A systematic literature review on the link between peer victimization and literacy during adolescence

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Peer victimization and literacy failure are on the rise. Yet, there is little understanding of their interplay, particularly during adolescence—a period of heightened sensitivity to social–emotional and academic maladjustment. Guided by the Developmental Cascades Framework, this systematic literature review elucidated how peer victimization and literacy are directly and indirectly linked via negative behaviors, sex, and grade. A total of 21 studies were published between 1993 and 2022 that focused on typically developing 5th- to 8th-graders. Sample sizes ranged from 140 to 86,372 participants. Results indicated a bidirectional connection between increased peer victimization and poorer literacy. Preliminary evidence was found in support of an indirect link via internalizing behaviors, externalizing behaviors, and school engagement, but ambiguous support for the effect of sex. Taken together, adolescents who experience peer victimization are likely to struggle in literacy, as well as exhibit negative behaviors that may only serve to exacerbate this connection.

KEYWORDS

peer victimization, bullying, literacy, behavioral problems, school engagement

1 Introduction

The successful transition into adulthood requires the acquisition of academic and social–emotional proficiencies during adolescence (Blakemore and Mills, 2014; Lerner et al., 2010). However, recent U.S. school closures in response to the COVID-19 pandemic have adversely impacted these two crucial aspects of adolescent development. In 2019, literacy underachievement was reported in 27% of eighth graders (Irwin et al., 2022; U.S. Department of Education, 2022). In 2022, 30% of eighth graders demonstrated literacy underachievement, a 3% increase (U.S. Department of Education, 2022). Equally troubling is the impact of school closures on adolescents' ability to connect with peers (e.g., Foulkes and Blakemore, 2021), particularly given the rising reports of bullying (i.e., peer victimization). Peer victimization is defined as the physical (e.g., hitting, punching, kicking) or non-physical (e.g., rumor spreading, threatening, teasing) attempts to cause fear, chagrin, or injury upon others (Olweus and Pellegrini, 1996). In 2019, peer victimization rates for 12–18-year-olds were over 22% (Irwin et al., 2022). During the pandemic, peer victimization rates dropped; an effect that has been attributed to school closures (e.g., Bacher-Hicks et al., 2022). Yet, following the return to in-person instruction, peer victimization rates are on the rise and anticipated to exceed pre-pandemic rates (Bacher-Hicks et al., 2022; Schacter et al., 2023).

Peer victimization and literacy have a significant impact on various aspects of adolescents' lives. Both issues affect adolescents' academic performance (Buhs and Ladd, 2001; Savolainen et al., 2008), social–emotional development (Davis et al., 1999; Morrow et al., 2019), and mental health (Finkelhor et al., 2007; Boyes et al., 2018). Adolescents who experience peer victimization often struggle with internalizing symptoms of anxiety and depression (Sheppard et al., 2019; Sweeting et al., 2006), which can impact their ability to learn (Zychinski and Polo, 2012). Similarly, adolescents who struggle with literacy may experience emotional distress and low self-confidence (Arnold et al., 2005; Lee and Jonson-Reid, 2016), hindering academic success (Hwang et al., 2016; Pedersen et al., 2019) and limiting social interactions (Connolly, 1989; Salavera et al., 2019). While peer victimization and low literacy impact similar areas of adolescents' lives, intervention and instructional efforts remain focused on either peer victimization or literacy, never both (Kim et al., 2020; Pellegrini, 2002). Additionally, there is insufficient understanding of the association between peer victimization and literacy, particularly during adolescence, with few studies investigating this relation in depth. With school reopenings on the rise, understanding how peer victimization and literacy are connected is essential to curating a safe and supportive learning environment, one that fosters adolescents' academic and social–emotional development. Increased attention to the peer victimization-literacy connection will also prompt critical conversation and debate surrounding its nature and potential complexities and nuances, which in turn can lead to further investigation and the development of more effective interventions.

This systematic literature review is guided by the *Developmental Cascades Framework* (Masten and Cicchetti, 2010), which theorizes that maladaptation in one area of development, such as difficulties in peer relations, can negatively impact functioning in other domains, such as academic development. This framework posits that interactions between developmental domains can occur through various pathways—whether direct and unidirectional, direct and bidirectional, or indirect—highlighting the complex and interrelated nature of developmental processes. The *Developmental Cascades Framework* provides a form to test hypotheses that account for the complexity of the peer victimization-literacy connection. Thus, the goal of this review is to determine the nature of the connection between peer victimization and literacy, and what, if any, factors mediate this connection.

1.1 Peer victimization theories and interventional aims

Peer victimization and literacy are typically studied using different theories and have different interventional aims. The peer victimization literature is guided by theories that focus on the predictors, correlates, and outcomes of peer victimization, to identify those most at risk for peer victimization, and subsequently, investigate the consequences of peer victimization (see Hong and Espelage, 2012 for a review). For example, researchers have capitalized on the *Transactional Model of Development* (Sameroff, 2009) to identify individual (e.g., social–emotional skills) and contextual (e.g., peer, family, school) factors that place adolescents at risk for peer victimization. You and Yoon (2016) found that adolescents who face peer victimization and victimize their peers were more likely to be male, have higher levels of aggression, and

suffer parental abuse. Further, most peer-victimization interventions aim to reduce peer victimization by shifting the school climate, adolescents' behaviors, or attitudes about bullying (see Smith et al., 2004 for a review). For example, O'Moore and Minton (2005) reported a significant reduction in reports of peer victimization after implementing an intervention that supported and assisted schools with developing anti-bullying policies and school climates. Thus, research into peer victimization is guided by a set of theories and interventional efforts aimed at reducing peer victimization.

