included harsh or hurtful online comments, verbal humiliation on social media, and the spread of digital rumors. These experiences may lead to psychological distress such as depression, anxiety, low self-esteem, feelings of being a burden, and social isolation among adolescents. These conditions contribute to an increased risk of suicide, ranging from suicidal ideation to suicide attempts. In conclusion, the most prevalent experiences of cyberbullying on social media are harassment and denigration which can trigger internal psychological processes in adolescents such as thwarted belongingness and perceived burdensomeness. These psychosocial impacts can manifest as spectrum of suicide risk. In conclusion, experiences of cyberbullying on social media is a complex mental health problem among adolescents and require comprehensive prevention strategies through digital literacy, psychosocial support, family and school involvement, and the promotion of adolescent mental health.

Keywords: adolescent; cyberbullying; mental health; social media; suicide risk

INTRODUCTION

In the contemporary era, technological advancement has accelerated exponentially, fundamentally shifting human interactions into a highly interconnected digital landscape. While this unrestricted access to information offers unprecedented connectivity, it concurrently presents profound and novel challenges, particularly regarding psychological well-being [1]. The drastic shift towards an online social life is having a profound impact on children and teenagers, who are currently going through crucial stages of development. As teenagers generally find themselves in a vulnerable phase of development, a phase characterized by identity formation and a reliance on social attention, being actively involved in social media platforms significantly increases their vulnerability to the negative influences of the modern virtual world [2,3].

However, the rapid growth of the digital era is directly linked to increased cybersecurity risks, and society is not yet fully equipped to face the psychosocial impacts that arise from the intensive use of social media and smartphones. One of the most evident negative impacts is the emergence of cyberbullying. Cyberbullying refers to aggressive act or harassment that occur verbally, psychologically, or physically through social media, instant messaging applications, email, or other digital platforms [4]. Unlike traditional bullying, cyberbullying is uniquely amplified by perpetrator anonymity and continuous connectivity. Consequently, its psychological impact can be significantly more detrimental than that of conventional bullying [5]. Furthermore, exposure to cyberbullying has the potential to cause a greater sense of shame in victims. This due to the nature of the cyberbullying, whereby victims can be bullied by their peers at home or elsewhere, at any time, day or night [6].

Empirical global evidence shows that the prevalence of victims of cyberbullying has increased significantly over the past three years, rising from 3.8% to 6.4% among females and from 1.9% to 5.6% among males, with victimized youth exhibiting a 2.07-fold higher likelihood of developing suicidal ideation compared to their non-exposed peers [7]. This profound psychological toll of digital victimization is increasingly recognized as a potent catalyst for severe psychiatric morbidity, precipitating an elevated spectrum of suicide risk among youth. Globally, cyberbullying has emerged as a critical, compounding public health crisis [8]. The World Health Organization reports that over 700,000 suicide deaths occur annually, predominantly concentrated in low- and middle-income countries such as Indonesia. Consequently, suicide has become the second leading cause of mortality among individuals aged 15 to 29 years worldwide [9].

Extant research has heavily examined the prevalence and immediate psychosocial impacts of cyberbullying to unravel its complexity across different adolescent populations. As has been shown, victims of cyberbullying are at greater risk of experiencing depression, anxiety, low self-esteem, social isolation, emotional distress, suicidal ideation, or in the most severe cases, attempting suicide [10,11]. Suicide is a complex interaction of biological, psychological, cognitive, and environmental factors. Suicide risk among adolescents may manifest in the form of suicidal ideation [12]. Several previous studies have examined the relationship between cyberbullying and suicidal behavior among adolescents. Most studies demonstrated a significant association between exposure to cyberbullying and increased suicide risk, including suicidal thoughts, suicide plans, and suicidal behavior [13,14].

However, there remains a research gap regarding how experiences of cyberbullying on social media may develop into suicide risk among adolescents. Previous studies have mostly focused on the relationship between cyberbullying and suicidal behavior, while studies discussing the internal psychological processes experienced by adolescents due to exposure to cyberbullying remain limited. In addition, variations in psychological impacts and protective factors among adolescent victims of cyberbullying across different social and digital contexts have not been comprehensively discussed. Therefore, a systematic literature review is crucial to comprehensively analyze empirical evidence regarding adolescent cyberbullying experiences, internal psychological mechanisms, and the spectrum of suicidality.

Based on this background, the research questions in this study are: (1) what forms of cyberbullying experiences are experienced by adolescents on social media?; (2) how do internal psychological mechanisms emerge due to exposure to cyberbullying?; and (3) how does the spectrum of suicide risk develop among adolescent victims of cyberbullying? This study aims to systematically analyze various forms of cyberbullying experiences on social media, the internal psychological mechanisms experienced by adolescents, and the spectrum of suicide risk

among adolescents through a systematic literature review approach. The urgency of this study lies in the increasing incidence of cyberbullying and suicide risk among adolescents, which may seriously affect mental health, quality of life, and psychosocial development in the digital era. By understanding cyberbullying experiences and the psychological processes occurring among adolescents, this study is expected to contribute to the development of more targeted promotive and preventive mental health efforts for adolescent social media users. In addition, this study is expected to provide scientific contributions to the development of adolescent mental health studies, particularly related to cyberbullying, suicidal behavior, and psychosocial health in the digital era.

