



Bidirectional Relationships between Peer Victimization, Loneliness and Solitude in Adolescence: A Systematic Review

E. González-Abaurrea¹ · J. González-Cabrera² · J. Ortega-Barón³ · R. Escortell² · J. M. Machimbarrena¹

Received: 21 May 2025 / Accepted: 4 June 2025
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Abstract

Bullying victimization and cyberbullying victimization are pervasive phenomena with documented adverse psychological consequences. Although loneliness has been conceptualized as both an antecedent and outcome of victimization experiences, the nature of these relationships remains insufficiently understood. This systematic review synthesizes evidence on the relationships between bullying victimization, cyberbullying victimization, and loneliness, while examining conceptualizations and assessment of loneliness. Following PRISMA guidelines, 7253 articles were evaluated, including 100 studies meeting inclusion criteria. Selected studies included samples from a variety of countries, balanced in terms of gender and with ages ranging from childhood to adulthood. Most studies emphasized loneliness as distress arising from perceived deficiencies in social relationships, with measurement approaches varying considerably. The findings reveal complex, bidirectional relationships between victimization and loneliness, with stronger associations in adolescent samples compared to younger children or adults. While traditional bullying consistently demonstrated significant associations with loneliness, the cyberbullying-loneliness relationship showed greater variability. Some factors such as bystander behaviour or school connectedness moderated this relationship, being this protective effect stronger for girls. This review identifies critical gaps in understanding how different forms of loneliness interact with victimization across developmental stages and cultural contexts, providing a foundation for designing targeted interventions that address loneliness in victimized youth, particularly during adolescence.

Keywords Bullying · Cyberbullying · Peer-victimization · Loneliness · Solitude · Adolescence · Systematic review

Introduction

✉ J. M. Machimbarrena
juanmanuel.machimbarrena@ehu.eus
E. González-Abaurrea
eider.gonzalez@ehu.eus
J. González-Cabrera
joaquin.gonzalez@unir.net
J. Ortega-Barón
jessica.ortega@uv.es
R. Escortell
raquel.escortell@unir.net

Peer relationships play a major role in the well-being and quality of life of youth during the developmental period of adolescence (Caputi et al., 2017). Close social relationships can have a positive effect on the minimization of relevant problems, such as the consequences of peer victimization (Kendrick et al., 2012). Research shows that high levels of peer victimization and loneliness are associated with lower levels of psychological resilience (Ime, 2024) and internalizing and somatic symptomatology (Løhre, 2012). While diverse studies have recognized the connection of bullying victimization and cybervictimization to feelings of loneliness, little information exists about the directionality or prediction of one problem over another, and the interpretation of results is challenging owing to their complexity (Machimbarrena et al., 2019). Despite the growing body of literature that explores the association between these variables, more studies are needed to systematically collect data for a broader view of the topic and how it is related to

¹ Faculty of Psychology, University of the Basque Country (UPV/EHU), Avenida de Tolosa, 70, 20018 Donostia, Spain

² Instituto de Transferencia e Investigación (ITEI), Universidad Internacional de La Rioja (UNIR), Avenida de la Paz, 137, 26006 Logroño, Spain

³ Faculty of Psychology, University of Valencia (UV), Av. de Blasco Ibañez, 21, 46010 Valencia, Spain

multiple variables. The present study addresses this research gap through a systematic review.

Peer Victimization and Cybervictimization

Bullying and peer victimization are overlapping concepts, but the former is considered a category of peer aggression. In addition, unlike bullying, peer victimization does not necessarily involve power imbalance and refers to a broader range of behaviors that sometimes do not feature the key elements of bullying (power imbalance, intention, and repetition). As few studies have examined the discrepancies between bullying and peer victimization and the distinction is not always clearly drawn (Finkelhor et al., 2012), this systematic review addresses both phenomena as related concepts that exist on a spectrum of peer relationship problems.

Bullying, a phenomenon that has been studied for decades, is characterized by prolonged and reiterative exposures to negative behaviors of peers with the intentionality of harm, repetition over time, and power imbalance (Olweus, 1998). Cyberbullying, a newer form of bullying, consists of an action done repeatedly on social media by one or more people toward others with the intention to harm (Kowalski et al., 2010). Both forms of victimization have a negative impact on the victims' health in the short and long term (Garaigordobil, 2018). The possible consequences of victimization to the victim range from decreased well-being and self-esteem (Evangelio et al., 2022), social difficulties, withdrawal (Pabian & Vandebosch, 2019), and other externalizing and internalizing symptoms (Garaigordobil & Machimbarrena, 2019) to mental disorders, such as posttraumatic stress disorder, depression, anxiety, and even suicide ideation (Moore et al., 2017).

Despite the heterogeneity of the data, bullying and cyberbullying victimization are prevalent problems among adolescents. For instance, 23% of students report being victims of bullying at least several times per month (Organization for Economic Cooperation and Development [OECD], 2019). A study conducted in 44 countries showed that 11% of boys and girls between 11 and 15 years of age reported being bullied at least two to three times per month (Cosma et al., 2024). In another study, 15–22.5% of students reported having experienced cyberbullying (Andrade et al., 2021). Even if research in this field tends to study the two forms of violence separately, most victims of cyberbullying are also exposed to traditional school bullying (Modecki et al., 2014).

More important than the prevalence data is the evidence that shows that either form of victimization has long-lasting consequences to the victims, even if the victimization stops at some point. Chronically victimized youth present more physical (Espinoza et al., 2015) and mental health problems (Biebl et al., 2011), psychological disadjustment, and

academic difficulties (Halliday et al., 2021) than those who are less victimized. A longitudinal study showed that stable and intermittent victims showed poorer health-related quality of life than those who were not victims and even those that were victims only at one point in time (González-Cabrera et al., 2021). A recent meta-analysis points out that both face-to-face bullying and cyberbullying have additive and severe impacts on depression, suicidal ideation, non-suicidal self-injury, suicide attempts, and psychological well-being (Li et al., 2022). Lastly, adults who were victimized in their childhood perceived the effects in terms of socialization and various psychological problems, such as difficulties in resolving conflicts and maintaining relationships in their adulthood (Pabian & Vandebosch, 2019). Understanding the enduring repercussions of bullying and cyberbullying requires an investigation of various contributing factors, with a focus on loneliness, which has emerged as a significant variable in previous studies.

Loneliness

Loneliness is a multifaceted phenomenon defined as an unpleasant experience that occurs when a person's network of social relations is deficient in some important way, both quantitatively and qualitatively (Korzhina et al., 2022). Although no consensus has been reached regarding the dimensions of loneliness, two main factors of loneliness (emotional and social factors) have been established using the UCLA Loneliness Scale, which is a subjective assessment of the social network and support available (Borges et al., 2008).

Paradoxically, despite communication and information technologies enabling constant connection with others (Nowland et al., 2018), loneliness levels have increased considerably during the last decade and can be considered a stable and global phenomenon (Twenge et al., 2021). Adolescents, considered a vulnerable population due to their developmental stage (Aboujaoude et al., 2015), usually face a wide range of social, familiar, and personal changes that affect their experience of loneliness (Bowker et al., 2014). A meta-analysis revealed that the prevalence of loneliness among adolescents across countries ranged from 9.2% to 14.4% (Surkalin et al., 2022).

The development of loneliness involves the interaction of multiple situational factors associated with numerous physical and psychosocial problems (Hawley & Cacioppo, 2010), such as low-quality social interactions, low social competence (Cacioppo et al., 2006), low self-esteem, and depression. The impact of loneliness on health is clear, and its consequences can even continue to adulthood (Goosby et al., 2013). The need for social connection and feelings of loneliness are inherent to human nature. However, loneliness becomes an issue when it generates a pattern of deleterious

thoughts, feelings, and behaviors (Cacioppo & Patrick, 2008), which is sometimes understood as “social pain” (Laursen & Hartl, 2013).

Despite being a widely used construct, the definition and operationalization of loneliness—like those of bullying and cyberbullying—remain controversial, as evidenced by various instruments used to measure it and the different ways it is conceptualized. These inconsistencies underscore the need for further research to refine assessment methods and conceptual clarity.

Current Study

Given the large body of research on bullying/cyberbullying, feelings of loneliness, and their associations, this systematic review aimed to summarize the main results to gain understanding of the subject from existing knowledge. In this process, analyzing the main definitions of loneliness is key to forming a general idea of the dimensions of the variable being assessed (Objective 1). In addition, it is important to classify the self-reported instruments used to assess it (Objective 2). Lastly, the research gap on the relationships between bullying, cyberbullying, and loneliness can be addressed by gathering the results of previous studies, identifying key issues for future research, and taking into consideration the mediating or moderating variables that may affect these relationships. Thus, it is essential to clarify whether solitude and loneliness play the same role in the victimization or cybervictimization context (Objective 3).

Methods

Protocol and Eligibility Criteria

This systematic review was conducted in accordance with the aims and methods described in the first protocol presented in the International Prospective Register of Systematic Reviews (PROSPERO: CRD42022380369) and the guidelines for Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page et al., 2021). Articles should meet the following criteria to be selected for the study: (a) original studies and not reviews, book chapters, or special issues; (b) studies written in Spanish or English that examined the relationship between bullying and/or cyberbullying victimization and feelings of loneliness; and (c) studies that evaluated the variables with tools that present guarantees of validity and reliability.

Studies about victims of domestic violence, cyber-dating abuse, grooming, and other kinds of violence were excluded from the study. Other exclusion criteria were studies that included participants older than 18 years that

did not retrospectively assess the variables related to peer victimization or cybervictimization, articles not written in English or Spanish, and studies that did not use self-reported instruments or had insufficient guarantees of validity and reliability.

Search Strategy

The literature search was conducted on December 14, 2024, in the following databases: Scopus, Web of Science, ERIC, PsycINFO, Psicodoc, PubMed, and ProQuest Psychology, using the following terms and Boolean operators in the titles, abstracts, and keywords: (“peer-victim*” OR “bullying” OR “peer victim*” OR “peer intimidation” OR “cyberbullying” OR “cybervictim*”) AND (“loneliness” OR “lonel*” OR “alon*” OR “solitude”). Additional searches for articles and their reference lists were made on Google Scholar to identify more eligible studies.

Study Selection

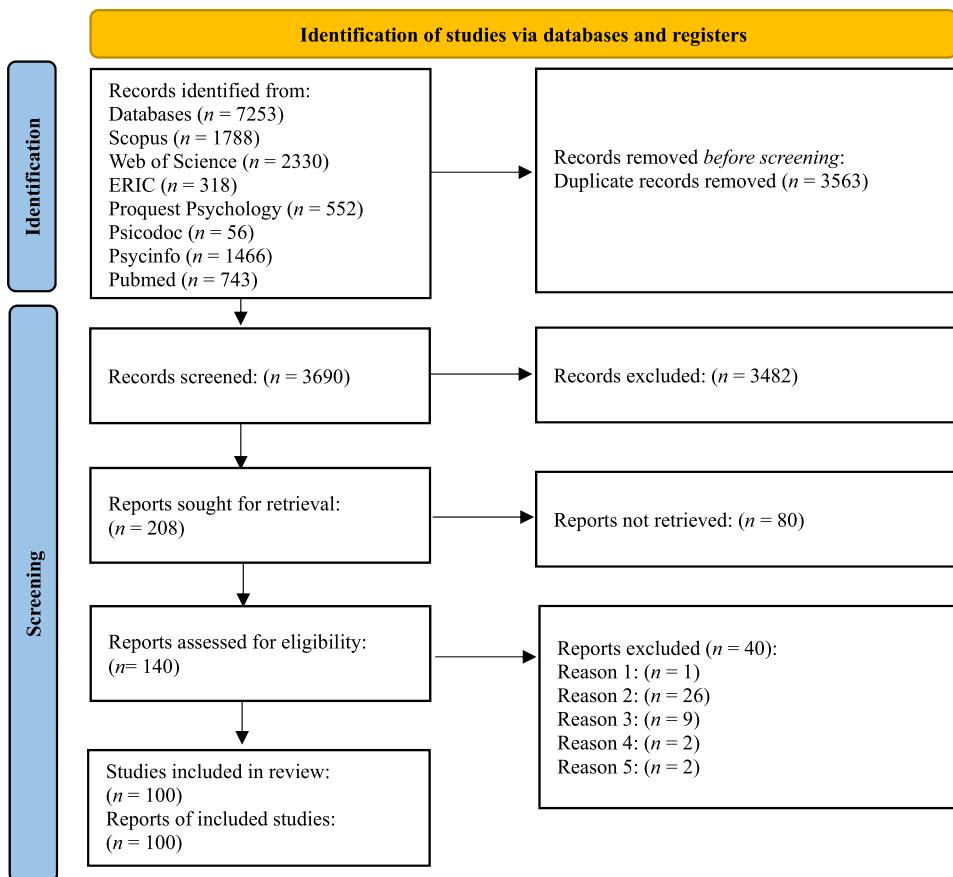
Figure 1 summarizes the process carried out in the identification, screening, and selection of studies. The database search retrieved 7253 articles. After removing duplicates using Microsoft Excel tables and owing to the large number of results, two independent researchers performed two screening tests, one by title, leaving out 208 articles, and the other by abstract. The Kappa concordance index (Landis & Koch, 1977) in the abstract screening was positive ($\kappa=0.81$). Discrepancies were resolved by consensus and consulting two more investigators. The eligibility of 128 articles were assessed by screening their full texts, and the articles that did not meet the eligibility criteria were removed from the review. Twelve more studies were included after additional searches. Finally, of 140 articles, 100 were included in the systematic review about the relationships between bullying and cyberbullying victimization and feelings of loneliness or solitude.

