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PREVALENCE AND ASSOCIATION OF CYBERBULLYING WITH SUICIDAL IDEATION: A SYSTEMATIC LITERATURE REVIEW

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Abstract

Cyberbullying is a type of harassment and a prevalent crime that is perpetrated or experienced by a person or groups of individuals via the use of electronic devices, and it frequently occurs among young people. Cyberbullying is well-recognized as a severe public health issue that affects adolescents. Most extant studies have focused on the national and regional effects of cyberbullying, with few examining the global perspective of cyberbullying. This systematic review comprehensively examines the global situation, gives an overview of cyberbullying-suicidal ideation, and clarifies existing results on the association between exposure to cyberbullying and suicidal ideation, risk factors, and the association between cyberbullying and suicidal ideation among adolescents. A systematic review of available literature was completed following PRISMA guidelines using the search themes “cyberbullying” and “suicidal ideation”; the time frame was from January 1st, 2018 to March 27th, 2024. Studies were searched on: Web of Science, Scopus, EBSCO, and SAGE Journal. Additional records identified through other sources included the references of reviews and two websites, Cyberbullying Research Center and United Nations Children’s Fund. A total of 18 studies out of 4,564 were included in our final evaluation focusing on cyberbullying victimization and suicidal ideation with a reliability of 0.838 with Cohen’s Kappa method. The prevalence rates of cyberbullying victimization ranged from 6.0 to 46.3%, while the rates of suicidal ideation ranged from 13.99 to 57.5%, based on 63 references. Verbal violence was the most common type of cyberbullying. Fourteen risk factors and three protective factors were revealed in this study. At the personal level, variables associated with cyberbullying including age, gender, online behavior, race, health condition, experience of victimization, and impulsiveness were reviewed as risk factors. Likewise, at the situational level, parent-child relationships, interpersonal relationships, and geographical location were also reviewed concerning cyberbullying. As for protective factors, empathy and emotional intelligence, parent-child relationship, and school climate.

Keywords: Cyberbullying, Suicidal Ideation, Depression, Victimization, Prevalence, Impulsivity.

INTRODUCTION

Cyberbullying is described as purposeful and repetitive aggressive conduct in an electronic context (e.g., email, blogs, chatrooms, social media, text messages, instant chats, online games, or websites) against a person who cannot easily defend themselves. [1–3]. It is deliberate and repeated. [4]. Cyberbullying acts are done purposefully to hurt, in contrast to accidents or harmless teasing. [5]. It can be sending offending text or images, mocking, spreading false rumors, and being excluded from a chat group. In the online context, bullying messages travel faster, and the audience is much larger. [6, 7]. Motivations for electronic aggression include revenge, jealousy, fun, or entertainment. [8]. Low self-control or impulsivity is found to be a characteristic of cyber aggressors. [9, 10]. A high impulsivity score or a low self-control score is linked to the bullying of others. [11, 12]. The cyberbully’s anonymity provides them

power and control. [13]. Different from face-to-face bullying, cyberbullying does not have to do with the effects of the bullying on the victim, thus blurring the empathic interchange. [14]. The online disinhibition effect causes bullies to do and say cruel things more than they would in person. [15]. There is a link between being a cyberbully and being a cyber-victim. Some cyberbullies admit that they were bullied at a particular time. [13].

Targets of cyberbullying have several characteristics in common. They are more likely to be seeking acceptance and to be seen online. They are frequently not savvy users and may not have been made aware of internet safety. They frequently missed out on opportunities to develop resilience when confronted with adversity and had limited access to carer support. Lastly, they are less likely to report an unsafe cyber situation to an adult. [1]. Studies report that approximately half of adolescents experience cyberbullying while more than half report witnessing frequent online bullying with most students failing to report it. [16].

Cyberbullying is a type of bullying that is perpetrated or experienced by a person or group and is intentionally utilized by persons via the use of electronic devices. It occurs repetitively [17]. There are three categories of involvement in cyberbullying: aggressive and hurtful to the victim [12] individuals who are victims, bullies (or perpetrators), and those who are both victims and bullies [18]. Many victims eventually become bullies [19].

Cyberbullying has been a growing phenomenon during the previous decade. This problem is defined as intentional and repeated harm to another person through the usage of electronic devices and online technologies. [20]. It is an act of repeatedly hurting another person's information and communications technology, such as sending harassing messages via text or the internet, sending disparaging comments on social networks, sending humiliating, threatening pictures, or intimidating someone via electronic means. [21]. Cyberbullying causes psychological harm, pain, and suffering, and is proven to have a impact traumatic to the victim. [5]. The term victim on the internet, is known as cyberbullying victimization, namely the individual who is the target of the perpetrator bullying on social media. Cyberbullying victimization is characterized by a tendency to feel depression, sadness, anxiety, anger, fear, avoidance of friends, school, and other activities, a decline in academic grades, or both [22]. Describe the forms of treatment received by victims of cyberbullying, such as having been ignored, not being appreciated, being called names, being threatened, being made fun of, and rumors spread by other people [23]. In contrast to face-to-face aggression, cyberbullying favors the aggressors' anonymity, as well as the access, dissemination, and permanency in cyberspace of the harmful content, being able to be seen by a wider audience [24].