1.2 Sociocognitive literacy theories and interventional aims

Much sociocognitive literacy research is guided by theories that focus on the predictors, correlates, and outcomes of literacy interventions, aiming to improve reading and writing performance (e.g., Langer, 1978; John-Steiner and Mahn, 1996). Despite sharing a common goal of improving literacy, cognitive, sociocultural, and developmental theories all provide different lenses through which to view literacy. Cognitive theories of literacy often attempt to account for a specific aspect or skill underlying literacy. Indeed, Perfetti and Stafura (2014) and Gough and Tunmer (1986) cognitive theories focus on skills that support reading comprehension. Sociocultural theories of literacy development focus on literacy as a social practice, often taking a Vygotskian approach to understanding how individuals learn to read and write (e.g., Cole et al., 1978; Perry, 2012). As such, sociocultural theories posit that literacy development comprises more than acquiring a set of linguistic, cognitive, and mechanical skills needed to perform reading and writing tasks, but also requires one to hone their literacy skills to engage in social discourse in a culturally-appropriate way (Landis, 2003; Prior, 2006; Warschauer, 1997). Developmental literacy theories, often used in conjunction with cognitive or sociocultural perspectives, posit that literacy proficiency is obtained by progressing through a set of prescribed developmental stages (Chall, 1983; Hulme and Snowling, 2013). During each stage of a developmental literacy theory, one must master literacy skills (e.g., decoding letter-sound relationships) before progressing to the next stage (e.g., word reading; Chall, 1983). If one's progression in literacy does not align with the theorized stages that underlie typical literacy development, one's literacy ability is considered delayed and flagged for intervention efforts (Hulme and Snowling, 2013). As such, sociocognitive literacy research is guided by a set of theories rather than a single theory aimed at reducing low literacy.

1.3 A connection between peer victimization and literacy?

While the sociocultural perspective considers the impact of social contexts that function to support literacy, there has been relatively little examination of the influence of peer victimization on literacy performance. Additionally, there has yet to be a literacy intervention that aims to reduce peer victimization, nor has any peer victimization intervention aimed to improve literacy performance. Consequently, little attention has been paid to the connection between peer victimization and literacy development, despite several reasons suggesting that peer victimization and literacy are connected. First,

when examining peer victimization and academic achievement during adolescence, work has largely focused on broad measures of academic achievement that often include a measure of literacy performance (e.g., Buhs et al., 2006; Liu et al., 2014; Morrow et al., 2014). For example, studies focused on the connection between peer victimization and academic achievement have included metrics such as grade point average (Juvonen et al., 2000; Nishina et al., 2005), letter grade average (Wei and Williams, 2004), and average standardized test performance (Morrow et al., 2014). Findings from these studies indicate that literacy, when conceptualized as a component of academic achievement, is already linked to peer victimization.

Second, studies of peer victimization and low literacy report similar correlates. In evidence, poor literacy and peer victimization are both linked to internalizing behaviors (e.g., symptoms of anxiety and depression; Hong et al., 2021; Schwartz et al., 2015), externalizing behaviors (e.g., acting out, fighting; Morgan et al., 2008; Sheppard et al., 2019), and low school engagement (e.g., participation, belonging; Dotterer and Lowe, 2011; Iyer et al., 2010). As such, adolescents who struggle with literacy and those who experience peer victimization are both likely to exhibit these negative behaviors.

Third, research into peer victimization and low literacy both suggest that early adolescence is an important developmental period. During early adolescence interpersonal conflict, such as peer victimization, is a common experience (Troop-Gordon, 2017). In fact, most reported peer victimization occurs between 8- and 13 years-old (see Hawker and Boulton, 2000 for meta-analysis). Similarly, reports of low literacy are particularly prevalent during this same time period. Indeed, results from the National Assessment of Educational Progress (NAEP) indicated 37% percent of fourth-grade students and 30% of eighth-grade students in the United States failed to demonstrate literacy grade-level competency, i.e., scored below a basic level (U.S. Department of Education, 2022). As such, adolescence, particularly early adolescence, is an important period in which to concurrently consider peer victimization and literacy. While co-occurrence during a period in development would not alone provide substantive evidence, it is noteworthy that both the developmental period and primary investigation site overlap.

Fourth, peer victimization and low literacy both are identified as primarily occurring in the school context. Research often focuses on peer victimization as it occurs in the school context (Smith et al., 1999), given that schools often comprise large groups of adolescents who spend a significant amount of their time interacting with peers. When adolescents experience negative peer interactions, such as those devoid of care, respect, and trust, they are likely to experience poor social peer relations, i.e., peer victimization (Leadbeater et al., 2015). This, in turn, led to school-based peer victimization intervention programs as the normative approach to remediate peer victimization consequences (Smith and Ananiadou, 2003).

Research into literacy and literacy interventions are also primarily conducted in school settings (see Graham et al., 2018 for meta-analysis). Since 1969, a nationally representative sample of U.S. adolescents have been assessed in core subject areas, such as literacy (i.e., reading comprehension assessment), as part of the U.S. Department of Education's evaluation of the educational progress of our nation's adolescents (U.S. Department of Education, 2022). The 2022 report indicates that reading comprehension assessment scores are in a downward trend for both fourth- and eighth-graders. As literacy plays a crucial role in academic success

by enabling the comprehension of information across multiple subject areas (van Dijk, 2015), evaluating literacy achievement in the school context works to improve instructional practices and subsequently, adolescents' literacy proficiency. As such, literacy interventions are typically conducted in school settings (e.g., Graham et al., 2018). Therefore, given that one primary aim of schooling is to promote literacy proficiency, and that peer victimization occurs largely in the school context, it is necessary to understand the interplay between adolescents' literacy and social–emotional functioning.

1.4 The developmental cascades framework

The *Developmental Cascades Framework* (Masten and Cicchetti, 2010) depicts transactions of influence across developmental domains that work to either promote or inhibit maturation. Specifically, this framework posits that functioning in one domain of development can have cascading effects on one's functioning in an intersecting domain. This, in turn, shapes their trajectory of ontogenesis—the course of development from prematurity to maturation. As previous research, guided by sociocultural theory, underscores several transactions of influence between the academic and social–emotional domains of adolescent development, particularly when there is maladjustment (e.g., Boyce Rodgers and Rose, 2001). Indeed, Wentzel (1991) reported a negative association between adolescents' academic performance and competence in three aspects of the social–emotional domain: prosociality, peer acceptance, and self-regulation. These findings give important insight into how functioning in the academic and social–emotional domains co-occur and interact with each other. However, there is a need to continue to parse dysfunctional academic (e.g., low literacy) and social–emotional (e.g., peer victimization) contexts to understand how these two domains are interconnected, particularly during adolescence.