Risk of Bias and Quality Assessment

The Newcastle–Ottawa Quality Assessment Scale (NOS) was used to assess the quality of the studies included in the review. This tool, developed to assess the quality of the studies selected for systematic reviews or meta-analytic reviews, estimates the quality of studies on the basis of the following criteria: selection, comparability, and exposure. According to this system, a study that scores less than 5 points has poor quality, whereas those with 6 points has fair quality (van Aalst et al., 2022; Wells et al., 2000).

Table 1 shows the quality assessment of 98 studies (excluding the qualitative ones from the total of 100) using the NOS tool for both case–control and cohort studies. As

Fig. 1 Study selection process represented on the PRISMA flow diagram. Note. Reasons to exclude studies were: (1) studies not written in English or Spanish; (2) studies not exploring the variables object of study; (3) studies not reporting results on one of the variables or not relating these variables to one another; (4) studies only using assessment methods based on nominations to assess peer-victimization or loneliness and not including any self-reported measure; (5) studies assessing victimization in adults with no retrospective measures



none of the studies were case-control studies, evaluating some of the criteria established in this scale was not appropriate. For this reason and regarding the specific case of this systematic review and the type of articles included in it, the tool was considered more useful as a checklist of several components related to the quality of the studies than as a system to assess them formally, as it would be in case of case-control studies. Therefore, although 9 points is the maximum score that can be obtained with the original NOS version, after the potentially evaluable items for these studies were assessed, cross-sectional and longitudinal studies were given a maximum score of 5, and cohort studies were given a maximum score of 9, considering the differential nature of the items used to assess the quality of this type of studies. Seventy-five studies (76.5%) scored 3 points or higher out of five, showing fair quality. The rest of the studies scored 1 or 2 points.

The ROBIS tool was used to assess the risk of bias and relevance of the systematic review, identify the concerns related to four domains (study eligibility criteria, study identification and selection, data collection, and study appraisal and synthesis of findings), and evaluate the risk of bias as low, high, or unclear (Whiting et al., 2016). After assessing the concerns in each of the four domains, the risk of bias of

this systematic review was identified as low (see Electronic supplementary material).

Data Extraction and Qualitative Analysis

Finally, one researcher performed the data extraction process, and another researcher revised it to ensure that there were no missing data. The data were arranged during the process using Microsoft Excel tables and Zotero. Forms were used to achieve a standardized extraction of the following data: country, year, sample, methodology (measurement tools), and results.

Although the main objective of this systematic review was to determine the research and knowledge available to date on the feelings of loneliness or solitude of victims of bullying and cyberbullying, two additional goals were achieved through the selection and analysis of the 100 studies: (1) describe the different definitions of loneliness that have been used in research and identify the assessment tools used to study loneliness, and (2) identify which self-reported assessment methods are used in this research context.

Table 2 summarizes the different conceptualizations of loneliness used by the authors of the 100 articles included in the review and describes the measurement tools used to assess loneliness in these studies. Table 3 presents the

Table 1 Newcastle—Ottawa quality assessment scale for studies included in the review

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Atik and Güneri (2013)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Estimation of missing data
Baker and Bugay (2011)	*	*		2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • No information on control variables • No report of missing data
Balootbangan et al. (2023)	*	—	—	1*	<ul style="list-style-type: none"> • Self-reports • Representative sample • No information on control variables • No report of missing data
Batool (2023)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • No information on control variables • No report of missing data
Bayat et al. (2021)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Estimation of missing data
Berguno et al. (2004)	Qualitative	Qualitative	Qualitative	Qualitative	Qualitative
Boivin and Hymel (1997)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • No information on control variables • No report of missing data
Boivin et al. (1995)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data
Bonsaksen et al. (2024)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data
Borg and Willoughby (2022)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Estimation of missing data
Brewer and Kerslake (2015)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (victimization – perpetration) • No report of missing data
Brighi et al. (2012)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Buchanan & McDougall (2021)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Estimation of missing data

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Buelga et al. (2012)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Cañas et al. (2019)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data
Cañas et al. (2020a)	*	*	—	2*	<ul style="list-style-type: none"> • Self-report • Representative sample • Control for variables (gender) • Report of missing data
Cañas et al. (2020b)	*	*	—	2*	<ul style="list-style-type: none"> • Self-report • Representative sample • Control for variables (gender) • Report of missing data
Cao et al. (2020)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Carney et al. (2020)	*	*	*	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variable • Report of missing data
Cava et al. (2007)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Cava et al. (2010)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender and type and frequency of cyber dating abuse) • No report of missing data
Cava et al. (2020)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender and type and frequency of cyber dating abuse) • No report of missing data
Cava et al. (2021)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (age, gender, life satisfaction, depressed mood) • No report of missing data
Chen et al. (2023)	*	-	—	1*	<ul style="list-style-type: none"> • Self-report • Representative sample • No report of control for factors • Report of missing data
Chu et al. (2019)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Clear et al. (2020)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data
Eid et al. (2023)	*	**	-	3*	<ul style="list-style-type: none"> • Self-reports • Snowball sampling method. Sample could be more representative • Control for variables (social media use, social comparison, age) • Report of missing data
Espinoza et al. (2020)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data
Estévez et al. (2009)	*	**	-	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Estévez et al. (2019)	*	**	-	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Feng et al. (2024)	*	**	-	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Ferguson and Zimmer-Gembeck (2014)	*	**	-	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Fredj et al. (2023)	*	*	-	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variable • No report of missing data
Gardner et al. (2017)	*	-	*	2*	<ul style="list-style-type: none"> • Self-report • Representative sample • No report of control for factors • Report of missing data
Graham et al. (2003)	*	*	-	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variable • No report of missing data
Graham and Juvonen (1998)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported
Griese and Buhs (2014)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Halpern et al. (2017)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Heiman et al. (2018)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported
Hsieh & Gourneau (2024)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Huang et al. (2023)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated
Iranzo et al. (2019)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender and face-to-face school bullying victimization) • No report of missing data
Jackson and Cohen (2012)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported
Jensen-Campbell et al. (2017)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Jiménez et al. (2009)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Kaarakainen et al. (2025)	Qualitative	Qualitative	Qualitative	Qualitative	Qualitative
Kochenderfer and Ladd (1996)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variable • No report of missing data
Kochenderfer-Ladd and Wardrop (2001)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variable • No report of missing data
Košir and Žugelj (2023)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Ladd et al. (2019)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated (FIML, MPLUS)

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Larrañaga et al. (2016)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender and victimization frequency) • No report of missing data
León-Moreno et al. (2021)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated
Li et al. (2019)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender and age) • Report of missing data
Li et al. (2021)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated (FIML, MPLUS)
Liang et al. (2025)	*	*	*	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data
Lissitsa and Kagan (2024)—cohort study	*	**	—	3*	<ul style="list-style-type: none"> • Not representative sample (only men) • Control for variables • No report of follow up
Lyu et al. (2024)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (RS, loneliness and BV) • No report of missing data
Ma and Chen (2019)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender and perceived bystander roles) • Report of missing data
Ma et al. (2018)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender) • Report of missing data
Machimbarrena et al. (2019)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender and age) • Report of missing data
Madsen et al. (2024)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Report of missing data
Malamut et al. (2021)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Matthews et al. (2022) – cohort study	**	**	**	6*	<ul style="list-style-type: none"> ● Somewhat representative sample ● Structured interview ● Control for variables (victimization type and frequency and socioeconomic status) ● Adequate follow-up conditions (time and follow-up rate)
Murphy et al. (2015)	*	*	—	2*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables (loneliness) ● No report of missing data
Olenik-Shemesh et al. (2012)	*	*	—	2*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables ● No report of missing data
Owusu et al. (2011)	*	**	—	3*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables (age and gender) ● Report of missing data
Pengpid & Petzer (2019)	*	**	*	4*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables ● Missing data estimated
Putra & Dendup (2022)	*	**	*	4*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables ● Missing data estimated
Quintana-Orts et al. (2021)	*	**	*	4*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables ● Missing data estimated (FIML, MPLUS)
Quynh Ho & Nguyen (2022)	*	**	—	3*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables (age and gender) ● Report of missing data
Şahin (2012)	*	—	—	1*	<ul style="list-style-type: none"> ● Self-reports ● Sample could be more representative ● No report of control for factors ● No report of missing data
Sarıçam et al. (2016)	*	—	—	1*	<ul style="list-style-type: none"> ● Self-reports ● Sample could be more representative ● No report of control for factors ● No report of missing data
Schacter and Juvonen (2018)	*	**	*	4*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables ● Missing data estimated
Schäfer et al. (2004)	*	**	—	3*	<ul style="list-style-type: none"> ● Self-reports ● Representative sample ● Control for variables ● No report of missing data

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Schultze-Krumbholz et al. (2012)	**	**	*	5*	<ul style="list-style-type: none"> • Self-reports • Community controls • Representative sample • Control for variables (age and gender) • Report of missing data
Segrin et al. (2012)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Sample could be more representative • Report of control factor • No report of missing data
Sette et al. (2023)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated
Shao et al. (2014)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (gender, peer-support, teacher-support) • No report of missing data
Sharma et al. (2017)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported
Shell et al. (2014)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported
Shi and Wang (2023)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated
Shin (2010)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Shukla & Chouan (2023)	*	—	—	1*	<ul style="list-style-type: none"> • Self-reports • Sample could be more representative • No report of control for factors • No report of missing reported
Storch and Masia-Warner (2004)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated
Storch et al. (2003)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated
Sugimura et al. (2017)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Swirsky and Xie (2021)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (demographic factors and T1 variable) • No report of missing data
van den Eijnden et al. (2014)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data estimated
Wachs (2012)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Wang et al. (2021)	*	*	*	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variable • Missing data reported
Wang et al. (2023)	*	*	—	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (demographic factors) • Report of missing data
Wang et al. (2024)	*	**	*	4*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • Missing data reported
Woods et al. (2009)	**	**	—	4*	<ul style="list-style-type: none"> • Self-reports • Case control • Representative sample • Control for variables • No report of missing data
Wright (2016)	*	*	-	2*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variable • No report of missing data
Wright and Wachs (2019)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (face-to-face victimization and gender) • No report of missing data
Wu et al. (2024)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data
Zhang et al. (2021)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data

Table 1 (continued)

Study	Domains			Total 5* max 9* max for cohort studies	Study characteristics based on Newcastle—Ottawa Quality Assessment Scale
	Selection 2* max 4* max. for cohort studies	Comparabil- ity 2* max 2* max. for cohort studies	Exposure Outcome 1* max 3* max. for cohort studies		
Zhang et al. (2023)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables (demographic factors) • No report of missing data
Zimmer-Gembeck et al. (2014)	*	**	—	3*	<ul style="list-style-type: none"> • Self-reports • Representative sample • Control for variables • No report of missing data

Stars represent the items from the NOS tool met by the studies. Regarding selection, items are related to the adequacy of case definition, the representativeness of cases, and the selection and definition of controls; in comparability, items are related to the control of important and additional variables; in exposure, stars are given when non-response rate is reported and, in the case of cohort-studies, according to the adequacy of the follow-up

relationship between bullying or cyberbullying and loneliness and includes information about the study sample and objectives, and variables assessed.

Results

Characteristics of the Studies

Regarding their sociodemographic characteristics, the studies ($N=100$) demonstrated considerable geographic diversity, with most studies originating from the United States ($n=20$), followed by Spain ($n=15$), China ($n=14$), Turkey ($n=5$), and Australia ($n=4$). The sample sizes ranged from 48 to 7956 and were generally balanced in terms of sex. Participant ages ranged from elementary school age to adulthood, with all peer victimization or cybervictimization experiences assessed corresponding to childhood or adolescence, whether measured contemporaneously or retrospectively. The studies included were predominantly cross-sectional ($n=76$), with fewer studies having qualitative ($n=2$), mixed-methods ($n=2$), and longitudinal designs ($n=20$). Longitudinal approaches were more common in the studies from the United States ($n=8/20$, 40%) than in those from other regions ($n=12/80$, 15%). The publication timeline spanned from 1995 to 2025, with 24 studies published before 2010, 42 studies published between 2010 and 2019, and 34 studies published from 2020 onwards. Of the total sample, 74% examined bullying victimization exclusively ($n=74$), 12% focused on cyberbullying victimization ($n=12$), and 13% investigated both phenomena ($n=13$). The

studies that examined cyberbullying primarily emerged after 2012 (23/25 studies, 92%).

Conceptualization and Assessment of Loneliness

Table 2 presents the conceptualizations and assessment tools for loneliness across the 100 studies. Only 46 studies provided a clear definition of loneliness or related concepts, such as solitude or anxious solitude. Among these definitions, the most common conceptual framework ($n=22$) characterized loneliness as related to perceived deficiencies in social relationships. Other definitions focused on cognitive awareness of relational deficiencies ($n=8$), feelings of isolation without physical separation ($n=7$), multi-component experiences involving both cognitive and affective elements ($n=6$), and reactive or anxious solitude ($n=3$). Most definitions emphasized the affective component of loneliness, while others addressed the universal nature of the need for connection or considered the perception of social network evaluation.