The cyberbullying actions received by the victim will cause feelings of worry. With minimal supervision, these actions can occur continuously [25]. Besides that, information received by the victim is published via the internet, both in words and images, can last longer, and can even remain permanently on the internet. [26]. Furthermore, everything that has been stored on the internet can be accessed. [1].

Cyberbullying takes place on social media, messaging and gaming platforms, and mobile phones, and it is generally committed repeatedly to those who are targeted [1]. Cyberbullying is defined as individuals who frequently transmit hostile or aggressive messages meant to inflict injury or discomfort on others (often peers) through a

collection of behaviors performed through the network of connections (e.g., computers, smartphones) [27]. With the rapidly growing population of Internet users, cyberbullying victimization is becoming increasingly common among adolescents. [2]. Adolescents who are cyber victims are more likely to have suicidal thoughts. [28–30].

A range of studies has provided evidence of the severe short- and long-term negative consequences of the psychological maladjustment of adolescents involved in cyberbullying situations. Adolescents suffering from cyber victimization tend to have a higher likelihood of suicide ideation and attempts [31]. Some researchers have suggested that a higher risk of developing depressive symptoms through suffering cyberbullying, such as the aggressor's anonymity or a large audience and the difficulty in eliminating the harmful content, which may decrease the capacity to control the situation or increase victims' feelings of fear and helplessness [32].

The prevalence rate of cyber-victimization amongst adolescents varies from 10% to 40%, with some studies showing a prevalence rate of up to 72%. Most published literature on cyberbullying emerges from North America and Europe, and there is very little data from Africa. Three recent reports from South Africa show the prevalence rates of cyber-victims among adolescents to be between 15.2% and 46.7% (5,6,7).

The current review seeks to uncover and synthesize findings from previous research that have identified specific elements that influence someone's cyberbullying victimization. Furthermore, the types and symptoms of cyberbullying victimization discussed in the chosen studies will be highlighted for context and a better understanding of the problem.

METHOD

Identification of Eligible Studies and Search Strategy

Literature was sourced using four different online databases, namely Scopus, Web of Science EBSCO, and SAGE Journals. The main search was conducted by the researchers during the last week of January 1st, 2018 to March 27th, 2024, targeting articles published in the past decade and throughout the search period. The high quality of the selected articles in this systematic literature review was obtained by looking at the validity and reliability of Interrater Reliability (IRR) as measured using Cohen's Kappa.

Keywords to be used were identified by reviewing past literature addressing cyberbullying and suicidal ideation – words associated with the term "cyberbullying" and the various forms of cyberbullying were sourced. The search revealed that cyberbullying was used interchangeably with the terms "virtual bullying" and "online bullying". Furthermore, before determining the keyword string to be used, the search functionalities of the chosen online literature databases were examined. Special symbols to promote truncation of utilized terms were excluded because they were previously used in database search engines.

The final string of keywords utilised was "(cyberbullying) OR (cyber victimization) OR (cyberbullying victimization) AND (suicidal ideation OR suicide ideation OR self-harm)", which was separated into two parts, containing the synonyms of "cyberbullying" in the first half and keywords associated with cyberbullying victimization for specification and focus in the second half.

We employed a combination of two sets of keywords. The first set of terms referred to “cyberbullying” “virtual bullying”, “internet bullying”, “cyber ostracism”, and “cyber victimization”. The second group of keywords was related to suicidal ideation, such as “suicidal ideation”, “suicide ideation”, “self-harm”, etc. The particular search phrases are listed in Table 1. After identifying the search terms, the search strategy was adjusted appropriately according to the different requirements of each database, and the search covered all published empirical and quantitative studies on the relationship between cyberbullying and suicidal ideation. The specific search strategies for the different databases are presented in Table 2.

Table 1: Search terms used in literature search.

Category 1	Category 2
Cyberbullying	Suicidal ideation
Cyber ostracism	Suicide ideation
Virtual bullying	Self-harm
Cyber victimization	
Internet bullying	

Eligibility and Screening

Literature was screened in multiple stages, beginning from the inspection of the title and abstract to select suitable articles from the databases, the whole content of the article is then closely examined to see whether it meets the criteria for inclusion in the review. Inclusion and exclusion criteria were established as parameters to facilitate these processes, to ensure that a coherent set of articles is chosen to be included in the review, allowing the researcher to accurately complete the study’s purpose.