The *Developmental Cascades Framework's* theorized cascading effects across developmental domains can occur in multiple directions (e.g., unidirectional vs. bidirectional) and via mediating pathways. In this context, evidence of a bidirectional, negative link between peer victimization and academic achievement lends support to a hypothesized bidirectional, negative link between peer victimization and literacy. Results from these studies lend support to how peer victimization and literacy would interact in the context of the *Developmental Cascades Framework*. Moreover, an array of work has demonstrated that as peer victimization increases, composite measures of academic achievement diminish, and vice versa (e.g., Buhs et al., 2006; Liu et al., 2014; Morrow et al., 2014). These composite measures of academic achievement often include an assessment of literacy, indicative of the role of literacy in overall educational success. As such, in the context of the *Developmental Cascades Framework*, the connection between peer victimization and literacy, an important component of academic achievement, is likely to demonstrate a similar transaction of influence (bidirectional and negative) as the connection between peer victimization and broader measures of academic achievement. Thus, there is a need to elucidate how a dysfunctional social peer context (e.g., peer victimization) impacts adolescents' literacy, as well as a need to better understand the impact of low literacy on peer victimization.

1.5 The current study

Research has demonstrated a negative link between peer victimization and academic achievement (e.g., Buhs et al., 2006); however, a synthesis of the research on the link between peer victimization and literacy does not yet exist. This is a critical oversight as literacy is a domain of learning on which cross-disciplinary success often hinges (e.g., Met, 2008; Sainio et al., 2019). Through a systematic review of the literature, we aimed to elucidate the connection between literacy and peer-victimization during adolescence, a pivotal point in educational success and social–emotional development. Further, we investigated the role of negative behaviors (i.e., internalizing and externalizing behaviors, low school engagement) and adolescent characteristics (i.e., sex and grade) in the peer victimization-literacy connection.

Guided by the *Developmental Cascades Framework*, we hypothesized that there would be a bidirectional link between peer victimization and literacy. This would indicate that increased peer victimization negatively influences literacy, and poorer literacy in turn, leads to increased peer victimization. We further hypothesized that internalizing behaviors, externalizing behaviors, school engagement, sex, and grade-level would all play a role in the peer-victimization literacy connection. This would indicate that negative behaviors and adolescent characteristics (sex and grade-level) impact the association between peer victimization and literacy. Through synthesis of published literature, we sought to establish a foundational understanding of the peer victimization-literacy connection by addressing five major research questions.

RQ1: How does peer victimization impact literacy?

RQ2: How does literacy impact peer victimization?

RQ3: Do either internalizing or externalizing behaviors mediate, moderate, or play an associative role in the peer victimization-literacy connection?

RQ4: Does school engagement mediate, moderate, or play an associative role in the peer victimization-literacy connection?

RQ5: Do sex and grade-level mediate, moderate, or play an associative role in the peer victimization-literacy connection?

2 Methods

Figure 1 provides an overview of the search, screening, and identification procedures for this systematic literature review. All search, screening, and identification procedures discussed below were conducted independently by each author of this manuscript. Three literature searches were conducted using the PsycINFO, ERIC EBSCO Host, and Web of Science databases. The search used combinations of the following search terms: *peer victimization, literacy, underachievement, achievement, bullying, performance, bully-victims, academic, reading, writing, peer harassment, internalizing behaviors, externalizing behaviors, and school engagement.* A total of 3,588 studies were identified. After excluding 495 duplicates from across the databases, 3,093 study titles and abstracts were examined. Studies were included if they were (a) published between

January 1, 1993 and March 31, 2022; (b) focused on typically developing fifth to eighth graders; (c) focused on a global measure or specific forms of peer victimization (e.g., verbal, physical, relational); (d) focused on literacy or reading or writing; (e) published in English; and (f) published in a peer-reviewed journal. Studies were excluded when they focused only on adolescents with attention deficit and hyperactivity disorder, specific learning disabilities, genetic disorders, or brain injury or insult. Studies that focused specifically on cyber-bullying were also excluded, as cyber-bullying and academic achievement, including literacy, have been recently reviewed (see Samara et al., 2021 for meta-analysis).