Among the assessment approaches, the most frequently used instruments were the UCLA Loneliness Scale ($n=32$) (Russell et al., 1978) and the Asher Loneliness Scale ($n=29$) (Asher et al., 1984) or their variants. Of the 32 studies that used the UCLA Loneliness Scale, only 15 (47%) provided explicit definitions of loneliness, similar to studies that used other measurement tools (31/68 studies, 46%). The measurement approaches varied considerably in scope and complexity: 12 studies employed single-item measures (e.g., “Do you feel lonely?”), and the number of items used to assess loneliness ranged from 1 to 38 across the studies (mean = 12.4 items). Thirteen studies used a single-factor

Table 2 Conceptualization and measurement of loneliness and solitude

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	
	Name and author of the questionnaire	Type of loneliness analyzed	No. of items
(Atik & Güneri, 2013)	Not provided	Loneliness and Social Dissatisfaction Scale (LSDS) (Asher & Wheeler, 1985)	Subjective loneliness 24
(Baker & Bugay, 2011)	Not provided	Loneliness and Social Dissatisfaction Scale (LSDS) (Asher & Wheeler, 1985)	Subjective loneliness 24
(Balootbangan et al., 2023)	Cognitive awareness of the weakness of social and personal relationships that leads to sadness (Cava et al., 2021)	Loneliness scale (ad hoc)	Loneliness in friendships Loneliness in family Affective symptoms of loneliness 38
(Batoor, 2023)	Not provided	UCLA Loneliness Scale (Russell et al., 1978)	Subjective loneliness 20
(Bayat et al., 2021)	Unpleasant feeling that takes place when one's network of social relationships is deficient in some important way, quantitatively or qualitatively (Perlman & Peplau, 1981)	Urdu version (Zafar & Kausar, 2015) One ad hoc item “Do you ever feel lonely?”	Subjective loneliness 1
(Berguno et al., 2004)	Human response to having had and lost a certain type of relationship. The need for contact and tenderness are frustrated (Fromm-Reichmann, 1959)	Ad hoc items	Subjective loneliness 3
(Boivin & Hymel, 1997)	Not provided	Loneliness and Social Dissatisfaction Scale (LSDS) (Asher & Wheeler, 1985)	Subjective loneliness 16
(Boivin et al., 1995)	Not provided	Loneliness and Social Dissatisfaction Questionnaire (Asher & Wheeler, 1985)	Subjective loneliness 16
(Bonsaksen et al., 2024)	Not provided	Ad hoc item	Subjective loneliness 1
(Borg & Willoughby, 2022)	Affinity for solitude: the enjoyment of solitude regardless of preference (Goossens, 2014)	Three items adapted from Burger (1995) Eleven items Two questions	Affinity for solitude Motivations for solitude Time spent alone 3 11 2
(Brewer & Kerslake, 2015)	Reactive solitude: solitude that results from negative affect or an external motivation. Spending time alone in response to a situation or emotional state	UCLA Loneliness Scale (Russell et al., 1978)	Subjective loneliness 20
(Brighi et al., 2012)	Perceived social isolation rather than physical separation (Cacioppo & Hawkley, 2003)	UCLA Loneliness Scale (Russell et al., 1978)	Subjective loneliness 16
(Buchanan & McDougall, 2021)	Not provided	Louvain Loneliness Scale for Children and Adolescents (LLCA) (Marcoen et al., 1987). Italian version (Melotti et al., 2009)	Loneliness with parents Loneliness with peers 10
(Buelga et al., 2012)	Not provided	UCLA Loneliness Scale Version 3 (Russell, 1996)	Subjective loneliness 20
		UCLA Loneliness Scale (Russell et al., 1980)	Subjective loneliness

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	
	Name and author of the questionnaire	Type of loneliness analyzed	No. of items
(Cañas et al., 2019)	Not provided	UCLA Loneliness Scale, Spanish adaptation (Expósito & Moya, 1993)	20
(Cañas et al., 2020a)	Not provided	UCLA Loneliness Scale, Spanish adaptation (Expósito & Moya, 1993)	20
(Cañas et al., 2020b)	Not provided	UCLA Loneliness Scale, Spanish adaptation (Expósito & Moya, 1993)	20
(Cao et al., 2020)	Discrepancy between derived and achieved levels of social contact with a feeling of extensively diffused and severe pain (Goossens & Beyers, 2002)	The Children's Loneliness Scale (Asher et al., 1984)	16
(Carney et al., 2020)	Aversive emotion reflecting a discrepancy between derived and obtained contact and support (Hall-Lande et al., 2007)	Revised version of Loneliness and Social Dissatisfaction Questionnaire (Cassidy & Asher, 1992; Ladd et al., 1996)	4
(Cava et al., 2007)	Not provided	Version 3 of UCLA Loneliness Scale (Russell, 1996), Spanish version (Expósito & Moya, 1999)	20
(Cava et al., 2010)	Not provided	Version 3 of UCLA Loneliness Scale (Russell, 1996), Spanish version (Expósito & Moya, 1999)	20
(Cava et al., 2020)	Negative emotional response to a discrepancy between the desired and achieved quality of one's social network (Vanhalst et al., 2014)	UCLA Loneliness Scale, Spanish adaptation (Borges et al., 2008)	20
(Cava et al., 2021)	Negative emotional response to a discrepancy between the desired and achieved quality of one's social network (Vanhalst et al., 2014)	UCLA Loneliness Scale, Spanish adaptation (Borges et al., 2008)	20
(Chen et al., 2023)	Loneliness is a form of psychological distress which is a result from current relations not meeting the individual's social expectations (Peplau & Perlman, 1982)	Children's Loneliness Scale, Chinese version (Dong & Lin, 2011, as cited in Chen et al., 2023)	16
(Chu et al., 2019)	Not provided	Short form of UCLA Loneliness Scale (Hays & DiMatteo, 1987)	8
(Clear et al., 2020)	Not provided	Loneliness and Social Satisfaction Scale (Asher et al., 1984)	16

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	Type of loneliness analyzed	No. of items
	Name and author of the questionnaire			
(Eid et al., 2023)	A stressful emotion caused by the feeling that a person's social demands are not needs are not met by the quantity or quality of personal connections (Hawley et al., 2008; Wheeler et al., 1983)	Jong-Gierveld Loneliness Scale, 5-item adaptation (Wilson et al., 2007)	Subjective loneliness	5
(Espinoza et al., 2020)	Not provided	Asher Loneliness Scale, 5-item adaptation (Espinoza et al., 2020)	Subjective loneliness	5
(Estévez et al., 2009)	Not provided	UCLA Loneliness Scale (Russell, 1996)	Subjective loneliness	20
(Estévez et al., 2019)	Not provided	Spanish version of UCLA Loneliness Scale (Expósito & Moya, 1993; Russell et al., 1980)	Subjective loneliness	20
(Feng et al., 2024)	Feeling of separation from others caused by a lack of social interaction, interpersonal interactions or sense of not being understood and accepted (Chen et al., 2023)	Loneliness scale (UCLA 3rd edition) (Russel, 1996)	Subjective loneliness	20
(Ferguson & Zimmer-Gembeck, 2014)	Unpleasant feeling of disassociation from others and missing contact or closeness with others (Asher & Paquette, 2003)	Social Dissatisfaction Questionnaire (Cassidy & Asher, 1992)	Subjective loneliness	13
(Fredj et al., 2023)	Not provided	One ad hoc item: "During the past 12 months, how often have you felt lonely?"	Subjective loneliness	1
(Gardner et al., 2017)	Not provided	Loneliness and Social Dissatisfaction Questionnaire (Asher et al., 1984)	Subjective loneliness	4
(Graham et al., 2003)	Not provided	Loneliness scale by Asher and Wheeler (1985)	Subjective loneliness	16
(Graham & Juvonen, 1998)	Not provided	Loneliness scale by Asher and Wheeler (1985)	Subjective loneliness	16
(Griese & Buhs, 2014)	Unmet social needs and unsatisfactory interpersonal relationships (Heinrich & Gullone, 2016; Weiss, 1987)	Loneliness and Social Dissatisfaction Questionnaire (Cassidy & Asher, 1992)	Subjective loneliness	5
(Halpern et al., 2017)	Feeling arising from the lack of connection to other people and lack of social ties	One ad hoc item "Do you ever feel lonely?"	Subjective loneliness	1
(Heiman et al., 2018)	Social loneliness: lack of companionship and failure to establish social relationships. Emotional loneliness: not provided	Loneliness Questionnaire (Williams & Asher, 1990, as cited in Heiman et al., 2018)	Social loneliness and emotional loneliness	16
(Hsieh & Gourneau, 2024)	Unpleasant and distressing feeling when deficiencies are perceived in the subjective assessment of the social and interpersonal relationships (Asher & Paquette, 2003; Parker & Seal, 1996; West et al., 1986)	5 items from UCLA Loneliness Scale-Short Form (ULS-8) (Hays & DiMatteo, 1987)	Subjective loneliness	5

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	Type of loneliness analyzed	No. of items
	Name and author of the questionnaire			
(Huang et al., 2023)	Interpersonal relationships discrepancy between what one wants to possess and what they actually possess, reflecting a desire for more friends and closer relationships (Peplau & Perlman, 1982)	Loneliness Scale by Asher et al. (1984)	Subjective loneliness	16
(Irango et al., 2019)	Subjective feeling of being alone or without the desired level of social relationships (Ernst & Cacioppo, 1999)	UCLA Loneliness Scale, Spanish adaptation (Expósito & Moya, 1999)	Subjective loneliness	20
(Jackson & Cohen, 2012)	Cognitive awareness of a deficiency in one's social and personal relationships and consequent affective reactions (Asher & Paquette, 2003)	Loneliness questionnaire (Asher et al., 1984)	Subjective loneliness	16
(Jensen-Campbell et al., 2017)	Not provided	Loneliness questionnaire (Asher et al., 1984)	Subjective loneliness	16
(Jiménez et al., 2009)	Not provided	UCLA Loneliness Scale (Russell, 1996) Spanish version (Expósito & Moya, 1999)	Subjective loneliness	20
(Kaaralkainen et al., 2025)	Distressing feeling arising from the perception of the lack in quality (emotional loneliness) or quantity (social loneliness) in relationships; also a feeling as "lost in life" (existential loneliness) (Cacioppo & Patrick, 2008; Hemburg et al., 2022; Juntila, 2010, as cited in Kaarakainen et al., 2025)	Prompts on a discussion forum asking the origin of experiences of loneliness and the essential determinants of those experiences	Loneliness and experiences related to it	2
(Kochenderfer & Ladd, 1996)	Not provided	Items referred to loneliness subscale from the Loneliness and Social Dissatisfaction Questionnaire (LSDQ) (Cassidy & Asher, 1992)	Subjective loneliness	3 + 3
(Kochenderfer-Ladd & Wardrop, 2001)	Not provided	Revised version of Cassidy and Asher's (1992) Loneliness and Social Satisfaction Questionnaire	Subjective loneliness	5
(Košir & Žugelj, 2023)	Negative emotional state associated with the discrepancy between the social needs and the perception that those are not met in terms of quantity or quality (Campbell, 2013)	The UCLA Loneliness Scale (Russell et al., 1980), Slovenian adaptation (Avsec & Bajec, n.d. as cited in Košir & Žugelj, 2023)	Subjective loneliness	20
(Ladd et al., 2019)	Solitude: behavioral manifestation of social disengagement or withdrawal (Ooi et al., 2017)	Ad hoc items for teachers	General assessment of preference for solitude	3

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	
	Name and author of the questionnaire	Type of loneliness analyzed	No. of items
(Larrañaga et al., 2016)	Loneliness results from perceived deficiencies in an individual's social relationships, is a subjective experience, and is unpleasant and distressing (West et al., 1986)	UCLA Loneliness Scale, 8-item adaptation (Valkenburg & Peter, 2007)	Subjective loneliness 5
(León-Moreno et al., 2021)	Emotional loneliness: perception of the absence of meaningful relationships Subjective evaluation of the social network: quality of social interactions and relationships and the lack of affiliative relationships (Borges et al., 2008; Expósito & Moya, 2000; Yáñez-Yáben, 2008)	UCLA Loneliness Scale, Spanish Adaptation by (Expósito & Moya, 1999)	Emotional loneliness Subjective evaluation of the social network 20
(Li et al., 2019)	Distressing feeling accompanied by the frustration of social need, which may result from the poor quantity and quality of social relationships (Hawkley & Cacioppo, 2010)	Asher's Child Loneliness Scale (Asher et al., 1984)	General assessment of feelings of loneliness with four dimensions: <ul style="list-style-type: none"> •Feelings about loneliness •Judgment of social ability •Feelings of social inadequacy •Subjective estimation of peer relationships
(Li et al., 2021)	Not provided Subjective, unpleasant, and distressing experience derived from unsatisfactory close relationships with others (Vangnas et al., 2018)	Adapted self-report (Asher et al., 1984) Children's Loneliness Scale (Asher et al., 1984)	Subjective loneliness 16
(Liang et al., 2025)	A sense of isolation and not fulfilled need for social ties (Schäfer et al., 2004)	Self-reported loneliness (Hughes et al., 2004)	Frequency of feelings of lack of companionship, exclusion or isolation 3
(Lissitsa & Kagan, 2024)	Cognitive awareness of a deficiency on one's social and personal relationships and the ensuing affective reactions of sadness, emptiness and longing (Asher & Paquette, 2003)	Loneliness Scale (Asher & Wheeler, 1985)	Subjective loneliness 16
(Ma & Chen, 2019)	Not provided	Asher Loneliness Scale (Asher & Wheeler, 1985)	General assessment of feelings of loneliness with four dimensions: <ul style="list-style-type: none"> •Feelings about loneliness •Judgment of social ability •Feelings of social inadequacy •Subjective estimation of peer relationships