Eligibility

Firstly, to ease the process of reviewing the articles, and to avoid misinterpretation of the contents of the articles due to flaws in translation, the articles screened were limited to those written in the English language. Secondly, a timeline spanning a decade, from 2018 to the current year, was set, taking into account the growth of the technical scene which may have altered too greatly in the previous decade given how quickly technology has evolved, thereby influencing the findings regarding individuals’ online. Behavior. In addition to that, only research articles that discuss and elaborate on cyberbullying and suicidal ideation were included.

Any response to cyberbullying that promotes bullying, such as bystander’s silence, which is seen as silent approval and reinforcement of the bullying act, and “aggressive defending,” in which the bystander defends the victim by acting aggressively against the bully, were classified as negative bystander behavior in the current review. Additional actions of this type include helping the bully and supporting them by laughing with them or spreading the content to others, among other similar actions. This would indefinitely exclude articles that only address positive and constructive bystander behavior that express support toward the victim and disapproval of cyber aggression without the use of excessive aggression. Additionally, articles that do not identify the relationship between identified factors and negative bystander behavior and approach the topic through the lens of positive bystander behavior will also be excluded to avoid misinterpretation of the results. The criteria are better presented in Table 1.

Literature Search and Screening

The literature search was divided into two phases. The first phase involved retrieving articles related to the entered keyword string utilizing search engines of literature databases, and the second part involved a backward and forward search using relevant articles. Through the preliminary literature search using the literature databases, 4,564 articles were identified and screened based on their abstract and title. This preliminary screening resulted in 18 articles being identified and selected for further screening. On the other hand, as for the backward and forward search, a randomly selected article published between January 1st, 2018 to March 27th, 2024, respectively, was used to fill timeline gaps. The literature database “Web of Science” was used for these processes, which resulted in the 31 most relevant articles being identified through the screening of their title and abstracts alone. Next, upon the removal of articles that could not be accessed, were not written in English, and were duplicates, authors were left with 128 articles to be screened. These articles were screened based on their full texts to determine whether or not they met the inclusion criteria set. This resulted in 18 relevant articles being selected as the most suitable to be included in the systematic review and fulfill the research objective of identifying the factors associated with cyberbullying victimization. Existing reviews on cyberbullying victimization often analyze a range of the number of studies, typically between 15 to 40 [12,33]. The PRISMA (preferred reporting items for systematic reviews flow diagram (Figure 1) shows the procedure.

The high quality of the selected articles in this systematic literature review is 18 articles. It was obtained by looking at the validity and reliability of Interrater Reliability (IRR) as measured using Cohen's Kappa. The IRR results showed a p-value of less than 0.05 ($p < .005$) and showed .001 with a Reliability of 0.838, which means the selected articles were strong and approved by the raters (Table 2).

Table 2 Symmetric Measures Cohen’s Kappa

		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Measure of Agreement	Kappa	.838	.110	5.447	<,001
N of Valid Cases		18			

Selected publications were then examined for author names, participant age ranges, study design, types and prevalence rates of negative cyber-bystander behavior, and the factors contributing to negative cyberbullying. The extracted data are shown in Table 3 and explored in the next section.

Table 3: Article-Finding Criteria

Criteria	Inclusion	Exclusion
Timeline	Between 2018 and 2024	Before 2018
Language	English	Language other than English
Type of articles	Research articles	Articles other than research articles (e.g., reviews, conference proceedings, books).
	Quantitative	Qualitative
Country	Any countries	No exclusion
Content	Cyberbullying and suicidal ideation	Does not address the relationship between cyberbullying and suicidal ideation