METHODS

This study employs a Systematic Literature Review (SLR) research design with a qualitative interpretive approach to synthesize and integrate diverse empirical findings concerning adolescents' experiences of cyberbullying on social media and their associated suicide risks. The use of narrative analysis in this review is not intended merely to recount or summarize the content of each included article in isolation. Rather, narrative synthesis is applied as a systematic and structured analytical strategy that enables the researcher to compare, contrast, and integrate findings across studies, thereby producing a more holistic and comprehensive understanding of the phenomenon under investigation [15]. Through this approach, patterns, thematic relationships, and conceptual linkages between cyberbullying exposure and suicide-related outcomes can be identified more clearly.

The SLR approach was selected because it provides a rigorous methodological framework for systematically identifying, evaluating, and synthesizing evidence from previous research. By employing standardized procedures for literature searching, screening, appraisal, and synthesis, SLR enhances the transparency, replicability, and credibility of the review process. This study was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines, which outline essential steps for article identification, screening, eligibility assessment, and inclusion in the final synthesis [16]. Adherence to PRISMA ensures that the review process is comprehensive, methodologically sound, and aligned with international standards for systematic evidence synthesis.

To ensure conceptual clarity and methodological consistency, the systematic review protocol was developed based on the Population, Exposure, Outcome (PEO) framework. This framework guided the formulation of research questions, the development of search strategies, and the determination of inclusion and exclusion criteria. The criteria established for this review include: (1) Population: adolescents aged 10–19 years; (2) Exposure: experiences of cyberbullying occurring on social media platforms; and (3) Outcome: suicide-related risks, encompassing suicidal ideation, non-suicidal self-injury (NSSI), digital self-harm, and suicide attempts. These criteria were consistently applied during the screening and selection stages to ensure that all included studies specifically addressed adolescent populations, their experiences with cyberbullying, and the corresponding suicide-related outcomes.

A detailed description of the inclusion and exclusion criteria used in this review is presented in Table 1, providing a transparent overview of the parameters guiding study selection and ensuring that the final body of evidence is both relevant and methodologically robust.

Table 1. Inclusion and exclusion criteria

Aspect	Inclusion criteria	Exclusion criteria
Population	Adolescents aged 10-19 years (as defined by WHO) who are active users of social media	Children (<10 years) or adult group (>19 years)
Exposure	Having experienced exposure to cyberbullying or digital aggression on various social media platforms	Experiencing traditional bullying or offline bullying alone without exposure to digital/social media
Outcome	Suicide related outcomes (suicidal ideation, self-harm, NSSI, suicide attempt)	Only discusses the impact of cyberbullying on academic achievement or physical problems without indicators of mental health or suicide risk
Study design	Original empirical studies	Reviews, editorials, conference paper
Language	Article published in English or Indonesian	Articles published in language other than English or Indonesian
Accessibility	Full-text articles accessible through the selected databases or institutional access	Articles with unavailable full-text, inaccessible documents, or abstract-only publications

A comprehensive literature search was conducted on April 2, 2026, in three databases: ScienceDirect, PubMed, and Google Scholar. These databases were selected because they provide extensive coverage of scientific publications in the fields of public health, mental health, psychology, and adolescent health. The search strategy utilized targeted Boolean Operators (AND/OR) combined with specific Medical Subject Headings (MeSH) terms and specific keyword. Keywords used in the search included “cyberbullying”, “online bullying”, “social media”, “adolescent”, “teenager”, “youth”, “suicide”, “suicidal ideation”, and “suicide attempt”.

The literature search following the PRISMA guidelines began with identification, screening, eligibility, and inclusion processes, which were systematically documented using the PRISMA flowchart template (Figure 1). In the identification process, a total of 928 articles identified from three databases: PubMed (n = 31), Google Scholar (n = 396), and ScienceDirect (n = 501). Duplicates were then eliminated using Zotero 8.0.4 software. A total of 40 duplicate articles were removed. This was followed by a screening stage based on titles and abstracts. Of the 888 articles, 798 were eliminated at this stage and leaving 90 articles. During full-text review stage, 12 articles whose full texts was unavailable were excluded. In the eligibility stage, the remaining 78 full-text articles were thoroughly evaluated based on strict, predefined selection criteria, resulting 64 articles were excluded. The outcome of the inclusion stage was the selection of 14 high-quality articles, which will be analyzed in greater depth.

The quality assessment of the 14 included articles was conducted using relevant and rigorous tools appropriate for the study type, specifically the Joanna Briggs Institute (JBI) Critical Appraisal Tools, specifically utilizing the checklist for cohort studies and analytical cross-sectional studies [17]. Studies scoring above 70% were considered to possess high methodological quality and low risk of bias, thereby qualifying for the final synthesis [18]. Data extraction was systematically executed to gather core study characteristics, including the author and publication year, article title, study design, sample size, role in cyberbullying, and key psychiatric outcomes. The extracted data were analyzed narratively using

comparative thematic synthesis to evaluate the psychological pathways and the progression of behavioral responses across the spectrum of suicide risk among adolescents experiencing digital victimization.