Based on the inclusion and exclusion criteria, a total of 66 studies met inclusion criteria during title and abstract screening. A full-text review was conducted on those 66 studies. Upon full-text review 48 studies were excluded, as they did not meet the inclusion criteria. The majority of studies were excluded due to academic composite measures (e.g., mathematics and literacy scores combined) that could not be parsed based on the information provided. Many studies on literacy that included a measure of peer victimization did so by including surveys and questionnaires (e.g., school climate survey) where peer victimization was included as a single question. As we could not separate peer victimization from these broader measures these studies were excluded. The references of the 18 remaining studies were then examined for additional inclusion (i.e., snowballing; Greenhalgh and Peacock, 2005). This resulted in 3 additional studies, which met the inclusion criteria. As such, the final sample in this systematic literature review consisted of 21 total studies (Table 1).
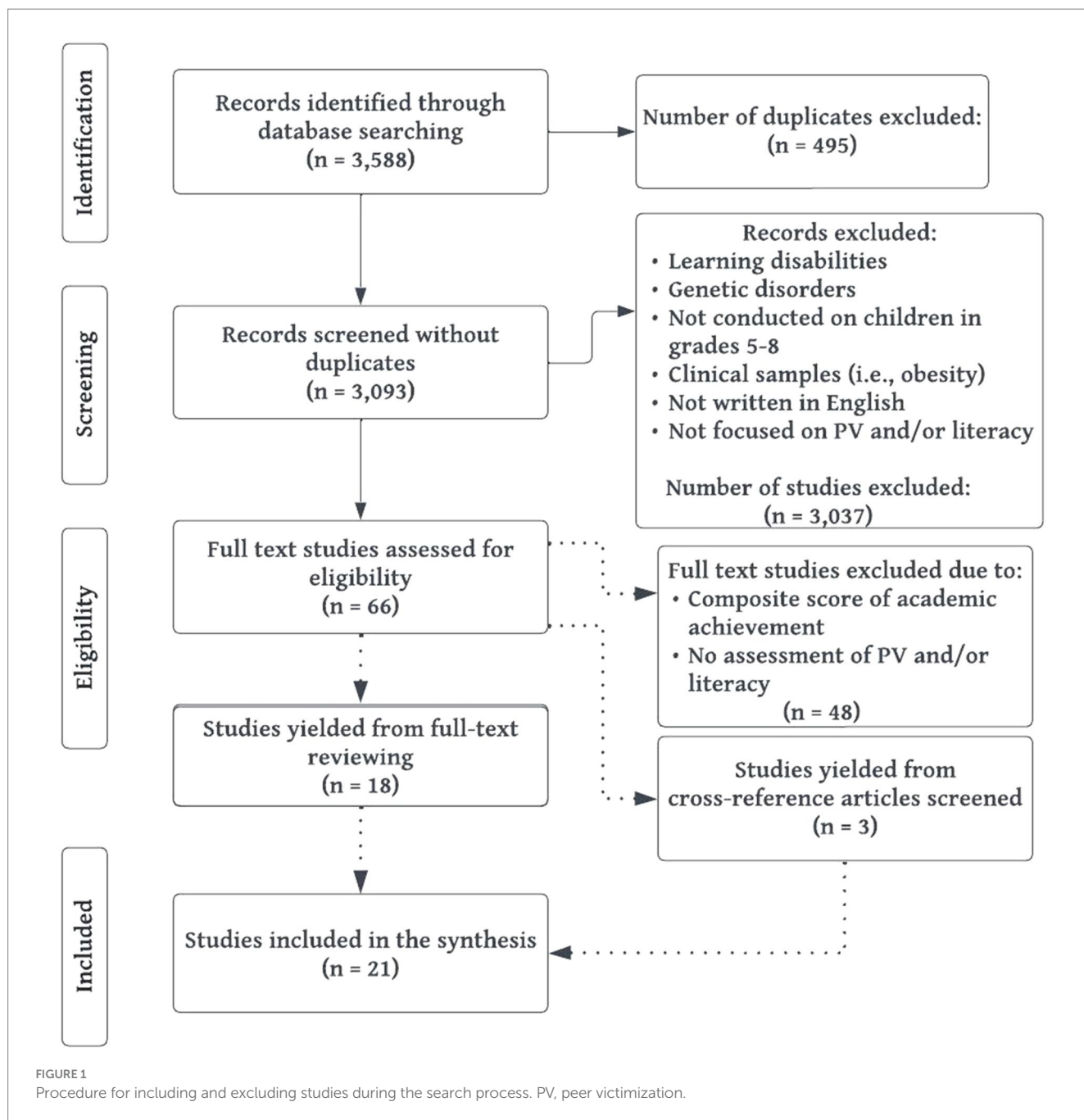
2.1 Direct and indirect impact of peer victimization on literacy

To address research question one, we first explored the influence of peer victimization on literacy achievement. We focused on those studies that included at least one form of peer victimization as an independent variable, and at least one measure of literacy, reading, or writing as the dependent variable.

Peer victimization is typically defined based on its two component forms: physical and non-physical (Ladd and Ladd, 2001). Physical peer victimization consists of using forceful behaviors to hurt or injure another person (e.g., hitting, shoving, kicking, punching; Bradshaw et al., 2013; Olweus and Pellegrini, 1996). Non-physical peer victimization consists of verbal or relational aggression. Verbal aggression typically involves teasing, name-calling, or rumor spreading (Bradshaw et al., 2013; Olweus and Pellegrini, 1996), while relational aggression is characterized of manipulative behaviors intended to harm a peer's social relationships and social status (e.g., social exclusion, threatening to withdraw friendship, using defaming remarks to solicit others to reject a peer; Crick and Grotpeter, 1996). Here, we synthesized the peer victimization's components together (i.e., global measures), we then provided preliminary evidence from the small number of studies that reported peer victimization components as separate measures.

2.2 Direct and indirect impact of literacy on peer victimization

To address research question two, we focused on the influence of literacy on peer victimization. We focused on those studies that

FIGURE 1
Procedure for including and excluding studies during the search process. PV, peer victimization.

included at least one measure of literacy, reading, or writing as an independent variable, and at least one form of peer victimization as the dependent variable.

2.3 Indirect impact of negative behaviors and adolescent characteristics

To address research questions three to five, we intended to synthesize the literature on the associative, mediating, and moderating roles of externalizing behaviors, internalizing behaviors, school engagement, sex, and grade-level in the peer victimization-literacy connection. However, aside from sex, none of these variables were examined as moderators in the context of the peer

victimization-literacy connection. As such, our systematic literature review focused on the associative, mediating, and moderating roles of sex, as well as the associative and mediating roles of externalizing behaviors, internalizing behaviors, school engagement, and grade-level in the peer victimization-literacy connection. Details are described below.

2.4 Externalizing and internalizing behaviors

To address research question three, we explored the associative and mediating roles of externalizing behaviors and internalizing behaviors in the peer victimization-literacy connection. Externalizing

TABLE 1 Studies included in the systematic literature review (*n* = 21).