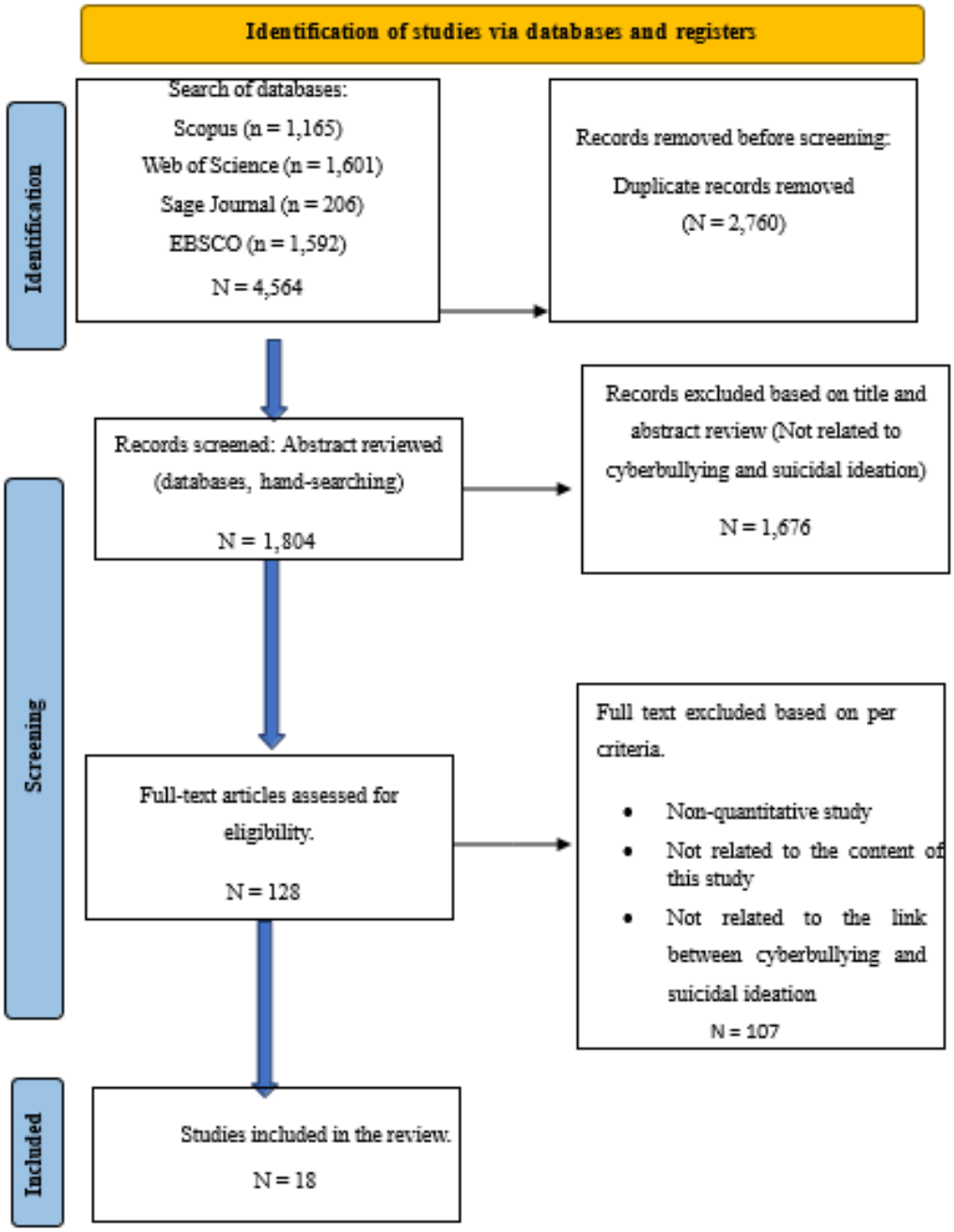

Figure 1: Flow diagram for study retrieval and selection of relevant studies

RESULT AND DISCUSSION

Selection and Characteristics of Sources of Evidence

Since the dearth of research on the issue of cyberbullying and suicidal ideation [34] [35], a total number of 18 articles were reviewed for this study, cyberbullying and its related concepts were tested as predictors of suicidal ideation in 18 articles, and cyberbullying was tested as an outcome variable in articles. The characteristics of the 18 included studies are presented in Table 4. These studies originated from various regions, including the U.S., Europe, and Asian countries.

The study design was still predominantly cross-sectional. Of the 18 studies, 13 studies (72.22%) used a cross-sectional design, two studies (11.11%) used a longitudinal design, one study (5.56%) used multivariate analysis, one study (5.56%) used meta-analysis and one study (5.56%) used Smart PLS. Overall, studies during the 2010s were dominated by cross-sectional studies (n=2/18; 11.11%). Although they were still dominated by cross-sectional studies (n=13/18; 72.22%) during the 2020s, the proportion of cross-sectional studies increased.

Regarding the direction of the variables included in the papers reviewed, 16 studies (88.89%) explored the impact of cyberbullying on suicidal ideation. Two studies (11.11%) focused on suicidal ideation on cyberbullying, indicating that researchers have paid more attention to the influence of the cyberbullying domain on the suicide domain and less attention to the influence of the suicide domain on the cyberbullying domain.

Cyberbullying in this review encompasses several highly similar constructs such as online bullying, virtual bullying, cyber ostracism, and cyber victimization; therefore, the measurement for cyberbullying differs. The Revised Cyberbullying Victimization Questionnaires, the 21-item scale Cyberbullying Episodes Scale (CBV) was assessed with the Cyber Bullying Question and the question batteries from [36] These are the most commonly used instruments to examine cyberbullying victimization experiences. Similarly, the suicide ideation indicators are; the Beck Scale for Suicide Ideation (BSSI) [37], which measures overall suicidal ideation and is the most widely used measurement tool. Of the 18 articles included, all the studies (100%) describe the distribution of the subjects. Among the single-industry-sourced articles, studies were more likely to be found in healthcare, hospitality, school, government organizations, construction, and university faculty.