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	Type of loneliness analyzed	No. of items
	Name and author of the questionnaire			
(Ma et al., 2018)	Not provided	Asher Loneliness Scale (Asher & Wheeler, 1985)	General assessment of feelings of loneliness with four dimensions: •Feelings about loneliness •Judgment of social ability •Feelings of social inadequacy •Subjective estimation of peer relationships	16
(Machimbarrena et al., 2019)	Feeling of anxiety that accompanies the perception that one's social needs are not being met in terms of quantity or quality (Campbell, 2013)	Loneliness Scale, Spanish adaptation (Richaud and de Minzi & Sacchi, 2004)	•Peer loneliness •Family loneliness •Relational uneasiness: personal inadequacy or difficulty with social expression •Isolation: isolation or lack of skills related to social interaction	29
(Madsen et al., 2024)	Subjective feeling of isolation defined as the cognitive discrepancy between social relations wished and the ones perceived and the affective reaction that follows	One ad hoc item: “Do you feel lonely?”	Subjective loneliness	1
(Malamut et al., 2021)	Negative emotional response to self-perceived deficiencies in relationships (Peplau & Perlman, 1982)	Louvain Loneliness Scale for Children and Adolescents (Goossens, 2016, as cited in Malamut et al., 2021)	Subjective loneliness	12
(Matthews et al., 2022)	Loneliness is a form of psychological distress which is a result from current relations not meeting the individual's social expectations (Peplau & Perlman, 1982)	UCLA Loneliness Scale, Version 3, 4-item adaptation (Russell, 1996);	Subjective loneliness	4
(Murphy et al., 2015)	A multi-faceted phenotype with myriad variables influencing its onset, development, and course. It has been described as a universal experience characterized by a fundamental need for social connection (Cacioppo & Patrick, 2008)	UCLA Loneliness Scale (Russell et al., 1980)	Subjective loneliness	20
(Olenik-Shemesh et al., 2012)	Discrepancy between one's expectations of relations and the reality (Peplau & Perlman, 1982)	Loneliness questionnaire (Asher et al., 1990, as cited in Olenik-Shemesh et al., 2012)	Subjective loneliness with two subscales: emotional and social loneliness	17
(Owusu et al., 2011)	Not provided	Ad hoc item: “During the past 12 months, how often have you felt lonely?”	Subjective loneliness	20
(Pengpid & Peltzer, 2019)	Not provided	Ad hoc item: “During the past 12 months, how often have you felt lonely?”	Subjective loneliness	8
(Putra & Dendup, 2022)	Not provided	Ad hoc item: “Most of the time or always felt lonely during the 12 months before the survey”	Subjective loneliness	20

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	
	Name and author of the questionnaire	Type of loneliness analyzed	No. of items
(Quintana-Orts et al., 2021)	Not provided	UCLA Loneliness Scale, Spanish version by Velarde-Mayol et al. (2016)	16
(Quynh Ho & Nguyen, 2023)	Negative emotional experiences when individuals have less number of social relationships or lower quality of relationships than they wish to have (Eccles & Qualter, 2021)	UCLA Loneliness Scale, Version 3 (Russell, 1996)	20
(Şahin, 2012)	Not provided	UCLA Loneliness Scale (Russell et al., 1978)	3
(Sarıçam et al., 2016)	Loneliness is a form of psychological distress which is a result from current relationships not meeting the individual's social expectations. (Peplau & Perlman, 1982)	UCLA Loneliness Scale, Turkish adaptation (Demir, 1989)	5
(Schacter & Juvonen, 2018)	Not provided	An adapted scale (Asher & Wheeler, 1985) Self-perception questionnaire (Marsh & O'Neill, 1984), subscales related to loneliness	16 5 + 4
(Schäfer et al., 2004)	Not provided	UCLA Loneliness Scale-8 (Hays & DiMatteo, 1987)	5
(Schultze-Krumbholz et al., 2012)	Not provided	UCLA Loneliness Scale, Version 3 (Russell, 1996)	8
(Segrin et al., 2012)	Not provided	Short version by Rotenberg et al. (2004) of the Italian version of the Loneliness and Social Dissatisfaction Questionnaire (Asher & Wheeler, 1985; Caputi et al., 2021)	20
(Sette et al., 2023)	Perceived lack of intimate relationships and/or not belonging to a group (Galanaki & Vassilopoulou, 2007)	Subjective loneliness	5
(Shao et al., 2014)	Not provided	Children's Loneliness Scale (CLS) (Asher et al., 1984) 16-item adaptation (National Children's Study of China [NCSC], 2011, cited in Shao et al., 2014)	16
(Sharma et al., 2017)	Not provided	General assessment of feelings of loneliness with four dimensions: •Feelings about loneliness •Judgment of social adequacy •Feelings of social inadequacy •Subjective estimation of peer relationships	1
(Shell et al., 2014)	Anxious solitude: unpleasant feeling that arises from wanting to engage in peer interaction but being blocked by social anxiety (Asendorpf, 1990; Gazelle et al., 2005)	Ad hoc item: "During the past 12 months, how often have you felt lonely?" Peer- and self-nominations	3
		Anxious solitude	

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	Name and author of the questionnaire		Type of loneliness analyzed	No. of items
			Name	Author		
(Shi & Wang, 2023)	Emotion derived from being left out from social networks and being perceived as unpopular among peers (Newman et al., 2005)	Asher's Child Loneliness Scale (Asher et al., 1984)	Asher's Child Loneliness Scale (Asher et al., 1984)	Asher	Subjective loneliness	20
(Shin, 2010)	Not provided	Loneliness and Social Dissatisfaction (Asher & Wheeler, 1985)	Loneliness and Social Dissatisfaction (Asher & Wheeler, 1985)	Asher	Subjective loneliness	16
(Shukla & Chouhan, 2023)	Not provided	Gierveld Loneliness Scale (Gierveld & Tilburg, 2006; Leung et al., 2008)	Gierveld Loneliness Scale (Gierveld & Tilburg, 2006; Leung et al., 2008)	Gierveld	Social and emotional loneliness	6
(Storch & Masia-Warner, 2004)	Not provided	Asher's Child Loneliness Scale (Asher et al., 1984)	Asher's Child Loneliness Scale (Asher et al., 1984)	Asher	Subjective loneliness	16
(Storch et al., 2003)	Not provided	Asher's Child Loneliness Scale (Asher et al., 1984)	Asher's Child Loneliness Scale (Asher et al., 1984)	Asher	Subjective loneliness	16
(Sugimura et al., 2017)	Anxious solitude: feeling that comes from showing verbal inhibition and reticent behavior (Gazelle & Rudolph, 2004; Rubin, 1982)	Adapted anxious solitude (Gazelle & Ladd, 2003)	Adapted anxious solitude (Gazelle & Ladd, 2003)	Gazelle & Ladd	Anxious solitary behaviour	8
(Swirsky & Xie, 2021)	Not provided	Asher Loneliness Scale, 7-item adaptation (Swirsky & Xie, 2021)	Asher Loneliness Scale, 7-item adaptation (Swirsky & Xie, 2021)	Asher	Subjective loneliness	7
(van den Eijnden et al., 2014) (Wachs, 2012)	Not provided Not provided	Loneliness Scale (Russell et al., 1980) One ad hoc item "Do you feel lonely at school"?	Loneliness Scale (Russell et al., 1980) One ad hoc item "Do you feel lonely at school"?	Russell	Subjective loneliness Subjective loneliness at school	10 1
(Wang et al., 2021)	Subjective experience occurring when there is a deficiency in one's social and personal relationships, with feelings of sadness, emptiness and longing (Asher & Paquette, 2003, p.75)	One item from the Me and My School Questionnaire (Deighton et al., 2013): "I feel lonely"	One item from the Me and My School Questionnaire (Deighton et al., 2013): "I feel lonely"	Deighton	Emotional and behaviour difficulties	1
(Wang et al., 2023)	Distressing feeling accompanied by the frustration of social need, which may result from the poor quantity and quality of social relationships (Hawley & Cacioppo, 2010)	The revised Loneliness Scale (Zou, 2003, as cited in Wang et al., 2023)	The revised Loneliness Scale (Zou, 2003, as cited in Wang et al., 2023)	Zou	Assessment of emotional loneliness with four dimensions: • Pure loneliness • Perceptions of one's social competence • Evaluation of current peer relationships • Perceptions of unfulfilled important relationships	21
(Wang et al., 2024)	Negative emotion arising from the discrepancy between expected and actual social network (Vanhalst et al., 2014)	Chinese version of the short form of UCLA Loneliness Scale (Xu et al., 2018)	Chinese version of the short form of UCLA Loneliness Scale (Xu et al., 2018)	Xu	Subjective loneliness	6
(Woods et al., 2009)	Not provided	Loneliness and Social Dissatisfaction Questionnaire (Asher & Wheeler, 1985)	Loneliness and Social Dissatisfaction Questionnaire (Asher & Wheeler, 1985)	Asher	Loneliness, feelings of social inadequacy and interests	16
(Wright, 2016) (Wright & Wachs, 2019)	Not provided Not provided	UCLA Loneliness Scale (Russell, 1996) UCLA Loneliness Scale (Russell, 1996)	UCLA Loneliness Scale (Russell, 1996) UCLA Loneliness Scale (Russell, 1996)	Russell	Subjective loneliness Subjective loneliness	20 20

Table 2 (continued)

Authors and year of publication of the reviewed paper	Conceptualization	Measurement tools	No. of items
Name and author of the questionnaire	Type of loneliness analyzed		
(Wu et al., 2024)	Not provided	ULS-8 Loneliness Scale (Hays & DiMatteo, 1987)	8
(Zhang et al., 2021)	An unpleasant experience that occurs when individuals feel that their social, interpersonal network is low in quality or insufficient in quantity (Costa & McCrae, 1992)	UCLA Loneliness Scale (Russell, 1996) modified (Wang, 1995, as cited in Zhang et al., 2021)	18
(Zhang et al., 2023)	A discrepancy between an individual's perceived and desired quality of social connection (Ostroff & Kamper, 2015; Povedano et al., 2015; Vanhalst et al., 2014)	Jong-Gierveld Loneliness Scale, 6-item Chinese version (Delong Gierveld & Van Tilburg, 1999)	6
	Loneliness includes the feeling of having few friends and being unable to satisfy one's basic friendship needs (Cassidy & Asher, 1992)	•Emotional loneliness •Social loneliness	
(Zimmer-Gembeck et al., 2014)	Not provided	The Loneliness and Social Dissatisfaction Questionnaire (Cassidy & Asher, 1992)	13

loneliness measure to assess general feelings of loneliness, while 17 expanded the assessment to different types of loneliness, such as social or emotional loneliness; contexts where loneliness is experienced (e.g., family or peer contexts); and components that constitute the construct (e.g., feelings of social inadequacy). Multidimensional assessment approaches were used more frequently in European studies (12/35, 34%) than in studies from other regions (5/65, 8%). Among the 25 studies that examined cyberbullying, 5 (20%) used single-item measures, 16 (64%) used measures with 5–20 items, and 4 (16%) used measures with more than 20 items.

Bullying Victimization and Feelings of Loneliness

Table 3 summarizes the findings according to the type of study, objectives, selected variables, and main results regarding the relationship between bullying or cyberbullying and loneliness.

Of the 100 studies selected for the qualitative synthesis, 74 used bullying victimization as a single target variable, while 13 investigated both bullying and cyberbullying. All the studies identified an association between bullying victimization and feelings of loneliness, demonstrating a consistent relationship between being a victim of bullying and experiencing high levels of loneliness, regardless of the type of bullying victimization.

On a cross-sectional level, all types of peer victimization, particularly relational and verbal forms, correlated positively with emotional loneliness and negatively with social network assessment. This pattern appeared consistently across the studies from the different geographic regions. While affinity for solitude did not statistically predict peer victimization, reactive or anxious solitude could increase the risk of becoming a victim (Borg & Willoughby, 2022).