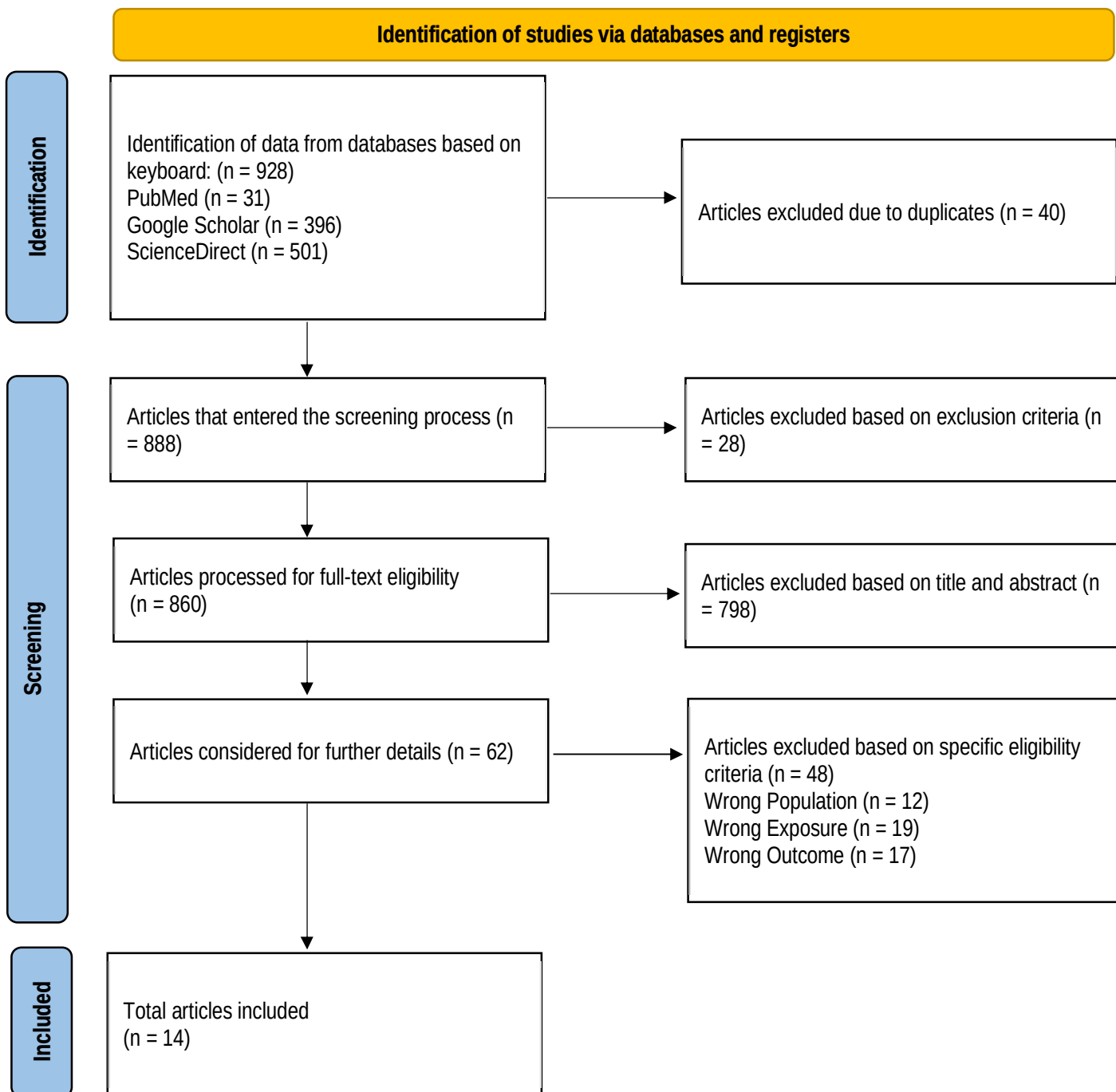


Figure 1. PRISMA flow diagram for adolescent cyberbullying and suicide risk article selection

RESULTS

The quality assessment of the included articles was systematically aligned with the methodological design of each study to ensure an accurate and fair appraisal of scientific rigor. Two studies employing robust longitudinal prospective and multi-wave cohort designs ($n = 2$) were evaluated using the JBI Critical Appraisal Checklist for Cohort Studies, which is specifically designed to assess the methodological soundness of studies that follow participants over time. This checklist examines key elements such as participant selection, exposure measurement, outcome assessment, confounding control, follow-up adequacy, and statistical analysis. Its use ensures that the longitudinal evidence included in this review meets established standards for internal validity and reliability.

Meanwhile, the remaining articles utilizing quantitative cross-sectional designs ($n = 12$) were assessed using the JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies. This instrument evaluates essential methodological components such as clarity of inclusion criteria, validity and reliability of exposure and outcome measurements, identification and management of confounding variables, and appropriateness of statistical techniques. Applying this checklist allowed for a structured and consistent evaluation of cross-sectional evidence, ensuring that only studies with acceptable methodological rigor were included in the synthesis.

Based on the results of the methodological quality assessment across all 14 included studies, the overall body of evidence demonstrated adequate methodological quality with a low risk of bias. None of the studies exhibited critical flaws that would compromise the validity of their findings; therefore, all articles were retained for the final synthesis. The results of this appraisal indicate that the scientific evidence incorporated into this review is derived from studies that meet established methodological standards, thereby strengthening the credibility, robustness, and interpretive depth of the synthesized findings.

Most of the included studies focused explicitly on adolescents as the primary population, examining their experiences with cyberbullying on various social media platforms and the associated suicide-related risks. This alignment with the PEO criteria ensured that the synthesized evidence directly addressed the core phenomenon under investigation. A comprehensive synthesis of the characteristics of the included studies; covering aspects such as study design, sample characteristics, measurement instruments, exposure types, and suicide-related outcomes is presented in Table 2, providing a clear overview of the evidence base informing this systematic review.