Year	Authors	Journal	Country	Sample Size	Age/Grade	Study design	Assessments		Constructs measured		Mediators/Moderators			Primary findings
							Peer victimization	Literacy	Peer victimization	Literacy	Intern./ Extern. Prob.	Sch. Engage.	Sex	
2013	Vaillancourt et al.	J. Abnorm. Child Psychol.	Canada	$n = 695$	Grades 3, 5–8 M_{age} at $T_1 = 10.91$ years	LT (4 TP with 1 year intervals)	Self-report (Vaillancourt et al., 2008)	Province-mandated reading and writing tests (EQAO) (Queen's Printer for Ontario, 2012)	Global	Broad reading and writing skills	X		X	Poorer 3rd grade writing performance predicted increased PV and intern. behaviors in 5th graders. In 5th–8th graders, PV was positively associated with intern. and extern. behaviors. Compared to males, females had greater reports of PV and had greater reading and writing performance.
2017	Ladd et al.	J. Educ. Psychol.	United States	$n = 383$	K ($M_{age} = 5.5$) - Grade 12 ($M_{age} = 17.89$)	LT (13 TP with 1 year intervals)	Self-report (Kochenderfer and Ladd, 1996)	Standardized psychoeducational reading assessment (WRAT; Wilkinson, 1993)	Global	Word reading, sentence comprehension		X	X	Increased PV predicted poorer reading assessment performance in 2nd–12th graders. PV and sch. engage.were negatively associated in K-12th grade. Compared to females, males had greater reports of PV.
2014	Wienke Totura et al.	J. Youth Adolesc.	United States	$n = 469$	Grades 6–8 $M_{age} = 12.9$ years	CS	Self-report (OBVQ; Olweus, 1996; Safe Community-Safe School Project, 2002)	State-mandated reading test (FCAT)	Global	Reading comprehension	X	X		Increased PV predicted lower academic achievement—a latent variable that included reading test performance, by way of increased intern. behaviors and lower sch. engage.

(Continued)

TABLE 1 (Continued)

Year	Authors	Journal	Country	Sample Size	Age/Grade	Study design	Assessments		Constructs measured		Mediators/Moderators			Primary findings
							Peer victimization	Literacy	Peer victimization	Literacy	Intern./ Extern. Prob.	Sch. Engage.	Sex	
2015	Jenkins and Demaray	Psychol. Sch	United States	$n = 140$	Grades 6–8	CS	Self-report (BVS; Reynolds, 2003)	School-reported grade in reading class (1 = A; 5 = F)	Global	Broad reading skills			X	Academic achievement—a latent variable that included reading performance, was not directly related to PV. Rather, academic self-concept fully mediated the association between PV and academic achievement. Reports of PV did not differ by sex.
2007	Hoglund	J. Educ. Psychol.	Canada	$n = 337$	Grades 6–7 $M_{age} = 12.5$ years	CS	Self-report (SEQ; Crick and Grotpeter, 1996)	Teacher-reported Language Arts grade (0 = F, 6 = A)	Physical and relational	Broad reading and writing skills	X	X	X	Increased PV was negatively associated with sch. engage. and school achievement—a latent variable that included Language Arts grade. The association between PV and school achievement was partially medicated by increased extern. behaviors. Males reported greater physical PV, while females had greater literacy performance.

(Continued)

TABLE 1 (Continued)

Year	Authors	Journal	Country	Sample Size	Age/Grade	Study design	Assessments		Constructs measured		Mediators/Moderators			Primary findings
							Peer victimization	Literacy	Peer victimization	Literacy	Intern./ Extern. Prob.	Sch. Engage.	Sex	
2009	Beran	Psychol. Sch	Canada	$n = 4,293$	12–15 years	CS	Self-report (Statistics Canada, 1999)	Teacher- and parent-reported Language Arts achievement	Verbal and physical	Broad reading and writing skills	X			Increased PV was associated with poorer Language Arts achievement and increased extern. behaviors.
2009	Wienke Totura et al.	J. Adolesc.	United States	$n = 1,442$	Grades 6–8	CS	Self-report and teacher-report (OBVQ)	State-mandated reading test (FCAT)	Global	Reading comprehension	X			Increased teacher-reported PV was associated with poorer reading test performance. Increased self-reported PV was associated with increased intern. behaviors.
2021	Turunen et al.	PLoS ONE	Finland	$n = 1,824$	Grades 6, 7, 9 M_{age} at $T_1 = 12$ years, 9 months	LT (3 TP with 1 year intervals)	Self-report (OBVQ)	Standardized psychoeducational reading assessments (ALLU) (Lindeman, 1998)	Global	Reading fluency and comprehension	X			Reading assessment performance was positively associated with PV in 7th and 9th graders. PV was positively associated with intern. and extern. behaviors in 6th, 7th, and 9th graders.
2017	Davidson et al.	Soc. Dev.	United States	$n = 92$	Grades 3–5	LT (2 TP with 1 year intervals)	Peer-nomination (Perry et al., 1988)	Performance creating written texts (NCCS) (Baker-Ward et al., 2007)	Global	Narrative coherence				Sophisticated narrative writing (e.g., inclusion of evaluative statements) in 3rd and 4th graders predicted reduced PV 1 year later.

(Continued)

TABLE 1 (Continued)

Year	Authors	Journal	Country	Sample Size	Age/Grade	Study design	Assessments		Constructs measured		Mediators/Moderators			Primary findings
							Peer victimization	Literacy	Peer victimization	Literacy	Intern./ Extern. Prob.	Sch. Engage.	Sex	
2017	Lacey et al.	J. Early Adolesc.	United States	$n = 29{,}203$	Grades 7–8	CS	Student- and teacher-report (PTB) (Cornell et al., 2013) Student-report (The Bully Victimization scale; Lacey et al., 2017)	State-mandated reading and writing tests (2013 Virginia Standards of Learning exams; Virginia Department of Education, 2007)	School-Wide Global, Global	Broad reading and writing skills		X		Increased teacher-reported PV was associated with poorer reading and writing test performance. Increased self-reported PV was associated with poorer reading test performance. sch. engage. Fully mediated the PV-literacy connection and was positively associated with PV.
2017	Turunen et al.	Learn Instr.	Finland	$n = 17{,}188$	Grades 3–8	CS	Peer-report (PRQ; Salmivalli and Voeten, 2004)	Self-reported reading difficulty (0 = no difficulty; 3 = large difficulties)	Global	Broad reading skills			X	Increased self-reported reading difficulties were associated with increased likelihood of being viewed as a victim of bullying by peers. Males had greater peer reports of PV and self-reported reading difficulties.
2008	Beran et al.	Educ. Res.	Canada	$n = 2084$	10–11 years	CS	Self-report (Statistics Canada, 1999)	Teacher-reported reading and writing achievement (1 = near the top of the class, 5 = near the bottom of the class; Statistics Canada, 1999)	Global	Broad reading skills Written composition, spelling				Increased PV was negatively associated with reading and writing achievement.