On a longitudinal level, several studies have highlighted the complex relationship and interplay between victimization and loneliness. The longitudinal studies in Table 3 document three types of temporal relationships. For example, a bidirectional effect is suggested between school victimization and feelings of loneliness. That is, while loneliness predicted future victimization, previous victimization significantly predicted future loneliness (Espinoza et al., 2020). This bidirectional relationship appeared in 7 of the 9 longitudinal studies with adolescent samples (ages 12–18 years) but in only 1 of the 4 studies with younger children (ages 5–11 years). These findings align with the association between Time 1 bullying victimization and Time 2 loneliness, indicating that victimization affects not only current but also future levels of loneliness (Wright & Wachs, 2019). A longitudinal cohort study supports both pathways: that childhood loneliness predicts adolescent victimization and that occasional and frequent bullying predict higher levels

Table 3 Relation between bullying or cyberbullying and loneliness

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Atik & Güneri	2013	Turkey	CS	<i>N</i> =742 AR: 11–15 <i>M</i> age=13.11 52.9% girls	Explore how individual factors, parenting style and academic achievement discriminate students involved and non-involved in bullying	Bullying Loneliness Academic achievement Parenting style Locus of control	Loneliness is a powerful predictor discriminating victims and bully/victims from uninvolved students
Baker & Bugay	2011	Turkey	CS	<i>N</i> =144 AR: 11–15 <i>M</i> age=12.50 45.8% girls	Study the mediator and moderator roles of loneliness between peer-victimization and depressive symptoms	Loneliness Peer victimization Depressive symptoms	Loneliness mediator of the relationship between peer-victimization and depressive symptoms
Balootbhagan et al	2023	Iran	CS	<i>N</i> =365 7th–8th grades 58.9% girls	Study how loneliness and other variables predict peer-victimization	Victimization Loneliness Other psychological variables	Loneliness → direct effect on victimization Emotional intelligence → victimization through loneliness
Batool	2023	Pakistan	CS	<i>N</i> =499 AR: 13–17 <i>M</i> age=14.5	Study the relationships between bullying victimization and psychosocial variables	Bullying victimization Loneliness Other psychosocial variables	Verbal victimization predicted → loneliness
Bayat et al	2021	The Netherlands	CS	<i>N</i> =7956 AR: 12–18 <i>M</i> age=no data 50.4% girls	Explore the associations between loneliness and contextual factors	School context Loneliness Other social and personal variables	Being bullied associated with loneliness No association between cyberbullying and loneliness
Berguno et al	2004	UK	Qualitative	<i>N</i> =42 AR: 8–10 <i>M</i> age=not provided % girls not provided	Address the experience of loneliness	Loneliness Peer victimization	Loneliness appeared after victimization Loneliness increased vulnerability to be victimized
Boivin & Hymel	1997	Canada	CS	<i>N</i> =793 AR: 8–10 <i>M</i> age=11.5 49.5% girls	Study how negative social perceptions impact in aggression and withdrawal	Loneliness Victimization Other social and psychological variables	Peer victimization mediates impact of social behavior on loneliness
Boivin et al	1995	Canada	LS	<i>N</i> =774 AR: 9–12 <i>M</i> age=10.8 48.19% girls	Evaluate how social withdrawal, peer rejection and peer victimization influence the feelings of loneliness and depressive symptoms over time	Peer status Victimization Social withdrawal Loneliness Depressive symptoms	Victimization → + loneliness
Bonsaksen et al	2024	Norway	CS	<i>N</i> =1072 AR: 13–19 <i>M</i> age=no data 49.6% girls	Understand cyberbullying and its consequences	Cyberbullying Loneliness Other adjustment variables	Cyber-victims present+loneliness than cyber-victims that are also perpetrators

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Borg & Willoughby	2022	Canada	LS	N= 1072 AR: 10–16 M age= 12.48 49.8% girls	Study if affinity for solitude predicts psychosocial adjustment (i.e., peer-victimization)	Affinity for solitude Motivations for solitude Peer-victimization Other psychosocial variables	+ Reactive solitude → + peer-victimization Affinity for solitude does not predict peer-victimization
Brewer & Kerslake	2015	UK	CS	N=90 AR: 16–18 M age= 17.11 56.67% girls	To study the influence of loneliness on cyberbullying victimisation	Cyberbullying victimization and perpetration Loneliness Self-esteem Empathy	Loneliness was not a significant predictor of cyberbullying victimisation
Brighti et al	2012	Italy	CS	N= 2326 AR: 11–21 M age= 13.9 47% girls	Study how relational context influence in the chances of being a victim	Loneliness Bullying and cyberbullying Other variables	High perception of loneliness with peers → + risk of being direct victim Loneliness with peers → + predicts indirect victimization Loneliness with parents → + likely to be cybervictimized
Buchanan & McDougall	2018	Canada	CS Retrospective	N=347 AR: 18–48 M age= 20.6 51% girls	Explore the relationship between victimization and cybervictimization and loneliness	Peer victimization Cybervictimization Loneliness	Social peer-victimization in high school predicts loneliness in university Cybervictimization in high school → no association with loneliness in university
Buelga et al	2012	Spain	CS	N=1319 AR: 11–16 M age= 13.7 53% girls	Study the links between social reputation, peer victimization and other variables	Peer victimization Loneliness Other variables	Relational victimization correlates with loneliness Social reputation and victimization related indirectly through loneliness
Cañas et al	2019	Spain	CS	N= 1318 AR: 11–18 M age= 13.8 53% girls	Analyse the psychological profile of the adolescents involved in cyberbullying situations	Cyberbullying Loneliness Perceived Stress Satisfaction with Life Social Anxiety	Positive correlation between cybervictimization and loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Cañas et al	2020a	Spain	CS	<i>N</i> =2399 AR: 12–18 <i>M age</i> =14.63 49.8% girls	To study the differences in the feelings of loneliness depending on the level of cybervictimization	Loneliness Parent-Adolescent Communication School Adjustment Victimization through Mobile Phone and Internet	There were significant differences in loneliness between cybervictimization groups Severe cybervictimization → + loneliness than moderate cybervictimization Traditional-online victims showed higher loneliness than other groups of victims. All groups of victims → + loneliness than uninvolved
Cañas et al	2020b	Spain	CS	<i>N</i> =1318 AR: 11–17 <i>M age</i> =13.8 53% girls	Analyse the variables depending on the level of cybervictimization Study the psychological adjustment of those involved in cyber- and traditional bullying	Peer-victimization Peer-aggression Loneliness Self-concept Depression Perceived Stress Other variables related to adjustment	Partial mediation of loneliness in the association between bullying victimization and suicide ideation
Cao et al	2020	China	CS	<i>N</i> =715 AR: 8–15 <i>M age</i> =11.81 42.8% girls	Explore the mediating effect of loneliness in the relationship between bullying and suicide ideation	Bullying victimization Loneliness Suicidal ideation	Partial mediation of loneliness in the association between bullying victimization and suicide ideation
Carney et al	2020	USA	CS	<i>N</i> =834 AR: no data <i>M age</i> =4th–6th grade 64.9% girls	Explore the moderator role of school connectedness in the association between loneliness and peer victimization	Peer victimization Loneliness School connectedness	Positive moderate correlation between victimization and loneliness School connectedness (protective factor) moderated association between peer victimization and loneliness in girls
Cava et al	2007	Spain	CS	<i>N</i> =1319 AR: 11–16 <i>M age</i> =13.7 52% girls	Analyze the role of loneliness on overt victimization by peers	Loneliness Overt victimization Other variables	Adolescents' perceptions of family and classroom environment had a significant indirect effect on peer overt victimization mediated by loneliness Overt victimization → + loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Cava et al	2010	Spain	CS	<i>N</i> =1319 AR: 11–16 <i>M</i> age=13.7 52% girls	Study the relationship between adolescents' perception of the family and classroom environment and peer relational victimization	Relational victimization Loneliness Other variables	Indirect effect of Family Environment on Peer Relational Victimization through loneliness Indirect effect of Classroom Environment on Peer Relational Victimization through loneliness Loneliness related to relational victimization
Cava et al	2020	Spain	CS	<i>N</i> =604 AR: 12–17 <i>M</i> age=14.37 56.6% girls	To analyse the differences in loneliness and cyber-bullying victimization in youths with different type and frequency of Cyber Dating Victimization victimization	Cyber dating violence Loneliness Depressive mood Cyber-bullying victimization	Significant outcomes: + Direct cybervictimization → + emotional loneliness + Direct cybervictimization →—social networking assessment + Indirect cybervictimization → + emotional loneliness + Indirect cybervictimization →—social networking assessment
Cava et al	2021	Spain	CS	<i>N</i> =647 AR: 12–17 <i>M</i> age boys=14.27 <i>M</i> age girls=14.49 50.9% girls	Analyse the relationship between peer-victimization and dating violence through the effect of loneliness	Dating violence victimization Peer victimization Loneliness Life satisfaction Depressed mood	Significant correlations: + Relational peer-victimization → + emotional loneliness + Relational peer-victimization →—social networking assessment + Physical victimization → + emotional loneliness + Physical peer-victimization →—social networking assessment + Verbal peer-victimization → + emotional loneliness Peer-victimization → loneliness (partial mediator) → dating violence

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Chen et al	2023	China	CS	<i>N</i> =2601 AR: no data <i>M</i> age=13.9 48.4% girls	Examine the comorbidity of loneliness and social anxiety and the role of peer relationships (i.e., bullying victimization)	Loneliness Social anxiety Bullying victimization Friend nomination test Friendship quality	Peer-victimization → bridge-symptoms (i.e., feeling ridiculed, feeling left-out) → co-occurrence of loneliness and social anxiety
Chu et al	2019	China	LS	<i>N</i> =661 AR: 11–15 <i>M</i> age=12.86 39.2% girls	Study the temporal and reciprocal relationship between bullying victimization and other loneliness and other psychosocial problems	Bullying victimization Loneliness Other psychosocial problems	Loneliness at T1 and T2 positively predicted CBV at T2 and T3
Clear et al	2020	Australia	CS	<i>N</i> =361 AR: 11–18 <i>M</i> age=14.9 60% girls	Explore how dispositional mindfulness protects from internalizing symptoms derived from peer victimization	Perceptions of victimization Loneliness Dispositional mindfulness Other psychological variables	Both physical and relational peer-victimization → + loneliness
Eid et al	2023	Lebanon	CS	<i>N</i> =379 AR: 13–17 <i>M</i> age=16.07 64.9% girls	Study the association between bullying victimization and feelings of loneliness among adolescents and through the effect of problematic social network use	Bullying victimization Loneliness Problematic Social Network Use (PUSN)	Significant association: + Bullying victimization → + loneliness Bullying victimization + negative social comparison and addictive consequences of problematic use of social network (mediator) → ↑ loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Espinosa et al	2020	USA	LS	$N=4339$ AR: no data $M\text{ age}=15.02$ 54% girls	Examine bidirectional relations between school and cybervictimization with loneliness in three years	School victimization Cybervictimization Loneliness Demographic covariates	Across time stability in school victimization, cybervictimization and loneliness
Estévez et al	2009	Spain	CS	$N=1319$ AR: 11–16 $M\text{ age}=13.7$ 53% girls	Observe how psychological adjustment changes between the roles involved in bullying	Peer victimization Psychological adjustment (loneliness included)	Victims and bully/victims → + loneliness (+ in victim group) than non-involved or bullied
Estévez et al	2019	Spain	CS	$N=1318$ AR: 11–18 $M\text{ age}=13.8$ 53% girls	Analyze how victimization, both traditional and online, can predict psychological maladjustment (i.e., loneliness)	Victimization Loneliness Other psychological adjustment related variables	The probability of feeling loneliness increases in traditional victims

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Feng et al	2024	China	CS	<i>N</i> =618 AR: 12–18 <i>M age</i> =15 49.5% girls	Study the mechanisms of peer bullying on Internet addiction and the possible mediating role of loneliness and physical activity	Bullying victimization Internet addiction Loneliness Physical activity	Peer bullying → + loneliness Loneliness as mediator between bullying and Internet addiction Physical activity reduces loneliness after peer bullying and mitigated loneliness-induced Internet addiction ↑ Peer victimization → ↑ loneliness
Ferguson & Zimmer-Gembeck	2014	Australia	CS	<i>N</i> =639 AR: 9–13 <i>M age</i> =10.8 48.5% girls	Analyse the association between relationship stressors and loneliness and the mediational role of rejection sensitivity on it	Peer victimization Loneliness Other social-, cognitive and family-related variables	↑ Peer victimization → ↑ loneliness
Fredj et al	2023	Tunisia	CS	<i>N</i> =802 AR: not provided <i>M age</i> =13.40 52.2% girls	Analyse the association between bullying and individual and family context variables	Bullying Loneliness Other variables related to individual and familiar context	Adolescents reporting feeling lonely were more likely to be bullied
Gardner et al	2017	UK	CS	<i>N</i> =443 AR: not provided <i>M age</i> =9.79 58% girls	Study the role of emotion regulation processes on maladaptive peer-victimisation coping	Peer victimization Maladaptive coping Emotion regulation School loneliness	Peer victimization → maladaptive coping strategies derived from poor cognitive reappraisal mediates → loneliness
Graham et al	2003	USA	CS	<i>N</i> =785 AR: not provided <i>M age</i> =11.5 55.6% girls	Explore the relationship between peer-victimization and adjustment outcomes	Peer-victimization Loneliness Other adjustment variables	Victims → + loneliness than non-victims
Graham & Juvonen	1998	USA	CS	<i>N</i> =418 AR: not provided <i>M age</i> =12.4 50.7% girls	Study the relations between self-blaming attributions for victimization and maladjustment	Self-perception of victimization Loneliness Other adjustment variables	Self-perceived victimization → loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Griese & Buhs	2014	USA	LS	N=511 AR: not provided <i>M age</i> =10.62 (T1) and 11.3 (T2) 51% girls	Analise the moderating effect of prosocial behaviors on loneliness in victimized youth	Loneliness Peer-victimization Social support Prosocial behavior	Prosocial behaviour moderates relational peer-victimization and loneliness one year later: children reporting high levels of relational victimization + prosocial behaviour → ↓ loneliness T2 Girls: + relational victimization (and not overt) T1 + T2 Loneliness
Halpern et al	2017	Chile	Mixed Methods	N=7000 AR: 10–20 <i>M age</i> =14.4 58.3% girls	Observe the effects of bullying and cyberbullying	Well-being Loneliness Bullying and cyberbullying	Prosocial behavior protective factor for loneliness in children with high levels of relational victimization Non-victims ↓ levels of loneliness than victims of face-to-face bullying, cyberbullying or both Victims of both bullying and cyberbullying → ↑ loneliness than victims of bullying or cyberbullying Social and emotional loneliness + likeability to be victim or cybervictim than students that were not lonely
Heiman et al	2018	Israel	CS	N=902 AR: 10–18 <i>M age</i> =13.21 49.9% girls	Study the relationships between perceived loneliness and peer victimization and cyber-victimization	Social and emotional loneliness Peer victimization Cybervictimization	Subjective well-being mediates relationship between social loneliness and cyber-victimization: ↑ social loneliness → ↓ subjective well-being → ↑ probability of cyber-victimization
Hsieh & Gourneau	2023	USA	CS	N=196 AR: 10–11 <i>M age</i> =10.83 79% girls	Examine loneliness as a risk factor related to online victimization	Online victimization Loneliness	Online victimization positively correlated to loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Huang et al	2023	China	LS	N= 857 AR: no data M age= 14.73 45.6% girls	Investigate if peer victimization exacerbates loneliness through rumination and rejection sensitivity	Peer-victimization Rumination Rejection sensitivity Loneliness	Peer victimization → + loneliness Peer victimization + rumination and rejection sensitivity → + loneliness
Iranzo et al	2019	Spain	CS	N= 1068 AR: 12–18 M age= 14.51 48.5% girls	Study the indirect relationship between cybervictimization and suicide ideation through loneliness and other variables	Cyberbullying victimization Bullying victimization Depressive symptomatology Perceived stress Loneliness scale Psychological distress Suicide ideation	+ Physical and verbal bullying → + loneliness (positive association) + Cyberbullying → + loneliness (significant positive association) Indirect relationship between cybervictimization and suicide ideation, stronger than the direct one
Jackson & Cohen	2012	USA	CS	N= 192 AR: 3rd to 6th grade M age= not provided 51.5% girls	Study the association between peer-victimization and cybervictimization and psychosocial functioning (including loneliness)	Peer victimization Cybervictimization Loneliness Other social variables	Cybervictimization + perceived stress, loneliness, depressive symptoms and psychological distress (mediators) → ↑ suicidal ideation
Jensen-Campbell et al	2017	USA	LS	N= 1073 AR: 3rd, 5th, 6th and 9th grades M age= not provided 49.7% girls	Study the trajectories of victimization and its impact in health	Peer-victimization Loneliness Internalizing and externalizing problems Other health-related variables	+ Traditional victimization + loneliness + Cybervictimization + loneliness
Jiménez et al	2009	Spain	CS	N= 565 AR: 11–18 M age= 13.6 49% girls	Study the impact of community involvement in loneliness	Peer victimization Loneliness Other personal and social variables	Constantly victimized children in school → + loneliness in 9th grade than never-victimized children Escaped victims → + loneliness than non-victims
Kaarikainen et al	2025	Finland	Qualitative	N= 896 AR: youth M age= not provided Gender: not provided	Study the experiences of loneliness in young people	Adolescents with higher feelings of loneliness → + likelihood to be target of peer harassment Most expressed concept: loneliness related to bullying	