Table 2. Synthesis of findings from included studies on cyberbullying experiences and suicide risk among adolescents

No.	Authors, year	Title	Methods	Role in cyberbullying	Psychological mechanism	Suicide-related outcome	Findings
1.	Meng et al., 2023 [19]	Integrating the interpersonal theory of suicide into the relations between cyber-victimization and suicidality among adolescents: A short-term prospective study	Quantitative (Longitudinal prospective design)	Victim	Thwarted belongingness	Suicidal ideation & suicidal attempt	Cyber-victimization is significantly and prospectively associated with increased thwarted belongingness ($p < 0.01$). Thwarted belongingness significantly mediates the relationship between cyber-victimization and both suicidal ideation ($p < 0.05$) and suicide attempts ($p < 0.05$).
2.	Li et al., 2025 [20]	The longitudinal relationship between cyberbullying perpetration and suicidal ideation among vocational school adolescents: A moderated mediation model	Quantitative (three-wave longitudinal)	Perpetrator	Depression	Suicidal ideation	Cyberbullying perpetration at T1 significantly predicts depression at T2 ($p < 0.001$), which significantly predicts suicidal ideation at T3 ($p < 0.001$). However, the direct pathway from T1 cyberbullying perpetration to T3 suicidal ideation is not statistically significant ($p > 0.05$). Depression fully mediates the relationship between perpetration and suicidal ideation (significant indirect effect).
3.	Grimland et al., 2025 [21]	Cyberbullying victimization and suicide attempt among adolescents: A cross-national comparison	Quantitative (cross-sectional)	Victim	Emotional symptoms	Suicidal attempt	Cyberbullying victimization is significantly associated with suicide attempts among adolescents across nations, particularly in the combined victimization (traditional and cyberbullying) with the strongest relationship found in Lithuania ($p < 0.001$). Cyber-victimization alone significantly increases suicide attempt odds in India, Lithuania, and Singapore ($p < 0.05$), but is non-significant in China and Iran. Emotional symptoms act as a significant moderator ($p < 0.05$).
4.	Kee et al., 2024 [22]	Cyberbullying victimization and suicide ideation: The mediating role of psychological distress among Malaysian youth	Quantitative (cross-sectional)	Victim	Depression, anxiety, emotional exhaustion, perceived stress	Suicidal ideation	Cyberbullying victimization has a significant and positive relationship with suicidal ideation ($p < 0.05$) and depression ($p < 0.05$). Anxiety ($p < 0.05$), emotional exhaustion ($p < 0.05$), and perceived stress ($p < 0.05$) act as significant mediators

No.	Authors, year	Title	Methods	Role in cyberbullying	Psychological mechanism	Suicide-related outcome	Findings
							between cyberbullying and depression ($p < 0.05$). Depression significantly mediates the relationship between cyberbullying and suicidal ideation ($p < 0.05$).
5.	Liu et al., 2023 [23]	Cybervictimization and non-suicidal self-injury among Chinese adolescents: The effect of depression and school connectedness	Quantitative (cross-sectional)	Victim	Depression	Non-Suicidal Self-Injury (NSSI)	Cybervictimization is significantly associated with depression ($p < 0.001$) and non-suicidal self-injury (NSSI) among adolescents ($p < 0.001$). Depression is also significantly associated with NSSI ($p < 0.001$) and significantly mediates the relationship between cybervictimization and NSSI.
6.	Peprah et al., 2023 [24]	Cyberbullying victimization and suicidal ideation among in-school adolescents in three countries: implications for prevention and intervention	Quantitative (cross-sectional)	Victim	Loneliness	Suicidal ideation	Experiences of cyberbullying victimization are significantly associated with suicidal ideation among adolescents ($p < 0.001$). Adolescents experiencing loneliness have a higher risk of suicidal ideation, especially in the "always" category ($p < 0.001$).
7.	Rakoff et al., 2023 [25]	Cross-sectional study of factors associated with suicide ideation in Ontario adolescents	Quantitative (cross-sectional)	Victim	Perceived burdensomeness, thwarted belongingness, low self-esteem	Suicidal ideation	Cyberbullying does not have a significant direct relationship with adolescent suicidal ideation ($p = 0.24$). Conversely, perceived burdensomeness significantly increases suicidal ideation, especially in adolescents with low self-esteem ($p < 0.001$) and feeling worthless all the time ($p < 0.001$). Thwarted belongingness regarding not knowing where to seek mental health support is also significantly associated with increased suicidal ideation ($p < 0.001$).
8.	Quintana-Orts et al., 2021 [26]	Are loneliness and emotional intelligence important factors for adolescents? Understanding the influence of bullying and cyberbullying victimisation on suicidal ideation	Quantitative (cross-sectional)	Victim	Loneliness, emotional intelligence (protective factor)	Suicidal ideation	Cybervictimization is significantly associated with suicidal ideation among adolescents ($p < 0.01$). Loneliness is significantly associated with suicidal ideation ($p < 0.001$), but does not significantly mediate the relationship between cybervictimization and suicidal ideation. Emotional intelligence (EI) significantly moderates and weakens the influence of loneliness on suicidal ideation.
9.	Lee et al., 2021 [27]	A social-ecological approach to understanding the relationship between cyberbullying victimization and	Quantitative (cross-sectional)	Victim	Depressive symptoms, perceived peer relationship stress	Suicidal ideation	Cyberbullying victimization (including verbal abuse, online privacy leaks, sexual mockery, digital threats, and exclusion) is significantly associated with suicidal