(Continued)

TABLE 1 (Continued)

Year	Authors	Journal	Country	Sample Size	Age/Grade	Study design	Assessments		Constructs measured		Mediators/Moderators			Primary findings
							Peer victimization	Literacy	Peer victimization	Literacy	Intern./ Extern. Prob.	Sch. Engage.	Sex	
2022	Wang	Int. J. Environ. Res. Public Health.	China	$n = 10,528$	Grades 4–5	CS	Self-report (SBS) (Mullis et al., 2012)	Standardized psychoeducational reading assessment (adapted from PRILS test; Caygill and Chamberlain, 2004)	Global	Reading comprehension			X	Increased PV was associated with poorer reading assessment performance. Males reported greater PV than females.
2009	Baker-Henningham et al.	Child Abuse Negl.	Jamaica	$n = 1,300$	Grade 5 $M_{age} = 11.0$	CS	Self-report (Baker-Henningham et al., 2009)	Standardized psychoeducational reading and writing (spelling) assessment (WRAT; Wilkinson, 1993)	Global	Word reading, sentence comprehension Spelling			X	Increased self-reports of experiencing and witnessing PV was associated with poorer reading and writing (spelling) performance. Females had greater literacy performance than males.
2014	Gietz and McIntosh	Can J Sch. Psychol.	Canada	$n = 81,387$	Grades 4, 7	CS	Self-report (Satisfaction Survey) (British Columbia Ministry of Education, 2008)	Province-mandated reading test (FSA) (British Columbia Ministry of Education, 2008)	Global	Reading comprehension				PV was not associated with reading test performance.
2020	Barrera-Osorio et al.	Comp. Educ. Rev.	Colombia	$n = 1,486$	Grades 4, 6, 8	CS	Self-report (adapted from PACES; Chi et al., 2006 and CIRCLE; Nicotera et al., 2010)	Standardized psychoeducational reading and writing assessment (ELA) (Meneses et al., 2018; Uccelli et al., 2014)	Global	Reading comprehension, vocabulary, word and syntax structures		X		Increased PV was associated with poorer reading and writing performance in 4th and 6th graders. PV and sch. engage. were negatively associated in 4th, 6th, and 8th graders.

(Continued)

TABLE 1 (Continued)

Year	Authors	Journal	Country	Sample Size	Age/Grade	Study design	Assessments		Constructs measured		Mediators/Moderators			Primary findings
							Peer victimization	Literacy	Peer victimization	Literacy	Intern./ Extern. Prob.	Sch. Engage.	Sex	
2012	Gaskins et al.	J. Appl. Dev. Psychol.	United States	$n = 892$	Grades 4, 5	LT (3 TP with 3–4 month intervals)	Self-report (PPSS; Kochenderfer and Ladd, 1996)	Standardized psychoeducational reading assessment (MAP) (Northwest Evaluation Association, 2004)	Global	Word recognition, vocabulary, reading comprehension, literary response and analysis	X			Increased PV was associated with poorer reading performance.
2005	Schwartz et al.	J. Educ. Psychol.	United States	$n = 199$	Grades 4–5 $M_{age} = 9.0$ years	LT (2 TP with 1 year intervals)	Peer-nomination Teacher-report (SBRC) (Schwartz et al., 2001)	State-mandated reading test (SAT–9) (Psychological Corporation, 1996)	Global	Reading comprehension, text analysis, determining author and reader strategies	X		X	Increased teacher- and peer-reports of PV in 4th grade predicted poorer 5th grade academic functioning—a latent variable that included reading test performance. Intern. behaviors fully mediated this connection. Reports of PV did not differ by sex.
2001	Schwartz et al.	Dev. Psychol.	China	$n = 296$	Grades 5, 6 $M_{age} = 11.5$ years	CS	Peer-nomination Self-report (My Day at School Questionnaire) Teacher-reported (SBRC)	School-mandated language test	Global	Broad reading and writing skills	X		X	Increased peer- and teacher- reports of PV were associated with poorer academic functioning–a latent variable that included language test performance. PV was positively associated with intern. and extern. behaviors. Reports of PV did not differ by sex.

(Continued)

TABLE 1 (Continued)

Year	Authors	Journal	Country	Sample Size	Age/Grade	Study design	Assessments		Constructs measured		Mediators/Moderators			Primary findings
							Peer victimization	Literacy	Peer victimization	Literacy	Intern./Extern. Prob.	Sch. Engage.	Sex	
2018	Adams and Hannum	Res. Soc. Educ.	China	$n = 812$	$M_{age} = 15.22$ years	LT	Self-report (GSCF)	Standardized psychoeducational language assessment	Physical	Broad reading and writing skills	X		X	Poorer language assessment performance predicted increased PV. PV was positively associated with intern. behaviors. Males had greater reports of physical PV compared to females.
2011	Román and Murillo	Revista de La CEPAL	16 Latin American countries	$n = 86,372$	Grade 6	CS	Self-report (SERCE) (Latin American Laboratory for Assessment of the Quality of Education, 2008)	Standardized psychoeducational reading assessment (Latin American Laboratory for Assessment of the Quality of Education, 2008)	Physical, Verbal	Broad reading skills			X	Increased self-reported PV was associated with poorer reading assessment performance. Adolescents in classrooms with increased occurrences of PV had poorer reading assessment performance. Males reported greater physical and verbal PV, compared to females.