Table 4: Overview of the studies included in the systematic literature review

Reference (year)	Region	Study-design	Type/prevalence of cyberbullying	N	Symptom
Paruk EM et al. [38]	South Africa	Longitudinal	The overall prevalence rate of some form of cyberbullying in this sample was 56.7%, of which 6.2% were cyberbullies, 20.6% were cyber-victims and 29.9% were cyberbullies and cyber-victims. Female participants were more likely to be involved in cyberbullying than males.	97	Depression, anxiety, non-suicidal self-injury, suicidal ideation, suicidal attempts, and suicide isolate themselves and feel unhappy.
Fabris et al. [30]	Italy	Multivariate analysis	Both victims and bully/victims were found to be at increased risk for suicidal ideation, internalizing and externalizing symptoms, and emotional dysregulation compared with students who were neither victims nor perpetrators of cyberbullying episodes.	1158	Aggressive behaviors. Constructive defense, whereas poor regulatory skills, and aggressive defense.
Grech et al. [29]	Malta	Cross-sectional	36.6% of students have been bothered online and 12.7% have seen hateful messages being directed at others.	367	Anger, sadness, fear, humiliation Self-harm, suicidal ideation.

Cassiani, et al. [39]	Columbia	Cross-sectional	Cyberbullying victimization was associated with post-traumatic stress disorder risk (OR = 2.05, 95%CI 1.51–2.79), lifetime cigarette smoking (OR = 1.91, 95%CI 1.42–2.57), female gender (OR = 1.68, 95%CI 1.25–2.26), family dysfunction (OR = 1.68, 95%CI 1.18–2.41), and poor-fair health condition (OR = 1.45, 95%CI 1.08–1.95).	1462	Post-traumatic stress disorder risk, cigarette smoking, female gender, family dysfunction, and poor-fair general health condition.
Skilbred et al. [40]	Norway	Cross-sectional	The prevalence of cyberbullying in this study was 5 %. 3% of these were cyber victims, 1% were cyberbullies and 1% were cyberbully-victims. Among those involved, 68% (n = 142) were cyber victims, 16% (n = 33) were cyberbullies and 16% (n = 33) were cyberbully-victims. Fifty-three percent of them were girls, with an average age of 19.5 years. Ninety-three percent took general education and 5.5% took vocational studies.	4531	Self-harm, suicide attempts, antisocial behavior, anxiety and depression, particularly poor parental attachment, and report a high degree of peer rejection.
Xiaowei et al. [12]	China	Cross-sectional	Among them, 686 (45.5%) were male students, and 823 (54.5%) were female students. Their ages spanned from 16 to 25 years (M = 19.06, SD = 1.04). In terms of family status, 88.6% of the students lived in two-parent families, and 11.4% FIGURE 1 | Proposed conceptual model. Lived in single-parent or remarried families.	9091 – cases were obtained in analysis1509	Self-evaluation and depression
Saladino et al. [41]	Italy	Cross-sectional	30% of the sample thought that the cyber-victim did not react out of fear in the Tricky or Outing, Denigration, and Impersonation scenarios, with results of 32.8, 36.2, and 45.7%, respectively.	600	Aggressive behaviors, ignoring the feelings and reactions of the victims, suicide
Chudal et al. [43]	European and Asian countries	Cross-sectional	1.22 to 1.52 times more likely to report feeling sad or hopeless than students who had not undergone such bullying.	70451	Angry, anxious, nervous, or sad
Li et al. [44]	Spain	Meta-analysis	The mean victimization rate was 24.32% (95% CI 20.32–28.83%) for TB and 11.10% (95% CI 9.12–13.44%) for CB depression [TB only: 3.33 (2.22–5.00); CB only: 3.38 (2.57–4.46); Both: 5.30 (2.43–11.56)]; suicidal ideations [TB only: 3.08 (2.12–4.46); CB only: 3.52 (2.38–5.20); Both: 6.64 (4.14–10.64)]; self-harm [TB only: 2.70 (1.86–3.91); CB only: 3.57 (3.20–3.98); Both: 5.57 (2.11–16.00)];	266888	Depression, suicidal ideation, suicide attempts, and self-harm