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Kochenderfer & Ladd	1996	USA	LS	$N=200$ AR: 5–6 $M\text{ age}=5.5$ 47.5% girls	Analyze the prevalence of peer-victimization and its relation to school adjustment	Peer-victimization Loneliness Other adjustment variables	T1 all types of peer-victimization → + T2 loneliness
Kochenderfer-Ladd & Wardrop	2001	USA	LS	$N=388$ $M\text{ age}=5.5$ 50.2% girls	Predict loneliness from changes in peer-victimization	Peer-victimization Loneliness Social Satisfaction	Emergent and chronic peer-victimization are related to increased loneliness
Košir & Žugelj	2023	Slovenia	CS retrospective	$N=200$ AR: no data $M\text{ age}=19.84$ 74% girls	Explore the role of retrospective victimisation as a predictor of loneliness	Current and retrospectively reported victimisation	Retrospective victimisation → + current loneliness
Ladd et al	2019	USA	LS	$N=383$ AR: no data $M\text{ age}=5.50-17.89$ 50.4% girls	Study associations during the duration of peer victimization and social anxiety and preference for solitude since early childhood to late adolescence	Peer victimization Social anxiety Preference for solitude	Chronic victims → + growth and maintenance of preference for solitude over time (from age 5 to 18)
Larrañaga et al	2016	Spain	CS	$N=813$ AR: 12–18 $M\text{ age}=14.38$ 54.6% girls	Analyse the feelings of loneliness and parent-child communication in adolescents victims of cyberbullying	Cyberbullying victimisation Loneliness Parent-child communication	Differences in loneliness based on cyberbullying victimization severity: Severe victimization → ↑ (significant) loneliness than non-involved or occasional victimization Daily victimization → (positive association) avoidant communication with mother → x (interaction) ← loneliness
							Daily victimization → ↓ reports of open communication with parents → ↑ loneliness Cyberbullying → parents' report of open communication (moderator) → ↑ loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
León-Moreno et al	2021	Spain	CS	<i>N</i> =617 AR: 10–16 <i>M</i> age=13.04 49.3% girls	Analyze the relationships between loneliness, peer-victimization and other variables	Peer-victimization Loneliness Other variables	Most victimized students → + perception of emotional loneliness Most victimized students → → positive evaluation of social network
Li et al	2019	China	CS	<i>N</i> =2969 AR: no data <i>M</i> age=15.48 55.60% girls	Study if and how parental factors can influence the feelings of loneliness of bullied adolescents	Victimization behaviors Perceived parental autonomy support Perceived parental psychological control Coping style	Autonomy support → emotion-focused coping (mediator) → loneliness in victims ↑ Autonomy support → ↓ loneliness ↑ Psychological control → ↑ loneliness Autonomy support → problem-focused coping (mediator) → loneliness Psychological control → problem-focused coping and emotion-focused coping (mediators) → loneliness
Li et al	2021	China	CS	<i>N</i> =557 AR: no data <i>M</i> age=11 50.2% girls	Study the moderating effects of social sensitivity in the relationship between cybervictimization and psychological adjustment	Cybervictimization Social sensitivity Loneliness Other variables related to adjustment	Cybervictimization → ↑ loneliness (mainly in children with high social sensitivity)
Liang et al	2025	China	CS	<i>N</i> =2514 AR: 7–13 <i>M</i> age=no data 48.7% girls	Identify factors influencing childhood loneliness	Experiences Loneliness Other mental health variables	Being bullied included in factors related to loneliness
Lissitsa & Kagan	2024	Israel	Cohort study	<i>N</i> =797 cohort AR: 18–58 <i>M</i> age Gen X=51.53 <i>M</i> age Gen Y=31.87 <i>M</i> age Gen Z=23.01 100% men	Explore the association between bullying in childhood and adverse outcomes in adulthood	Bullying in childhood Loneliness Other behaviour-related and mental health variables	Loneliness moderates association between childhood bullying and current social media addiction (Gen Z)

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Lyu et al	2023	China	LS	N= 2381 AR: no data M age= 13.38 48.8% girls	Study three models (differential exposure, differential reactivity, and exposure-reactivity) of RS, BV and loneliness	Bullying victimization Rejection sensitivity Loneliness	T2 BV → + T3 loneliness Indirect effect of T1 RS on T3 loneliness partially via T2 BV Moderating effect of T1 RS on the link between T2 BV and T3 loneliness Victims ↑ loneliness than non-victims Perceived bystander participant roles → (prediction) victim's loneliness Experiencing the present of an outsider and a reinforcer or an assistant at the event did not differ in the level of loneliness Victims that perceived the presence of a defender → ↓ loneliness that the ones experiencing the presence of an outsider, a reinforcer or an assistant
Ma & Chen	2017	Taiwan	CS	N=209 AR: no data M age= 12.8 53% girls	Examine the relationship between perception of bystander participant roles and loneliness in victims of peer-victimization	Peer-victimization Depression Social anxiety Loneliness	Victims ↑ loneliness than non-victims Perceived bystander participant roles → (prediction) victim's loneliness Experiencing the present of an outsider and a reinforcer or an assistant at the event did not differ in the level of loneliness Victims that perceived the presence of a defender → ↓ loneliness that the ones experiencing the presence of an outsider, a reinforcer or an assistant
Ma et al	2018	Taiwan	CS	N=730 AR: no data M age= 12.8 49% girls	Study the coping strategies that moderate the effect of peer-victimization on psychological distress (depression and feelings of loneliness)	Coping strategies Peer-victimization Loneliness Depression	Victimization + low level of problem-solving coping (mediator) → ↑ psychological distress (depression and loneliness) Victimization + internalizing coping (mediator) → ↑ psychological distress (depression and loneliness)

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Machimbarrena et al	2019	Spain	CS	<i>N</i> = 604 students AR: no data <i>M</i> age= 13.3 54% girls	Identify differences in bullying victimization in relation to loneliness	Personality Loneliness Victimization Aggression	Bullying victimization sig- nificantly correlated with all types of loneliness: Peer loneliness Family loneliness Relational uneasiness Isolation
Madsen et al	2024	Denmark	CS	<i>N</i> = 5382 AR: 11–15 50.6% girls	Study the association between loneliness and bullying victimization (offline and online)	Bullying at school Cyberbullying Loneliness	Strong and graded association between the variables, higher in physical bullying than in cyberbullying
Malamut et al	2021	The Netherlands	CS	<i>N</i> = 804 students AR: 11–16 <i>M</i> age= 13.6 49.8% girls	Use latent profile analysis to identify groups of victims and compare their loneliness and self- esteem levels	Peer-victimization (self- and peer-reported) Loneliness Self-esteem	Popular self-identified victims → ↓ lonely than the rest of victims Popular self-identified victims → ↑ lonely than non-victims
Matthews et al	2022	UK	LS	<i>N</i> = 2232 cohort AR: 12 – 18 51% girls	Explore the relation- ship between bullying victimization and loneli- ness from adolescence to adulthood	Bullying victimization Loneliness Symptoms of depression Symptoms of anxiety	Both occasional bullying and frequent bullying were associated with higher level of loneliness at age 18 Childhood loneli- ness → adolescent victimisation Frequent childhood bully- ing victimisation → age- 18 loneliness Frequent cybervictimiza- tion → loneliness
Murphy et al	2015	Ireland	CS	<i>N</i> = 785 AR: 15–18 <i>M</i> age= 16.20 56.1% girls	Prove a model based on the risk of psychotic experiences from child- hood negative experi- ences (loneliness and victimization) and its interaction with cogni- tive process	Early Life Experiences Social Comparison Posttraumatic Growth Peer-victimization Loneliness Psychotic Experiences	Early feelings of subordina- tion and threat + loneli- ness (moderator) → vic- timization and psychotic experiences
Olenik-Shemesh et al	2012	Israel	CS	<i>N</i> = 242 students AR: 13–16 <i>M</i> age= 14.40 51.6% girls	Examine the association between cybervictimi- nation, loneliness and depressive mood	Cyberbullying Loneliness Depression	Cybervictims → + emo- tional and social loneli- ness than non-victims

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Owusu et al.	2011	Ghana	CS	<i>N</i> = 7137 AR: no data <i>M</i> age= no data 44% girls	Study the relationship between bullying victimization and psychological variables in senior high school	Bullying Loneliness Other health-related variables	Bullied students + lonely than those who were not bullied
Pengpid & Petzer	2019	Indonesia, Philippines, Thailand and Timor-Leste	CS	<i>N</i> = 33,183 AR: no data <i>M</i> age= 14.6 51.1% girls	Assess the relationship between bullying victimization and psychosocial problems in adolescence	Bullying Loneliness Other health-related variables	+ Bullying victimization + loneliness
Putra & Dendup	2020	Indonesia	CS	<i>N</i> = 79,601 AR: 13–18 52.99% girls	Identify adverse health and behavioural outcomes derived from bullying victimization	Bullying victimization Loneliness Other variables	Bullying victimization increased the likelihood of loneliness about 2.9 times
Quintana-Orts et al	2021	Spain	CS	<i>N</i> = 1929 students AR: 12–19 <i>M</i> age= 14.65 52.6% girls	Examine loneliness mediation in the association between peer-victimization and suicidal ideation	Traditional victimization Cybervictimization Loneliness Suicidal ideation Emotional intelligence	Traditional bullying → loneliness Loneliness mediated association between traditional bullying → suicide ideation Cybervictimization no association with loneliness EI buffers the impact of traditional victimization on loneliness
Quynh Ho & Nguyen	2023	Vietnam	CS	<i>N</i> = 980 adolescents AR: no data <i>M</i> age= 16.39 66.1% girls	Study the indirect effect of cyber-victimization on the relationship between self-disclosure on social media and loneliness	Loneliness Cyberbullying victimization Self-disclosure on SNSs	Cyber victimization → + loneliness Self-disclosure → cyber victimization (indirect effect) → + loneliness
Sahin	2012	Turkey	CS	<i>N</i> = 389 AR: secondary school <i>M</i> age= no data 59.1% girls	Study the relationship between cyberbullying and loneliness	Cyberbullying Loneliness	+ Loneliness + Cybervictimization
Sarıçam et al	2016	Turkey	CS	<i>N</i> = 326 AR: 13–18 <i>M</i> age= 16.24 51.23% girls	Analyse if loneliness mediates the association between perceived social competence and cyberbullying	Perceived social competence Cyberbullying Loneliness	Cyberbullying → + loneliness social competence when loneliness: the relationship between perceived social competence and cyberbullying decreased