No.	Authors, year	Title	Methods	Role in cyberbullying	Psychological mechanism	Suicide-related outcome	Findings
		suicidal ideation in South Korean adolescents: The moderating effect of school connectedness					ideation ($p < 0.001$). Depressive symptoms ($p < 0.001$) and perceived peer relationship stress ($p < 0.001$) significantly increase the risk of suicidal ideation.
10.	Azami & Tareman, 2020 [28]	Victimization in traditional and cyberbullying as risk factors for substance use, self-harm and suicide attempts in high school students	Quantitative (cross-sectional)	Victim	-	Self-harm & suicide attempt	Cyberbullying victimization shows a significant prevalence toward self-harm ($p < 0.01$) and suicide attempts ($p < 0.01$). Combined victims (cyberbullying and traditional bullying) face the highest risk toward physical self-harm ($p < 0.01$) and suicide attempts ($p < 0.01$), indicating combined exposure increases the risk of more severe suicidal behavior.
11.	Peng et al., 2020 [29]	Self-harm, suicidal ideation, and suicide attempts in chinese adolescents involved in different sub-types of bullying: A cross-sectional study	Quantitative (cross-sectional)	Victim & Perpetrator	-	Self-harm, suicidal ideation, suicide attempt	Cyberbullying victims show high baseline prevalence rates: self-harm (59.6%), suicidal ideation (60.6%), and suicide attempts (55.2%), which are significantly higher than non-involved peers ($p < 0.001$).
12.	Iranzo et al., 2019 [30]	Cyberbullying, psychosocial adjustment, and suicidal ideation in adolescence	Quantitative (cross-sectional)	Victim	Perceived stress, loneliness, depressive symptoms, psychological distress	Suicidal ideation	Cyberbullying victimization is significantly related to suicidal ideation ($p < 0.05$), perceived stress ($p < 0.01$), loneliness ($p < 0.01$), depressive symptomatology ($p < 0.01$), and psychological distress ($p < 0.001$). These variables significantly increase suicidal ideation directly and indirectly through psychological distress.
13.	Hinduja & Patchin, 2019 [31]	Connecting adolescent suicide to the severity of bullying and cyberbullying	Quantitative (cross-sectional)	Victim & Perpetrator	-	Suicide attempt	Cyberbullying experiences are significantly and positively associated with increased suicidal ideation ($p < 0.05$). This risk leaps 5-fold under dual/poly-victimization ($p < 0.001$). Experiencing a single type of bullying does not significantly increase suicide attempts, but dual exposure (traditional and cyber) significantly increases actual suicide attempts ($p < 0.001$).
14.	Patchin & Hinduja, 2017 [32]	Digital self-harm among adolescents	Quantitative (cross-sectional)	Victim & perpetrator	Depressive symptoms	Digital self-harm	Cyberbullying victimization significantly spikes the risk of engaging in digital self-harm by nearly 12-fold ($p < 0.001$). This trajectory is also significantly increased among adolescents with severe underlying depressive symptoms ($p < 0.001$).

The systematic review of the 14 included studies revealed that adolescent involvement in cyberbullying on social media is a complex and multi-layered phenomenon, characterized by diverse patterns of participation and exposure. Across the reviewed literature, adolescents were found to occupy three primary operational roles: victims ($n = 10$ studies), perpetrators ($n = 1$ study), and dual involvement as victim-perpetrators ($n = 3$ studies). Several studies also noted the presence of bystanders or witnesses, although these roles were not the central focus of the included articles. Despite this diversity, the victim role consistently emerged as the most prevalent and the most strongly associated with adverse psychological outcomes.

Cyberbullying experiences among adolescents manifested in multiple forms, reflecting the evolving nature of digital communication and online social interaction. The reviewed studies identified various modalities of cyberbullying, including harassment, flaming, denigration, exclusion, cyberstalking, impersonation, and the repeated dissemination of harmful or degrading digital content across social media platforms and other online communication channels [27,31]. These forms of victimization often occurred in overlapping patterns, with adolescents frequently exposed to more than one type of cyberbullying behavior. The data consistently demonstrated that adolescents who experienced cyberbullying as victims exhibited significantly higher levels of baseline psychiatric symptoms compared to peers who were not involved in digital aggression.

Quantitative findings across the studies clearly indicated that the pathway from cyberbullying victimization to suicide risk is substantially mediated by internal psychological distress markers. Experiences of cyberbullying were repeatedly associated with the onset or exacerbation of psychological problems such as heightened stress, depressive symptoms, anxiety, diminished self-esteem, social withdrawal, and pervasive emotional distress [20,22,23,27]. These psychological sequelae were not merely correlational but were shown to function as mediating mechanisms that intensified the relationship between digital victimization and suicide-related outcomes.

Advanced statistical analyses, including structural equation modeling, further reinforced the central role of psychological mediators. Several studies demonstrated that thwarted belongingness ($p < 0.01$) [19] and perceived stress ($p < 0.001$) [30] served as significant mediating constructs that explained how cyberbullying experiences translated into suicidal ideation and related behaviors. Conversely, protective variables such as school connectedness [23] and high emotional intelligence [26] were empirically validated as moderating factors that buffered and attenuated the harmful psychological effects of cyberbullying, thereby reducing the likelihood of suicidal ideation among affected adolescents.

The review also highlighted that cyberbullying experiences can escalate into a spectrum of self-harm behaviors, ranging from non-lethal forms to severe suicidal actions. Suicidal ideation emerged as the most consistently reported outcome, showing a direct and positive association with cyber-victimization across multiple studies [24,26]. Importantly, adolescents exposed to multiple forms of victimization; particularly concurrent traditional bullying and cyberbullying exhibited dramatically heightened risks. These adolescents demonstrated a fivefold increase in suicide risk, accompanied by a substantially higher incidence of suicide attempts and other severe behavioral consequences [21,28,31].