Journal abbreviations are in standardized IOS4 format. Intern./Extern. Prob, Internalizing and Externalizing Problems; Sch. Engage, School Engagement; CS, cross-sectional; LT, longitudinal; TP, time points; PV, peer victimization; EQAO, he Education Quality and Accountability Office; WRAT, Wide Range Achievement Test; FCAT, Florida Comprehensive Achievement Tests; BVS, Bully Victimization Scale; SEQ, Social Experiences Questionnaire; OBVQ, Olweus Bully/Victim Questionnaire; NCCS, Narrative Coherence Coding Scheme; PTB, Prevalence of Teasing and Bullying scale; PRQ, Participant Role Questionnaire; TIMSS, Trends in International Mathematics and Science Study; PIRLS, Progress in Reading and Literacy StudyZ; DfES, Department for Education and Skills National Pupil Database; FSA, Foundation Skills Assessment; MAP, Measures of Academic Progress; PPSS, Perceptions of Peer Support Scale; SAT-9, Stanford Achievement Test—Ninth Edition; SBRC, Social Behavior Rating Scale; GSCF, Gansu Survey of Children & Families; SERCE, Second Regional Comparative and Explanatory Study; LLECE, Latin American Laboratory for Assessment of the Quality of Education.

behaviors are characterized as a grouping of oppositional conduct that is directed toward the child's social environment, such as aggressive, noncompliant, and disruptive behaviors (e.g., Hinshaw, 1987; Liu, 2004). In contrast, internalizing behaviors are considered as covert, inner-directed, and symptomatically associated with experiencing social withdrawal, social isolation, depression, and anxiety (Gresham and Kern, 2004). As such, studies that included a measure of externalizing behaviors and internalizing behaviors were considered within the peer victimization-literacy connection.

2.4.1 School engagement

To address research question four, we explored the associative and mediating role of school engagement in the peer victimization-literacy connection. School engagement is a multidimensional construct that characterizes adolescents' feelings and attitudes toward school (e.g., school liking, belonging; Fredricks et al., 2004), and their ability to engage with peers, teachers, and the classroom material in a manner conducive to academic success (e.g., effort, persisting to learn complex ideas, adhering to classroom norms, contributing to class discussion; Buhs and Ladd, 2001; Finn, 1989; Fredricks et al., 2004). As such, studies that included a measure of school engagement were considered within the peer victimization-literacy connection.

2.4.1.1 Adolescent characteristics

To address research question five, we considered adolescent characteristics. Specifically, we focused on adolescents' sex and grade, as both have been reported to influence the relation between peer victimization and academic achievement more broadly. As such, we included articles that examined the associative and mediating roles of grade-level and sex within the peer victimization-literacy connection. Details regarding adolescents' sex and grade-level can be found in Table 1.

3 Results

3.1 Study characteristics

Study characteristics can be found in Table 1. Mean participant ages ranged from 5.5 to 17.89 years, with studies sample sizes ranging from 140 to 86,372 participants. Studies were conducted across the United States ($n=8$), Canada ($n=5$); China ($n=3$); Latin America ($n=2$); Finland ($n=2$), and Jamaica ($n=1$). Six of the reviewed studies followed participants at multiple timepoints during formal schooling (Davidson et al., 2017; Gaskins et al., 2012; Ladd et al., 2017; Schwartz et al., 2005; Turunen et al., 2021; Vaillancourt et al., 2013). The remaining studies ($n=15$) were cross-sectional and obtained reports of peer victimization and literacy measures at only one time point.

The National Institutes of Health (NIH) Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies was used to evaluate the methodological quality of all included studies. All studies ($n=21$) met the NIH quality assessment criteria, which included considerations of study design, sample size, data collection methods, and statistical analysis, ensuring internal validity within studies. While all studies met the quality criteria, some of the studies did not report specific information that the tool itself identified as characteristic of these types of studies. Specifically, observational cohort studies often do not report statistical power because the analyses are exploratory in

nature, which was the case for the longitudinal studies included in this review ($n=6$). Additionally, cross-sectional studies often cannot measure the independent variable prior to the measurement of the dependent variable, which provides weaker evidence for causal relations compared to cohort studies. In this review, 15 studies were cross-sectional and collected measurements of both the independent and dependent variables during the same timeframe. The NIH Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies notes that both of the aforementioned pieces of omitted information should be considered when interpreting the results, as they may influence the strength and reliability of findings.

3.2 Measurement of variables

Peer victimization was measured and reported in multiple ways across the studies. While all studies included a measure of the frequency of peer victimization, differences were found in the operationalization of peer victimization. The majority of studies ($n=17$) obtained a global measure of peer victimization (e.g., average rating across multiple forms of peer victimization). Of the studies that obtained measures of global peer victimization, one study obtained adolescents' self-reports of experiencing and witnessing global peer victimization (Baker-Henningham et al., 2009). Rather than obtaining a global or composite measure of peer victimization, other studies ($n=4$) parsed one or more forms of peer victimization, such as physical peer victimization only (Adams and Hannum, 2018), or physical vs. verbal or relational peer victimization (Beran, 2009; Hoglund, 2007; Román and Murillo, 2011). Across the studies, data on peer victimization (i.e., frequency and form) were collected via self-report (e.g., *Bully Victimization Scale*; Jenkins and Demaray, 2015), teacher-report (e.g., *Prevalence of Teasing and Bullying Scale*; Lacey et al., 2017), and peer report or nomination (e.g., *Participant Role Questionnaire*; Turunen et al., 2017). The majority of studies ($n=18$) included adolescents' self-report of their own peer victimization. Further, the level at which peer victimization was assessed (individual-, classroom-, or school-level) differed across studies. While the majority of studies ($n=19$) focused on peer victimization at the individual-level, others focused on peer victimization at the school-level ($n=1$) and peer victimization at both the individual- and classroom-level ($n=1$). Specifically, Lacey et al. (2017) measured schoolwide prevalence of peer victimization by averaging adolescents' self-reported and teacher-reported peer victimization scores into a school-level score. Román and Murillo (2011) measured peer victimization at the individual-level as well as the classroom-level by averaging adolescents' self-reported peer victimization scores in each class.