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Schacter & Juvonen	2018	USA	CS	N=5991 AR: middle school M age = no data 52% girls	Test the protective effects of prosocial norms in school and friendships on peer-victimization	Peer victimization Loneliness Friendships Prosocial norms in school Prosocial behaviour	When no friends: victimization x schools with less prosocial norms → loneliness Victims with no friends in prosocial schools → ↓ lonely than friendless victims in less prosocial schools
Schäfer et al	2004	Spain, Germany & UK	CS	N=884 AR: no data M age = no data 65% women	Study long-term correlated of victimization	Retrospective victimization Emotional loneliness and social isolation Other variables	Emotional loneliness is different regarding victims and non-victims, more in stable victims than those who were victims in primary or secondary school
Schultze-Krumbholz et al	2012	Germany	Mixed Methods	N=223 and 412 AR: no data (grades 7, 8, 9, 10) M age= 8.9 52.8% girls	Study, longitudinally, the internalising and externalising problems of cyberbullying	Cyberbullying and cyber-victimization Loneliness Other externalising and internalising variables	Boys: + relational cybervictimization + loneliness Victimization → depression → loneliness
Segrin et al	2012	USA	CS retrospective	N=111 AR: no data M age=20.77 67.5% girls	Explore if parental loneliness, family of origin and a story of being bullied are factors for young adults' loneliness	Bullying Loneliness Other personal and family variables	A story of being bullied predicts young adult loneliness
Sette et al	2023	Italy	CS	N=666 AR: 7-11 M age=8.9 52.8% girls	Study the direct and indirect links between child's social relationships, loneliness and academic self-perception	Peer victimization Loneliness Other relationship- and academic- related variables	↑ victimization ↑ children's loneliness ↑ victimization ↑ children's loneliness → ↓ positive academic self-perception
Shao et al	2014	China	CS	N=2457 AR: no data M age=12.6 47.0% girls	Study the effects of peer factors on the differences between victimized behaviours in adolescents	Anxiety Depression Loneliness Bullying Peer and teacher support Academic achievement	Aggressive victims → + loneliness Pure-victims → + loneliness Pure-victims > aggressors Being bullied → + loneliness
Sharma et al	2017	Korea	CS	N=4122 AR: no data M age = no data 52.4% girls	Examine if bullying is associated with psychological distress and other variables	Bullying Loneliness Use of drugs Other social and health-related variables	Being bullied → + loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Shell et al	2014	USA	LS	<i>N</i> =688 AR: no data <i>M age</i> =8.66 51.5% girls	Test if anxious solitude in the middle school transition would predict victimization	Victimization Anxious solitude Peer exclusion	Anxious solitude→+ victimization in both elementary and middle school
Shi & Wang	2023	China	CS	<i>N</i> =3363 AR: 10.75–19.33 <i>M age</i> =15.67 55% girls	Investigate if life satisfaction and loneliness mediate the association between victimization and Internet addiction	School victimization Loneliness Life satisfaction Internet addiction	Victimization→life satisfaction→loneliness→Internet addiction
Shin	2010	Korea	CS	<i>N</i> =605 AR: 4th, 5th and 6th grade <i>M age</i> =no data 45.8% girls	Study the psychosocial and friendship characteristics of students in bully/victim situations	Loneliness Victimization Friendship Social anxiety	Aggressive victims→+ loneliness than bullies and controls Aggressive victims with reciprocal friends→— loneliness than aggressive victims with no reciprocal friends
Shukla & Chouhan	2023	India	CS	<i>N</i> =451 Primary, middle and high school students 40.36% girls	Study the association between cyberbullying victimization and feelings of loneliness and the role of coping strategies and emotional intelligence in this association	Cyberbullying victimization Coping strategies Emotional Intelligence Loneliness	CB victimization→+ loneliness CB victimization + supporting→↓ loneliness
Storch & Masia-Warner	2004	USA	CS	<i>N</i> =561 girls AR: 13–17 <i>M age</i> =14.9 100% girls	Examine the relationship between overt and relational victimization and loneliness	Peer-victimization Loneliness Other personal and social variables	Relational and overt victimization→loneliness Relational victimization→+ loneliness when ↓ low levels of prosocial behaviour Relational victimization→+ loneliness, but less when high levels of prosocial behavior
Storch et al	2003	USA	CS	<i>N</i> =205 AR: 10–13 <i>M age</i> =10.83 55% girls	Study the association between relational and overt victimization and depressive symptoms, fear of negative evaluation, social avoidance and loneliness	Relational and overt victimization Depressive symptoms Fear of negative evaluation Social avoidance Loneliness	Overt-victimization→loneliness Relational victimization no association with loneliness when controlling for overt-victimization

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Sugimura et al	2017	USA	LS	<i>N</i> =576 AR: from elementary to middle school <i>M</i> age=7.96 52.6% girls	Explore how social behaviours impact victimization across time	Victimization Aggression Anxious solitude	Anxious solitude+aggressive behaviour → ↑ risk of victimization
Swirsky & Xie	2021	USA	LS	<i>N</i> =321 AR: 12.9—14.25 <i>M</i> age=13.01 55% girls	Examine three peer-related factors (peer support, peer preference, and social status) as moderators between peer victimization (social and overt) and adjustment (loneliness and aggression)	Peer-victimization Loneliness Peer-support Aggression Social status Peer preference	Overt victimization→ peer preference (moderator)→ loneliness (when high and not low preference victims) Social victimization→ peer preference (moderator)→ loneliness (↑ when high preference victims)
van den Eijnden et al	2014	The Netherlands	LS	<i>N</i> =831 AR: 11–15 <i>M</i> age=not provided 50.3% girls	Compare the antecedents and consequences of peer-victimization	Aggression and (cyber) victimization Loneliness Social anxiety	Loneliness T1 → ↑ online victimization T2 and face-to-face victimization T2 Online victimization T1 → ↓ Loneliness T2
Wachs	2012	Germany	CS	<i>N</i> =517 AR: 11–17 <i>M</i> age=not provided 50.8% girls	Investigate similarities and differences in the roles of bullying in cyberbullying when it comes to emotional characteristics	Roles in bullying and cyberbullying Emotional difficulties (loneliness) and social difficulties Moral disengagement	Loneliness+unpopular + friendless → ↑ risk for cybervictimization Lonely at school → ×4.5+ odds for traditional victimization and ×3+ times for cybervictimization than students with lower levels of loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Wang et al	2021	China	LS	N=800 AR: 8–14 M age=10.5 43.8% girls	Study the relations between bullying victimisation, school belonging, covitality and loneliness	School belonging Covitality Loneliness Victimisation	Verbal victimisation did not predict loneliness when controlling for relational and physical victimisation Loneliness T1 → ↓ verbal victimisation T2 Loneliness T1 did not predict other types of victimisation at T2 (only verbal) ↑ Covitality buffers effect of verbal victimisation (not physical or relational) on loneliness at T1 (only cross-sectional) Victimisation T1 → ↑ Loneliness T2
Wang et al	2023	China	CS	N=3600 AR: no data M age=16.21 36.64% girls	Explore the mediating roles of perceived social support and loneliness in the effect of childhood abuse on adolescent victimization	Childhood abuse Perceived social support Loneliness Victimization and bullying	Childhood emotional abuse → adolescent loneliness (mediator) → victimization
Wang et al	2024	China	CS	N=552 AR: 13–16 M age=14.8 52% girls	Test the relationship between overt and relational victimization and suicidal ideation through loneliness	Phobic anxiety Suicidal ideation Loneliness Bullying victimization	Relational victimization → loneliness (indirect) → suicidal ideation
Woods et al	2009	UK	CS	N=401 AR: 7–11 M age=13.5 53% girls	Explore the levels of loneliness in victims and its relation with friendship	Victimisation Loneliness Strengths and difficulties Friendships	Relational victims (not direct) → ↑ loneliness than non-victims ↑ quality of friendship → ↓ loneliness in victims and neutrals (but more in victims)
Wright	2016	USA	LS	N=568 AR: 13–15 M age=13.31 53% girls	Study the effect of parental mediation strategies in the relation between cyberbullying and psychosocial adjustment difficulties	Victimisation Cybervictimization Technology use mediation Other psychological variables	Cyberbullying victimisation T1 → T1 and T2 loneliness

Table 3 (continued)

Author	Year	Location	Type	Final sample	Objective	Assessed variables	Results
Wright & Wachs	2019	USA	LS	N=416 AR: no data M age=13.89 46% girls	Study the moderating effect of ethnicity in the associations among cyber victimization, and negative psychological consequences (i.e., loneliness)	Cybervictimization Face to face victimization Depression Anxiety Loneliness School belongingness	T1 cybervictimization → ↑ T2 loneliness Face-to-face victimization → ↑T2 loneliness
Wu et al	2024	China	LS	N=416 AR: no data M age=13.34 51.6% girls	Test the effect of cyberbullying on loneliness	Cyberbullying Loneliness Social support	T1 cyberbullying → ↑ T2 loneliness Social support partially mediates the association Loneliness → being bullied Loneliness mediates neuroticism → being bullied association Loneliness mediates agreeableness → being bullied association ↑ Victimization → ↑ loneliness
Zhang et al	2021	China	CS	N=1631 AR: 11–21 M age=15.39 53.7% girls	Explore the mediating role of loneliness in the relationship between personality traits and bullying victimization	Peer-victimization Personality traits Self-concept Loneliness	Loneliness mediates Peer-victimization + loneliness (mediator) → ↑ disruptive behaviors Peer-victimization + loneliness (mediator) → ↓ mental well-being
Zhang et al	2023	China	CS	N=780 AR: no data M age=15 53.7% girls	Study the influence of peer victimization on mental well-being and disruptive behaviors and the mediating role of loneliness and Internet addiction	Peer-victimization Mental well-being Disruptive behaviors Loneliness Internetaddiction	Relational victimization → ↑ loneliness Relational victimization (ostracism, gossip, exclusion) → ↑ rejection sensitivity → ↑ loneliness Over victimization no effect on loneliness
Zimmer-Gembeck et al	2014	Australia	CS	N=366 AR: 10–14 M age=12.1 50.5% girls	Analyse the direct and indirect relationship between overt/relational victimization and friendship conflict with loneliness	Loneliness Depressive symptoms Rejection sensitivity Peer victimization Friendship conflict	

Note Cross sectional (CS). Longitudinal Study (LS). Age Range (AR)

of loneliness in late adolescence (Matthews et al., 2022). In addition, having experienced social peer victimization in high school can predict loneliness in university students (Buchanan & McDougall, 2021). These findings correspond with the results of qualitative studies (Berguno et al., 2004; Kaarakainen et al., 2025).

Multiple factors influence the association between bullying victimization and loneliness. Several factors related to social context (peers and social network sites) play significant roles in this relationship. For instance, bystanders play a significant role in the association between loneliness and bullying victimization. Victims who perceived the presence and support of a defender during the victimization event reported lower levels of loneliness than those who perceived the presence of an outsider (i.e., a bystander who ignores the scene), a reinforcer (i.e., a bystander who observes the event and encourages the aggressor), or an assistant (i.e., one who joins the bully) (Ma & Chen, 2019).

Of the 87 studies that reported sex distributions (Table 3), only 6 specifically analyzed sex differences in the relationship between victimization and loneliness. Their findings suggest that the correlation between social support and reduced loneliness was stronger for victimized girls than for boys (Carney et al., 2020). Other mediator variables, such as negative social comparison, problematic use of social networking sites, rumination, rejection sensitivity, social connectedness, physical activity, covitality, coping strategies, and school prosocial culture, also appear to play a key role in the adjustment of victims. Finally, loneliness can moderate the association between peer victimization and other mental health and social variables, including dating violence, child emotional abuse, disruptive behaviors, mental well-being, suicide, and social reputation.

Cyberbullying Victimization and Feelings of Loneliness

Cyberbullying victimization was a target variable in 12 of the 100 studies, with 13 additional studies examining both face-to-face bullying and cyberbullying. While most studies identified a relationship between cyberbullying victimization and feelings of loneliness, some did not find a significant association between these variables. According to Table 3, all 74 studies that examined traditional bullying reported significant associations with loneliness, while 5 (20%) of the 25 studies that examined cyberbullying found non-significant relationships. Three of the 5 studies used single-item or brief (≤ 5 items) measures of loneliness. Specifically, loneliness has not been identified as a significant predictor of cyberbullying victimization (Brewer & Kerslake, 2015). Its relationship with cybervictimization ceased to be significant after controlling for face-to-face victimization (Espinoza et al., 2020).

Conversely, cyberbullying victimization and feelings of loneliness correlated positively and significantly in numerous studies, both cross-sectional and longitudinal, especially in severe cases or children with high levels of social sensitivity. A longitudinal study found that Time 1 cybervictimization predicted Time 2 feelings of loneliness, indicating that individuals who experience cyberbullying may have a greater risk of exhibiting higher levels of loneliness one year later. Research shows that both direct and indirect cyberbullying victimization and self-assessment of one's social network present a negative and significant correlation (Wright & Wasch, 2019).

Adolescents targeted by different types of cyberbullying (e.g., threats, isolation, and identity theft) tend to assess the available social support more negatively than those who are not cybervictims. Furthermore, both direct and indirect cyberbullying victimization positively and significantly correlated with emotional loneliness (Cava et al., 2020). Concerning severity, both moderate and severe cybervictimization positively associated with feelings of loneliness, but significant differences were found between groups based on severity: Severely victimized youth reported higher levels of loneliness than noninvolved or occasionally victimized adolescents (Cañas et al., 2020a, 2020b; Larrañaga et al., 2016; Matthews et al., 2022).