Beyond suicidal ideation and attempts, the review documented high prevalence rates of non-suicidal self-injury (NSSI) and the emerging phenomenon of digital self-harm, in which adolescents intentionally post harmful or derogatory content about themselves online. One study reported that exposure to digital victimization increased the likelihood of engaging in digital self-harm by nearly 12-fold ($p < 0.001$) [32], underscoring the profound psychological impact of cyberbullying in the digital era.

Overall, the findings indicate that cyberbullying on social media constitutes a complex mental health challenge for adolescents, shaped by the interaction of psychological, interpersonal, and contextual factors. The synthesis of evidence supports the emergence of three overarching themes: (1) the multifaceted nature of cyberbullying experiences among adolescents in contemporary digital environments; (2) the psychological mechanisms that link cyberbullying exposure to suicide risk; and (3) the spectrum of suicide-related outcomes experienced by adolescents who are victims of cyberbullying.

These themes collectively provide a comprehensive conceptual foundation for understanding how cyberbullying contributes to suicide risk and highlight the urgent need for targeted prevention and intervention strategies.

DISCUSSION

To provide a clearer visualization of how the identified thematic components interact to shape suicide risk among adolescents, the conceptual relationships synthesized from the reviewed studies are illustrated in Figure 2.

Cyberbullying experiences among adolescents in the digital era

The findings of this study indicate that experiences of cyberbullying have increasingly become part of the complex social and developmental challenges faced by adolescents in the digital era. The rapid expansion of social media and other digital communication platforms has fundamentally reshaped the nature of peer interaction, creating new avenues for connection while simultaneously giving rise to a wide spectrum of online risks. The various forms of cyberbullying identified in this review—such as verbal insults, rumor-mongering, online harassment, social exclusion, impersonation, and the dissemination of personal or sensitive information—demonstrate that digital environments do not always function as safe or supportive spaces for adolescents [27,31]. Unlike traditional bullying, which typically occurs within bounded physical settings and during specific time periods, cyberbullying can occur continuously, transcending temporal and spatial boundaries. This persistent and pervasive nature of digital aggression increases adolescents' vulnerability to prolonged psychological distress and cumulative harm.

The review further highlights that adolescents do not occupy a single, fixed position within cyberbullying dynamics. Instead, their involvement in social media spaces gives rise to multiple and fluid roles, including victims, perpetrators, dual-involved victim-perpetrators, and bystanders. These roles reflect the complex social interactions that characterize digital peer relationships and underscore the multifaceted nature of cyberbullying in contemporary youth culture [21,22,24]. Although much of the existing literature has traditionally focused on adolescents as victims, emerging evidence—particularly from recent longitudinal studies—indicates that perpetrators also constitute a group requiring substantial attention. Some adolescents actively engage in aggressive online behaviors, often driven by underlying psychosocial maladjustments, emotional dysregulation, or interpersonal difficulties [20].

Moreover, the findings of this review suggest that the boundary between victims and perpetrators is not always clearly delineated. In many cases, adolescents may shift between roles over time, reflecting the dynamic and reciprocal nature of digital interactions. For instance, individuals who initially experience victimization may retaliate by engaging in cyberbullying behaviors themselves, or they may internalize their distress and engage in digital self-harm as a maladaptive coping mechanism [29,31,32]. These patterns illustrate that involvement in cyberbullying cannot be understood solely through binary classifications; rather, it represents a continuum of behaviors influenced by emotional, social, and contextual factors.

Taken together, these dynamics demonstrate that adolescents' involvement in cyberbullying is complex, fluid, and deeply embedded within the broader ecology of digital social interaction. Therefore, when assessing risks among adolescents, it is essential to consider all forms of involvement; whether as victims, perpetrators, dual-involved individuals, or bystanders to obtain a more comprehensive and accurate understanding of the phenomenon. Such an approach is crucial for informing targeted prevention strategies, early identification efforts, and the development of interventions that address the full spectrum of cyberbullying experiences in the digital age.