			and suicide attempts: [TB only: 2.61 (1.50–4.55); CB only: 3.52 (2.50–4.98); Both: 7.82 (3.83–15.93)].		
Maurya et al. [22]	India	Longitudinal	Increased from 3.8% to 6.4% among female respondents and 1.9% to 5.6% among male respondents over three years. About 33% of females and 16.6% of males had depressive symptoms in their young adulthood. Nearly 7.5% of females compared to 2.3% of males, adolescents who experienced cyberbullying victimization were 2.50 times more likely to have suicidal ideation than their counterparts with no experience of cyberbullying victimization.	11864	Lower levels of self-esteem, hopelessness, psychological insecurity, weak emotional intelligence, and increased fear of loneliness.
Maurya et al. [45]	India	Cross-sectional	There was a positive relationship between cyber victimization (β=0.258) and depressive symptoms.	16292	Self-efficacy, depression, and parental communication.
Zhuojun et al. [46]	USA	Cross-sectional	Positively associated with suicidal ideation, plans, and attempts, and explained 16.2 %, 14.4 %, and 16.6 % of suicidal ideation, plans, and attempts. The sleep duration (depression) explained 20.5 %, 18.0 %, and 19.7 % (58.4 %, 50.0 %, and 39.4 %) of the variance of suicidal ideation, plans, and attempts, respectively.	13677	Sleep duration and depression, suicide
Camerini et al. [47]	China	Cross-sectional	Ranged from 13.99 to 57.5%, based on 63 references. The prevalence rates of cyberbullying preparation ranged from 6.0 to 46.3%, while the rates of cyberbullying victimization ranged from 13.99 to 57.5%, based on 63 references. Verbal violence was the most common type of cyberbullying. Fourteen risk factors and three protective factors were revealed in this study. At the personal level, variables associated with cyberbullying including age, gender, online behavior, race, health condition, experience of victimization, and impulsiveness were reviewed as risk factors. Likewise, at the situational level, parent-child relationships, interpersonal relationships, and geographical location were also reviewed about cyberbullying. As for protective factors, empathy and emotional intelligence, parent-child	2070	Cyberbullying; globalization; preventive measures; risk factors. Impulsiveness, verbal violence, emotional intelligence

			relationship, and school climate were frequently mentioned		
Wang et al. [48]	Taiwan	Cross-sectional	The prevalence rates of cyberbullying, traditional bullying, and combined bullying were 9.9, 13.3, and 9.4%, respectively, indicating that one-third of students were involved in one of these types of bullying; 48.7% of those involved in cyberbullying also experienced traditional bullying, and 41.5% of those involved in traditional bullying also experienced cyberbullying. In any type of bullying, not only being a victim but also being a bully/bully victim was significantly associated with at least one mental health problem (serious psychological distress, self-harm, or suicidal ideation), except in the case of cyberbullying bullies/bully victims.	2028	serious psychological distress, self-harm, or suicidal ideation
Ding et al. [49]	China	Cross-sectional	Internet abuse and alcohol use were more concentrated among bullies/bully-victims than victims for all types of bullying, and a similar trend was observed among types of schools and school climates, suggesting that specific behavioral circumstances or school backgrounds are associated with bullying perpetration.	1062	Depression and Experiential Avoidance, nonsuicidal self-injury
Kee et al. [50]	Malaysia	Smart PLS	The findings revealed that victims of cyberbullying incurred a significantly higher risk of suicide ideation. Mediation analyses indicated that anxiety, exhaustion, and stress-mediated the relationship between cyberbullying and depression, whereas depression significantly mediated the relationship between cyberbullying and suicide ideation. The results highlight the clear need for cyberbullying prevention programs to educate youth about the consequences of cyberbullying	534	Anxiety; Cyberbullying victimization; Depression; Exhaustion; Stress; Suicide ideation
Romdhane et al. [51]	Lebanon	Cross-sectional	After adjusting over potential confounders, mediation analysis models showed that both positive and negative PEs partially mediated the associations between cyberbullying victimization/perpetration and SI. Higher cyberbullying perpetration and victimization were significantly associated with greater positive and negative PEs; more severe positive and negative PEs were	3103	Cyberbullying, cyber-victimization, Suicidal ideation, Psychotic experiences, young adults, Psychosis, Suicide

			significantly associated with higher levels of SI. Higher cyberbullying victimization and perpetration were significantly and directly associated with higher levels of SI.		
			The prevalence rate of cyberbullying has significantly increased over the last years in parallel with the increase in the use of technologies in terms of mobile phones, social networking websites, and internet communities [14]. Meta-analytic estimates revealed that from 2.2 to 56.2% of adolescents reported having been cyber-victimized, while 5.3–31.5% reported having perpetrated cyberbullying.		