At the longitudinal level, loneliness (including loneliness felt at home in a family context) appears to predict cybervictimization more frequently than cybervictimization predicts loneliness. In addition, cyberbullying victimization appears to function as a mediator and have an indirect effect on the relationship between self-disclosure and feelings of loneliness. That is, while higher levels of online self-disclosure are associated with lower levels of loneliness, they increase the risk of becoming a cybervictim, as cyberbullies may use that information for harassment. Therefore, online self-disclosure can increase feelings of loneliness when the self-disclosing individual becomes a target of cybervictimization (Quynh Ho & Nguyen, 2022). Moreover, while reports of avoidant communication with mothers and loneliness increased the likelihood of being cyberbullied, parents' reports of open communication moderated the association between loneliness and cybervictimization. Cybervictims who maintained an open communication with their family reported lower levels of loneliness than those who did not (Larrañaga et al., 2016). One cross-sectional study found an indirect relationship between cybervictimization and suicidal ideation mediated by loneliness and other mental health variables (e.g., perceived stress, psychological distress, and depressive symptomatology), with loneliness being one of the strongest predictors of suicidal ideation in cybervictims (Iranzo et al., 2019).

Discussion

A growing body of literature addresses the nature of bullying and cyberbullying victimization and other social problems related to loneliness (Ma & Chen, 2019; Şahin, 2012; Söderberg & Björkqvist, 2020; Twenge et al., 2021). However, this systematic review was conducted in view of the absence of a comprehensive and broad analysis of the body of knowledge accumulated on the importance of loneliness as a risk or protective factor of bullying. This systematic review examined the relationships of bullying and cyberbullying victimization to loneliness across 100 studies. The findings revealed a complex, often bidirectional relationship that varies depending on the developmental stage, context, and measurement approach.

Conceptualization of Loneliness

Regarding the first objective, heterogeneity in the conceptualization of loneliness was found across the 100 studies. Most studies emphasized the emotional aspect of loneliness and the distressing feelings that arise from the lack of expected social ties. Many studies did not provide a clear definition of loneliness. This conceptual ambiguity was particularly common in the studies that used established measurement tools, perhaps reflecting the assumption that the construct is already sufficiently defined by the measurement instrument itself. As the conceptualization of one term shapes its assessment and may possibly affect the interpretation of the results, future studies on this topic should address the type of loneliness being assessed (emotional or social) to operationalize and delimit the term in each context (Maes et al., 2022). This conceptual clarification is essential for advancing theoretical understanding, as different dimensions of loneliness may relate to victimization through distinct psychological mechanisms. For instance, emotional loneliness may be connected to victimization through affect regulation pathways, while social loneliness might operate through perceptions of peer rejection and social exclusion.

On the basis of the synthesis of the conceptualizations of loneliness and the broader literature, the following definition is proposed: Loneliness is a multidimensional subjective experience characterized by a perceived discrepancy between desired and actual social relationships, resulting in emotional distress that may manifest differently across social contexts (e.g., peer relationships and family) and developmental stages. Unlike solitude, which refers to the objective state of being alone and can be positive or neutral, loneliness represents a negative emotional response to perceived social isolation.

Assessment of Loneliness

As recent systematic reviews have addressed the measurement tools used to assess both bullying (Vessey et al., 2014; Xie et al., 2023) and cyberbullying (Chun et al., 2020), the second aim of this study was to gather information about the tools used to assess loneliness. The most frequently used tool was the UCLA Loneliness Scale in its various versions (Russell et al., 1978). The analysis of the assessment methods revealed substantial methodological variation across the studies, with a significant number of studies using the UCLA Loneliness Scale or its variants, and several other studies using single-item measures. This methodological heterogeneity might have contributed to the inconsistencies of the findings. However, while most studies used a single measure of loneliness to assess general feelings of loneliness, others introduced the term in instruments that measured broader concepts, embedding loneliness within these wider constructs. The heterogeneity in assessment approaches points to the strengths and weaknesses of each method for different research objectives (Maes et al., 2022). This measurement diversity reflects broader theoretical tensions in the field between conceptualizing loneliness as a unidimensional and conceptualizing it as a multidimensional construct (Walsh et al., 2025). Single-item and unidimensional measures align with an understanding of loneliness as a global emotional experience, while multidimensional approaches reflecting the recognition that loneliness can be domain specific, with potentially different etiologies and consequences in different relational contexts. Therefore, future research should distinguish the different types of loneliness being assessed (social vs. emotional loneliness, and loneliness vs. solitude) and determine whether one type leads to another and how they shape adolescents' experiences. It is essential to adjust the focus and not to mistake the general distressing feeling stemming from a lack of social ties with the desire to be by oneself (Weinstein et al., 2021). Lastly, future qualitative studies on the topic would be key to acquiring a deeper knowledge about loneliness experiences and their multiple manifestations (Kirwan et al., 2025).

Relationship Between Victimization and Loneliness

The third objective was to collect data on the relationships between peer victimization, cybervictimization, and loneliness. The results indicate that this relationship is moderated by developmental stage, with stronger associations during adolescence (ages 12–18 years). This aligns with theoretical perspectives that suggest that adolescence is a critical period when peer relationships become central to identity formation (Branje et al., 2021) and sociocognitive abilities are developing but not yet mature (Blakemore & Mills, 2014).

The association between loneliness and bullying victimization was nuanced by interactions with the third variable. One key variable was the role of bystanders: The adolescents who had a defender present during victimization were less likely to feel lonely than those who experienced the presence of outsiders or reinforcers (Ma & Chen, 2019). This finding aligns with the social referencing theory, suggesting that victims interpret bystanders' reactions as indicators of their social value and acceptance.

The findings revealed sex differences in how social support mitigates loneliness after victimization. The protective effect of social support appears stronger for girls than boys, which suggests that intervention strategies might need gender-specific tailoring. These differences may reflect social developmental patterns wherein girls tend to establish more intimate friendships, whereas boys often engage in more activity-based peer interactions (Rose & Rudolph, 2006).

One longitudinal study found that peer preference plays a key role in the adjustment of victims. The higher the level of social preference, the higher the increase in loneliness. This counterintuitive finding points toward self-blaming or self-attributing tendencies in victims, as being victimized despite being a highly preferred peer seems atypical and more easily attributed to self-blame (Swirsky & Xie, 2021). Negative cognitive styles play a key role in developing a negative conception of self and peers (Kellij et al., 2022). Even if loneliness experiences are highly individual, three factors may interplay with its development: (a) level of vulnerability to social disconnection, (b) ability to self-regulate the emotions associated with feeling isolated, and (c) mental representations and expectations of others. In addition, loneliness has been related to increased worry and avoidance of social threats (Cacioppo & Cacioppo, 2018; Cacioppo & Patrick, 2008). While sociocognitive skills are significantly related to loneliness, high mentalization abilities may reduce feelings of loneliness and depressive symptoms. Higher levels of mentalization correlate with lower levels of loneliness, which explains why adolescents with more developed skills for understanding others' thoughts and emotions are less likely to experience loneliness (Bosacki et al., 2020; Caputi et al., 2017).

When comparing traditional bullying and cyberbullying, this review identified important distinctions. Longitudinal studies have shown discrepancies: While some found a direct relationship between cybervictimization and loneliness (Wright & Wasch, 2019), others indicated that this relationship only exists when face-to-face victimization is also present (Espinoza et al., 2020). Further research is needed to clarify the implications of cybervictimization on loneliness.

The implications of these findings for anti-bullying programs are significant. Interventions should address the social ecology of bullying by incorporating bystander training that explicitly teaches peers how to defend victims. School

psychologists should implement developmentally tailored approaches, with particular attention to adolescence as a critical period. The sex differences in protective effects suggest that interventions may need to be tailored differently for boys, potentially emphasizing activity-based social support mechanisms rather than emotional support alone. Moreover, programs that address cognitive attribution styles may be crucial in breaking the victimization–loneliness cycle. Digital literacy curricula should incorporate specific content that addresses the unique dynamics of cyberbullying and its relationship to offline social experiences.

Regarding solitude, which is often mistaken for loneliness, especially concerning isolated youth, affinity for solitude does not appear to be a risk factor of peer victimization (Borg & Willoughby, 2022) or other adjustment problems (Daly & Willoughby, 2020). However, it has also been identified as a consequence of victimization or an antecedent for future social difficulties (Corsano et al., 2019). This relationship is worth examining in future studies. This distinction between solitude and loneliness has important implications for intervention that suggest that programs should not necessarily aim to reduce all solitary behavior but rather to ensure that solitude remains a voluntary, positive experience rather than a response to social exclusion or victimization.

Implications for Practice

Given the findings across the three aims, several key implications for practice emerged. First, anti-bullying programs should target both the social components of bullying and its cognitive dimensions. Educators should develop preventive strategies that consider the protective role of friendship during adolescence while addressing attribution processes that may lead to self-blame. Second, interventions should move beyond asking bystanders not to join the bully to actively encourage defenders. The friendship protection hypothesis (Boulton et al., 1999) suggests that cultivating supportive peer relationships may have both preventive and remedial functions. Third, psychoeducational initiatives should distinguish between loneliness and solitude, destigmatizing the latter while addressing the former. Moreover, all components of loneliness, not only social skill deficits, should be addressed (Qualter, 2003). Finally, when designing interventions for cyberbullying victims, practitioners should consider the potential co-occurrence with traditional bullying and tailor approaches. Digital literacy education should help youth navigate online spaces in ways that promote meaningful connections while minimizing their vulnerability to victimization.

Limitations

This systematic review has several limitations that should be acknowledged. First, while the database search yielded a large number of results, only a limited number met the rigorous inclusion criteria. As a result, it is possible that relevant and high-quality studies were excluded, especially those in gray literature, books, theses, and articles not written in English or Spanish. Second, although some longitudinal studies were included, most of the evidence base remains cross-sectional. This limits the possibility of establishing temporal or causal relationships between the variables. Third, there were notable inconsistencies in how loneliness was conceptualized and measured across the studies. The differences in the instruments, cutoff points, and subscales used reduced comparability and hindered the development of a shared theoretical framework. Fourth, cultural generalizability was limited, as most studies were conducted in Western settings. Even though some studies used the adapted versions of loneliness scales in various languages, only few examined whether the construct was interpreted differently across cultures. Fifth, the quality of the studies was assessed using the NOS. However, because there were only a few case-control studies, several NOS criteria were not directly applicable. Thus, the tool was used primarily as a guiding framework. Studies with lower NOS scores were still included in the qualitative synthesis, as low scores may reflect strict methodological benchmarks rather than poor study quality. Sixth, reliance on self-report measures in most studies raises concerns about shared method variance, which may artificially inflate associations. Multi-method approaches remain underutilized in this field. Finally, although many studies highlighted the potential role of third variables—such as personality traits, life history, or contextual factors—there is still limited understanding of how these elements interact with the relationship between loneliness and victimization.

Future research should employ multi-method assessment approaches, compare different dimensions of loneliness, conduct fine-grained longitudinal studies across developmental transitions, examine cross-cultural variations, and design intervention studies that target the specific mechanisms identified in this review. Educational contexts should consider the multidimensional nature of loneliness in adolescence, focusing particularly on cognitive components, the protective role of friendship, and bystander dynamics.

Conclusion

Bullying, cyberbullying, and loneliness constitute highly prevalent phenomena that severely affect adolescents' psychological well-being. Despite the large body of research on the relationships between bullying, cyberbullying, and

loneliness, there is still a lack of integration of results and a broader view on the topic. This systematic review addressed this research gap by integrating the findings of 100 studies that met the eligibility criteria. Regarding loneliness conceptualizations, most definitions focus on the affective component of the variable. However, regarding the multidimensional nature of the construct, the way it is conceptualized can shape its assessment and thus its results. Along these lines, this methodological heterogeneity found in terms of the assessment may also contribute to inconsistencies in findings. The relationship between victimization and loneliness varied by type of loneliness (peer, family, or emotional loneliness), victimization form (physical, verbal, or relational), and severity, with longitudinal studies confirming bidirectionality. Factors such as bystander behavior, cognitive attribution styles, and mentalization abilities can significantly influence this relationship. This review highlights the ongoing need to refine loneliness research methods to deepen the understanding of victimization's role in adolescent research.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s40894-025-00266-2>.

Authors' Contributions EGA participated in the design and conceptualization of the study, conducted literature searches, carried out the screening of results and the selection of studies, did the data extraction, carried through the analysis for the quality assessment and risk of bias and wrote the first draft; JCC participated in the design and conceptualization of the study, acquired the funding resources, contributed to the selection of studies, took part on the quality assessment and reviewed and edited the manuscript; JOB participated in the design and conceptualization of the study, contributed to the screening and selection of studies, took part on the quality assessment and reviewed and edited the manuscript; RE participated in the design and conceptualization of the study and reviewed and edited the manuscript; JMM participated in the design and conceptualization of the study, carried out the screening and selection of studies, carried through the analysis for the quality assessment and risk of bias and wrote, reviewed and edited the manuscript. All the authors read and approved the final draft.

Funding Open Access funding provided thanks to the CRUE-CSIC agreement with Springer Nature. This research was funded by the University of the Basque Country (UPV/EHU) through the Grant PIF 2022 (PIF22/244), the Basque Government (IT1450-22), the Institute of Transference and Research [Instituto de Transferencia e Investigación (ITEI)] of the Universidad Internacional de La Rioja (UNIR) (ITEI-B23-006 & B24-001) and the Universidad Internacional de La Rioja through Vicerrectorado de Investigación, Proyecto RETOS 2024-2026/1.

Declarations

Conflict of Interest The authors declare not having any conflict of interest.

Preregistration The protocol for this systematic review was preregistered in the International Prospective Register of Systematic Reviews

(PROSPERO: CRD42022380369). <https://www.crd.york.ac.uk/PROSPERO/view/CRD42022380369>

Generative AI and AI-Assisted Technologies No IA or AI-assisted technologies were used in this study.

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