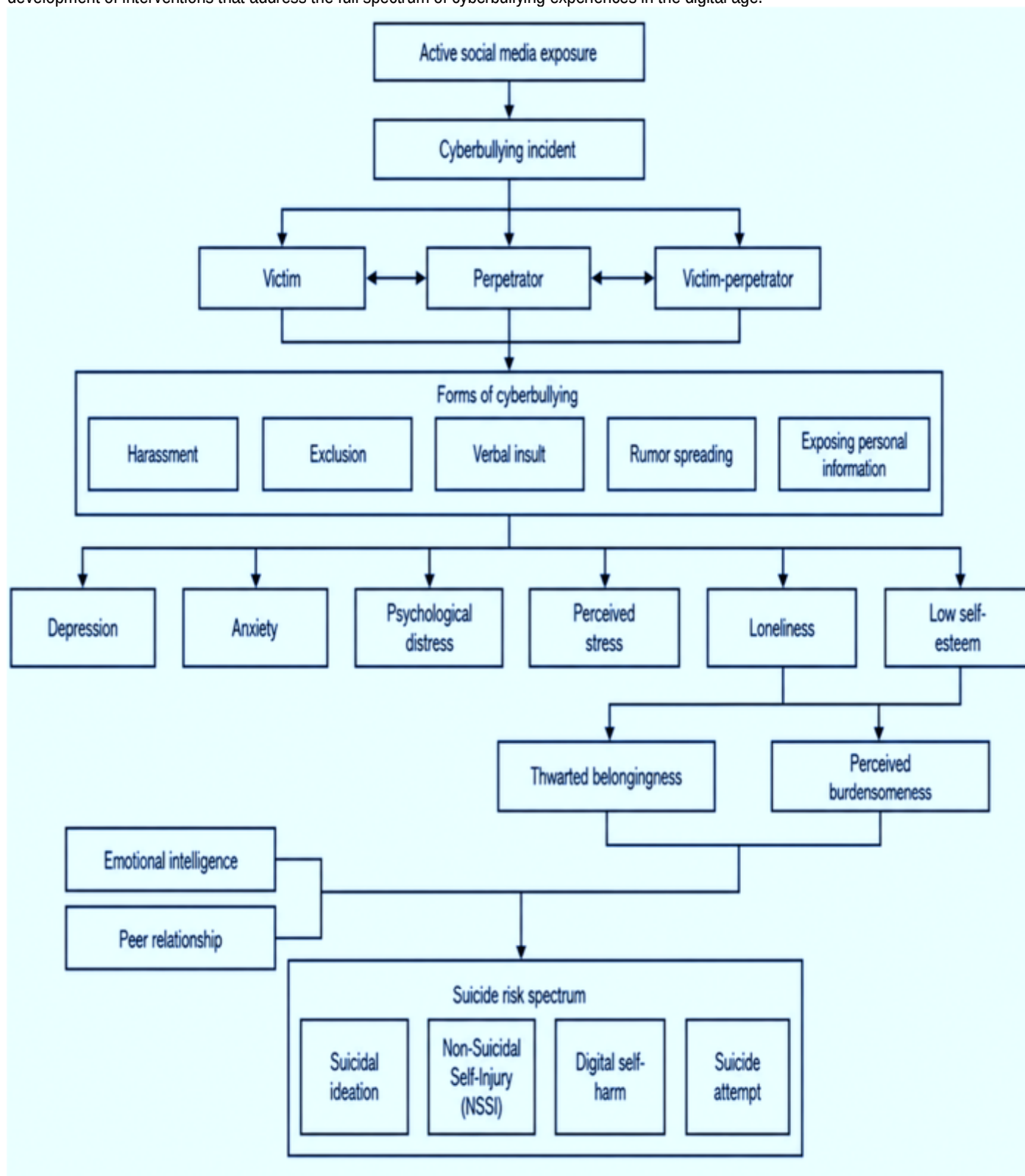


Figure 2. Conceptual framework of the cyberbullying experiences to suicide risk among adolescents

Psychological mechanisms in the relationship between cyberbullying and suicide risk

Findings from both longitudinal and cross-sectional studies indicate that the relationship between cyberbullying and suicide risk is not direct or instantaneous; rather, it unfolds through a series of internal psychological mechanisms that emerge as adolescents attempt to process and cope with their cyberbullying experiences on social media. The synthesis of evidence demonstrates that depression is one of the most consistently identified psychological factors mediating the association between cyberbullying victimization and suicidal ideation [22,27,30]. Adolescents who

experience persistent online harassment or humiliation often develop depressive symptoms that significantly heighten their vulnerability to suicidal thoughts.

In addition to depression, several studies have identified loneliness, perceived stress, anxiety, and general psychological distress as key contributors to increased emotional vulnerability among cyberbullying victims [24,26,30]. These emotional disturbances frequently arise from experiences of public humiliation, social rejection, exclusion, and isolation within digital environments. Over time, such prolonged distress can erode adolescents' sense of self-worth, diminish their perceived safety in social contexts, and foster feelings of hopelessness about the future. These psychological sequelae collectively create a fertile ground for the development of suicidal ideation.

Furthermore, the synthesis highlights that certain interpersonal and cognitive constructs serve as crucial mediators and moderators in explaining how cyberbullying experiences evolve into suicide risk. This developmental pattern aligns closely with Thomas Joiner's Interpersonal Psychological Theory of Suicide (IPTs), which posits that suicidal ideation emerges when individuals experience thwarted belongingness; a profound sense of social disconnection and perceived burdensomeness, the belief that one is a burden to others. One study found that thwarted belongingness significantly mediated the relationship between cybervictimization and both suicidal ideation and suicide attempts [19]. Other studies similarly indicate that loneliness, a core component of thwarted belongingness, exacerbates interpersonal stress and intensifies the risk of suicidal ideation among adolescents exposed to cyberbullying [24,30].

Taken together, these findings suggest that the relationship between cyberbullying and suicide risk is best understood as a gradual and cumulative psychological process. Cyberbullying acts as an initial stressor that triggers a cascade of emotional, cognitive, and interpersonal responses. As these responses accumulate; manifesting as depression, loneliness, perceived stress, anxiety, and feelings of social disconnection they progressively heighten adolescents' susceptibility to suicidal behavior. Thus, cyberbullying does not simply cause suicidal ideation; rather, it initiates a complex psychological trajectory that, if unaddressed, can culminate in severe suicide-related outcomes.

Spectrum of suicide risk among victims of cyberbullying

The clinical and behavioral outcomes identified in this review illustrate a dangerous, progressive, and gradually evolving spectrum of suicide risk among adolescent victims of cyberbullying. This spectrum encompasses a continuum of self-harm-related manifestations, beginning with the emergence of passive suicidal ideation, progressing to non-suicidal self-injury (NSSI), extending to newly emerging forms of digital self-harm, and culminating in suicide attempts. At the earliest stage of this continuum, adolescents who experience cyberbullying are significantly more susceptible to suicidal thoughts than their non-victimized peers [20,22,24,25]. These findings underscore that the psychological impact of cyberbullying varies in severity across individuals, with some adolescents experiencing transient distress while others develop more destructive patterns of self-harm as emotional suffering persists.