Prevalence of Cyberbullying

Cyberbullying, as a prevalent occupational stressor, is less likely to act as a mediator to connect the dots between the two variables and rarely serves as a moderator to buffer adverse effects or amplify expected effects. Cyberbullying has also been associated with depressive symptomatology and other mental health disorders. Besides being a risk factor for developing depressive symptoms, cyberbullying was considered a major risk factor for suicidal ideation and attempts. Those who suffered cyber victimization had 2.56 times higher odds of developing than those who did not. [38]. 22% of children among traditional bullying victims had a mental disorder (X2= 32.1, $p<0.001$), and more than 25% of children among those who reported cyberbullying and both bullying victimizations were suffering from a mental disorder. The overall incidence of suicide ideation was 25.7%, and the prevalence of suicidal attempts was 5.4% among Japanese adolescents. Female adolescents are twice as likely to commit suicide attempts than males (6.6% vs 3.5%) [45])

Previous Experience of Traditional, Cyberbullying, or Both Children who experience any type of bullying was 2.56 times more likely to develop a major depressive disorder (95% CI, 1.59-4.12) [34,38,40,45,52]. One of the significant factors that contribute to suicidality among junior and high school students was previous experience with cyberbullying (OR 6,5, 95% CI 4.7-8.8).

Personal Resources Adolescents with a high level of depressive symptoms due to cyber victimization had lower scores in personal resources such as emotional intelligence, gratitude, optimism, and forgiveness. Emotional regulation abilities can minimize the risk of depressive symptoms. Appreciation and non-depressive symptomatology may determine the psychopathological outcomes. Although forgiveness may be challenging to have after being cyberbullied, the forgiveness of others facilitates coping with offensive behavior under certain circumstances. [30].

Association of Cyberbullying with Suicidal Ideation

Cyberbullying was defined in some literature as aggressive and harmful acts carried out by using the perpetrator's internet and gadgets, which also checked out the other three characteristics of bullying.

In this study, many constructs highly similar to cyberbullying were included under the adolescents set as college students, such as verbal, harassment, sexual, and also social, and negative rumors. As victims, cyberbullying directly or indirectly influences adolescents in many symptoms. A longitudinal study [38] and [22] suggested that cyberbullying strains adolescents and negatively affects their emotions, ultimately leading them to misbehave at home. A 2-week experience sampling study showed that social stressors at school cause adolescents to experience social media activities, and spouses reported more withdrawn, angry, and less supportive behaviors from others [51]. The articles reviewed in this study suggest that cyberbullying can shape depression and impact various moods that make depression show deep symptoms, such as negative thinking, withdrawal, judgment of themselves and thinking about suicide, communication, relationship satisfaction, and family satisfaction. It also explains how such effects are derived from various kinds of symptoms.

Personal Resources Adolescents with a high level of depressive symptoms due to cyber victimization had lower scores in personal resources such as emotional intelligence, gratitude, optimism, and forgiveness. Emotional regulation abilities can minimize the risk of depressive symptoms. Appreciation and non-depressive symptomatology may determine the psychopathological outcomes. Although forgiveness may be challenging to have after being cyberbullied, the forgiveness of others facilitates coping with offensive behavior under certain circumstances. [30].

Over the past two decades, many researchers have moved away from the old paradigm of examining one or some depression in isolation and examining the person have suicidal ideation. [44]. Currently, there are two main theories about suicidal ideation. More and more studies have focused on how cyberbullying victimization contributes to adolescent suicide thoughts. The current study investigated a new explanation for worldviews or world assumptions through the perspective of the shattered assumption theory.

DISCUSSION

This systematic review included studies on the prevalence of cyberbullying and its relation to mental health and the risk of suicide among adolescents. The thorough examination of the research on the association between cyberbullying and suicidal ideation provides important new insights into the complex dynamics behind these phenomena and their significant effects on the mental health of adolescents. From a methodological standpoint, longitudinal studies are crucial in clarifying the temporal dynamics and possible causal pathways underlying these associations, even though cross-sectional studies provide insightful information about the prevalence as well as associated variables of cyberbullying victimization and suicidal ideation in all articles. A longitudinal lens is necessary to comprehend the course of victimization and its effects over time. Longitudinal studies, like those emphasized by [38] and [22] offer vital evidence of the long-lasting effects of cyberbullying on mental health consequences.

A recurring pattern in the analyzed research emphasizes the strong correlation between being a victim of cyberbullying and a higher risk of contemplated suicide among adolescents. Cyberbullying's position as a constant source of stress in the lives of adolescents is one important issue that has to be addressed. According to research [22, 28, 35, 37, 41], cyberbullying may be a trigger for several detrimental

psychological effects, such as suicidal thoughts and depression. Crucially, the effects of cyberbullying span wider societal and environmental aspects in addition to personal experiences. The regularity of cyberbullying at educational institutions and online communities, for example, highlights the necessity of systemic actions meant to establish more secure and encouraging surroundings for adolescents. Furthermore, the body of research emphasizes how crucial it is to take into account the compounding impacts of various victimization scenarios, including conventional bullying [2, 22, 31, 36]. Adolescents who are subjected to both cyberbullying and traditional bullying may be more likely to develop psychological distress and contemplate suicide. Additionally, the results highlight the importance of resilience and coping strategies in lessening the detrimental consequences of being a victim of cyberbullying. Adolescents with good social support networks and emotional management abilities could potentially be better able to deal with the difficulties posed by cyberbullying and preserve their mental health.