The synthesis of research consistently demonstrates a strong association between cyberbullying victimization and the emergence of Non-Suicidal Self-Injury (NSSI). NSSI refers to deliberate self-inflicted harm performed without the intention to die and is widely understood as a maladaptive coping strategy used to regulate overwhelming emotional distress, compensate for low self-esteem, or alleviate feelings of social isolation [23,28,29]. For many adolescents, NSSI becomes a behavioral expression of internalized pain resulting from humiliation, rejection, or exclusion in digital environments.

The rapid development of digital technology has also contributed to the emergence of a relatively new and concerning behavioral pattern known as digital self-harm. This behavior involves adolescents anonymously posting, sending, or sharing negative, harmful, or derogatory content about themselves through digital platforms [32]. The literature indicates that digital self-harm is disproportionately observed among adolescents with a history of cybervictimization and more severe depressive symptoms. These findings suggest that digital self-harm represents a unique form of psychological distress manifested within online spaces and reflects a deeper vulnerability to mental health problems. It highlights how digital environments can become both the source and the medium through which adolescents express emotional suffering.

Taken together, these findings indicate that cyberbullying should be understood not merely as an online interpersonal aggression but as a significant mental health concern with the potential to produce long-term psychological consequences if left unaddressed. At more severe points along the spectrum, the accumulation of chronic emotional distress, interpersonal strain, and maladaptive coping behaviors increases the likelihood of suicide attempts. The synthesis reveals that adolescents who experience cyberbullying bear a substantially greater emotional burden than those who are not exposed to digital aggression, placing them at heightened risk for attempting suicide [28,29,31]. Moreover, several studies demonstrate that cybervictimization can accelerate the transition from suicidal ideation to actual suicidal behavior, shortening the time between the onset of suicidal thoughts and the enactment of self-harm [21].

These findings collectively indicate that suicide risk among cyberbullying victims is a dynamic, cumulative, and progressive process. It begins with the emergence of suicidal ideation, develops into self-harming behaviors—including both physical NSSI and digital self-aggression—and may escalate into more severe forms of suicidal risk if appropriate psychological, social, and clinical interventions are not provided. At the most lethal end of this continuum, the persistent accumulation of psychological distress, physical self-harm, and digital self-aggression can culminate in actual suicide attempts. Adolescents who are victims of cyberbullying thus carry a disproportionately heavy emotional burden, placing them at significantly higher risk of attempting suicide compared to their non-victimized peers. Additionally, a history of cybervictimization appears to accelerate the progression from ideation to action, underscoring the urgent need for early identification and targeted intervention.

Limitations

This systematic literature review acknowledges several methodological limitations that should be considered when interpreting the findings. First, the literature search was restricted to articles indexed in ScienceDirect, PubMed, and Google Scholar, and limited to publications written in English or Indonesian. As a result, relevant studies published in other languages or indexed in alternative scholarly databases—such as Scopus, Web of Science, PsycINFO, ERIC, or regional repositories—may not have been captured. This restriction potentially limits the breadth of evidence and may introduce language or database selection bias.

Second, the review included only full-text articles, which may have led to the exclusion of potentially relevant studies available only as abstracts, conference proceedings, theses, or reports. Although this criterion was applied to ensure adequate methodological transparency and data completeness, it may have inadvertently narrowed the scope of the evidence base.

Third, this review did not incorporate a meta-analysis, and therefore the findings were synthesized narratively. The absence of meta-analytic procedures was primarily due to substantial heterogeneity across the included studies, particularly in terms of research design, measurement instruments, operational definitions of cyberbullying, psychological variables assessed, and suicide-related outcomes. These variations limited the

feasibility of quantitatively estimating pooled effect sizes or conducting subgroup analyses. Consequently, the conclusions drawn from this review rely on qualitative integration rather than statistical aggregation.

Additionally, differences in sample characteristics, cultural contexts, and digital platform usage across studies may influence the generalizability of the findings. Variability in methodological rigor, although assessed using standardized appraisal tools, may also contribute to differences in reported outcomes.

Despite these limitations, this systematic literature review provides a comprehensive and integrative overview of adolescents' cyberbullying experiences on social media, the internal psychological mechanisms that mediate the impact of digital victimization, and the progressively evolving spectrum of suicide risk. The synthesis offers valuable insights into the complex interplay between digital aggression and adolescent mental health, and highlights critical areas for future research, prevention, and intervention.

CONCLUSION

Based on the findings of this systematic literature review, it can be understood that cyberbullying experiences act as a risk factor that not only impacts adolescents' psychological well-being but also contributes to the development of various forms of suicide risk with varying severity. This relationship occurs through various psychological mechanisms, including depression, anxiety, loneliness, psychological distress, and impaired social connectedness, which can increase the vulnerability of adolescents experiencing cyberbullying. The risks that emerge develop along a spectrum that includes suicidal ideation, Non-Suicidal Self-Injury (NSSI), digital self-harm, and suicide attempts. These findings clarify that cyberbullying experiences, psychological responses, and suicide risk are interrelated processes.

Ethical consideration, competing interest and source of funding

-This study did not require ethical approval because it employed a Systematic Literature Review (SLR) design. The study exclusively used secondary data derived from previously published scientific articles and did not involve direct interaction with human participants, biological samples, or identifiable personal data. Therefore, formal ethical clearance and informed consent were not required. Nevertheless, the review process was conducted systematically and responsibly by adhering to academic integrity principles, proper citation practices, and transparent reporting based on the PRISMA guidelines.

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