Nevertheless, studies consistently demonstrate a robust association between experiencing cyberbullying and having suicidal thoughts in adolescence [51,53]. Those who have been the victims of cyberbullying are more likely to have considered suicide, which emphasizes how vital it is to solve this serious public health issue. Additionally, the cumulative consequences of several victimizations, including traditional bullying, raise the chance of adverse mental health outcomes. This highlights the necessity of comprehensive preventive and intervention techniques that take into account the broader socio-ecological context of cyberbullying. Adolescent resilience and adaptive coping strategies are critical, and personal resources such as emotional intelligence, gratitude, and optimism are emerging as possible protective factors against the detrimental impacts of cyberbullying victimization on mental health.

The implications of these discoveries for practice, policy, and research are extensive. Diverse approaches must be used in cyberbullying interventions, with an emphasis on the structural, interpersonal, and individual elements that lead to victimization and the subsequent impacts on mental health. To promote an inclusive and accommodating environment in school, school-based therapy could incorporate evidence-based programs that encourage social and emotional learning, empathy, and the formation of healthy connections, among other things. To address the underlying causes of cyberbullying and improve the mental health and general well-being of adolescents, researchers, lawmakers, educators, and community members should work together to develop comprehensive and effective therapies.

In conclusion, the integration of studies on cyberbullying and suicide ideation may yield a thorough understanding of the complex interconnections between personal, social, and environmental factors impacting the mental health of adolescents. This comprehensive review integrates methodological rigor and empirical evidence to help better understand the mechanisms behind the association between cyberbullying victimization and suicidal ideation. This will support the development of focused interventions and regulations to deal with this significant public health issue..

Limitation Studies

There are multiple limitations and flaws in various elements of the study, ranging from the literature search and data processing to the assessment of the study's quality. First, although the choice of keywords utilized, as well as the tight inclusion criteria were determined and employed to ensure that only relevant data would be retrieved,

it may have mistakenly excluded other significant literature that may have further enriched the current research. For example, while peer-reviewed articles published within the last six years may be better able to capture the dynamics of the phenomenon in the current cyber landscape, literature published before the past decade may contain important information from which the current review may have benefited. The absence of grey literature would have had a similar influence on the review.

Furthermore, limiting the literature search to five databases may have resulted in the omission of relevant literature that could be located in additional online databases or registries. Finally, human errors may have had an impact on the screening process. However, the review has met the goal of accumulating, presenting, and discussing relevant studies that provide a simple summary of cyberbullying and suicidal ideation.

Furthermore, the reproducibility or replicability of the search might be influenced by factors outside the authors' control, such as changes made to literature databases in terms of search retrieval techniques, the addition or removal of journals or articles, and so on. Furthermore, the quality of the review is difficult to assess because data extraction and analysis may be biased because they rely on the reviewers' and authors' perceptions and ideas, as well as the fact that the review includes research of diverse designs.

Despite its flaws, the review, like any other, has managed to compile and present a comprehensive set of literature and discussion of cyberbullying victimization associated with suicidal ideation, as well as possible interactions between them and potential gaps to fill in the future. Furthermore, the review can be utilized as a point of reference to identify additional topics and broaden the area of the research.

CONCLUSION

The synthesis of material contained in this review makes it clear that it is not only critical to creating an atmosphere that allows and encourages cyberbullying victimization but also an environment that discourages and disincentivizes suicidal thinking. This is especially true in the case of cyberbullying victimization, as it would aid in not only preventing the reinforcement and/or exacerbation of an act of aggression by primary aggressors but could prevent victimization potential future in acts of cyberaggression.

Furthermore, the review emphasizes the importance of considering and thoroughly researching the interaction of multiple variables, as well as contextual factors, as a catalyst for cyberbullying victimization, as many studies have either theorized or proven that these are relevant in gaining a better understanding of this phenomenon. Finally, the impact of technology on human behavior and interaction, as well as the importance of personal traits rather than a category approach to demographic disparities, may prove to be useful paths for future research. Furthermore, differences in personality features may be worth investigating to find elements that directly or indirectly influence an individual's choice of cyberbullying victimization on a personal level. Furthermore, loneliness, sleep issues, and anxiety may serve as important moderators in future investigations. Future research could also benefit from a more standard method of quantifying different types of cyberbullying victimization to ensure consistency between studies. Most importantly, as previously said, future research should look into how the characteristics of cyberspace and computer-mediated

communication influence an individual's decision to engage in cyberbullying victimization.

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