Across studies, literacy was also measured and reported differently. Most studies ($n=8$) administered a standardized psychoeducational literacy assessment (e.g., The Wide Range Achievement Test, WRAT; Baker-Henningham et al., 2009), while others ($n=7$) collected state/province- or school-mandated literacy test scores, or school literacy test scores. Several studies obtained literacy achievement measures, including adolescents' performance creating written texts ($n=1$), school-reported grades in reading courses ($n=1$), teacher-reported grades in language arts courses ($n=1$), teacher- and/or parent-ratings of literacy achievement ($n=2$), or self-reported literacy difficulties ($n=1$). Of these, five studies formed latent academic variables (e.g.,

school achievement, academic functioning) that consisted of components with highly overlapping variance, including measures of literacy (Hoglund, 2007; Jenkins and Demaray, 2015; Schwartz et al., 2001; Schwartz et al., 2005; Wienke Totura et al., 2014). As literacy performance could be parsed from the latent academic variables, these studies were included in the current review.

Most studies ($n = 13$) provided measures of negative behaviors associated with peer victimization and literacy. Specifically, these studies measured internalizing behaviors ($n = 8$), externalizing behaviors ($n = 5$), and/or school engagement ($n = 5$). Internalizing behaviors were measured via questionnaires that assessed self-reported symptoms of depression (e.g., *Children's Depression Inventory*; Schwartz et al., 2005), self-reported symptoms of anxiety (e.g., *The State/Trait Anxiety Inventory for Children-Trait Anxiety*; Wienke Totura et al., 2009), self-reported negative emotions (*Strengths and Difficulties Questionnaire*; Turunen et al., 2021), self-reported social withdrawal (Adams and Hannum, 2018), or teacher-reported submissive and withdrawn behaviors (Schwartz et al., 2001). Externalizing behaviors were measured via questionnaires that assessed self-reported disruptive behaviors (e.g., *Strength and Difficulties Questionnaire*; Turunen et al., 2021), self-reported inattentive/hyperactive behaviors (e.g., *The Inattentive/Hyperactivity Scale*; Beran, 2009), or teacher-, peer-, and/or self-reported aggressive behaviors (e.g., physical, verbal, and relational forms of aggression; Schwartz et al., 2001). Lastly, school engagement was measured via questionnaires that assessed student-reported cognitive (e.g., perception of one's academic ability; Lacey et al., 2017; Wienke Totura et al., 2014), behavioral (e.g., participation; Hoglund, 2007), motivational (school avoidance; Ladd et al., 2017), and affective/emotional (e.g., enjoyment of class; Hoglund, 2007; Lacey et al., 2017; Ladd et al., 2017; Wienke Totura et al., 2014) school engagement, as well as teacher-reported cognitive (e.g., investment in one's own learning; Hoglund, 2007), and behavioral (e.g., ability to stay on task; Hoglund, 2007; Ladd et al., 2017; Wienke Totura et al., 2014) school engagement.

3.3 Nature of the relationship between variables

All reviewed studies ($n = 21$) measured the direct association between peer victimization and literacy. Of these, most studies ($n = 11$) examined the link between peer victimization and reading, one study examined the link between peer victimization and writing, and several studies ($n = 9$) examined the link between peer victimization and both reading and writing. Moreover, studies assessed the role of internalizing and/or externalizing behaviors ($n = 10$) and school engagement ($n = 4$) in the peer victimization-literacy connection. Finally, sex differences were reported in the context of peer victimization, literacy, and the peer-victimization literacy connection ($n = 11$). Below, we discuss each type of peer-victimization-literacy connection in turn.

3.4 Peer victimization-literacy connection

While some studies found peer victimization to be predictive or associated with literacy ($n = 13$), others reported literacy to

be predictive or associated with peer victimization ($n = 5$). There was also evidence of a lack of support for the direct relation between peer victimization and literacy ($n = 3$); however, two of those studies found an indirect relation between peer victimization and literacy.

3.5 Increased peer victimization predicted poorer literacy abilities

Across 13 studies, increased peer victimization was found to predict future, or to be concurrently associated with, poorer literacy abilities (Baker-Henningham et al., 2009; Barrera-Osorio et al., 2020; Beran et al., 2008; Beran, 2009; Gaskins et al., 2012; Hoglund, 2007; Lacey et al., 2017; Ladd et al., 2017; Román and Murillo, 2011; Schwartz et al., 2001; Schwartz et al., 2005; Wienke Totura et al., 2009; Wang et al., 2022). Evidence from one study did not support a significant link between peer victimization and literacy (Gietz and McIntosh, 2014).

Three studies found increased peer victimization to predict poorer literacy abilities, as measured using standardized psychoeducational literacy assessments ($n = 2$) and state-mandated literacy tests ($n = 1$). One study found no evidence of this predictive relation. Cross-sectionally, poorer standardized psychoeducational reading and writing assessment scores in fourth and sixth grade were associated with increased self-reported global peer victimization (Barrera-Osorio et al., 2020). Longitudinally, Ladd et al. (2017) found increased self-reported global peer victimization was predictive of poorer reading assessment scores from kindergarten to 12th grade. This effect was stronger in earlier grades, peaking in second grade and diminishing as grade levels increased. Thirdly, increased teacher- and peer-reports of peer victimization in fourth grade predicted poorer fifth grade academic functioning—a latent variable that included state/province-mandated reading test performance (Schwartz et al., 2005). However, one study did not find self-reported global peer victimization to predict growth on a state-mandated reading test during a single school year in the fourth and fifth grades (Gaskins et al., 2012). Rather, these authors found a concurrent association between increased peer victimization and poorer literacy. In sum, irrespective of grade level, the majority evidence supported the predictive relation between increased peer victimization and poorer literacy ability when measured via performance on standardized psychoeducational literacy assessments.

3.6 Increased peer victimization was concurrently associated with poorer literacy abilities

Of the 11 studies that found a significant relation between increased peer victimization and poorer literacy abilities, the majority ($n = 8$) supported a concurrent association across diverse measures of literacy. First, three studies found peer victimization related to adolescents' performance on standardized psychoeducational literacy assessments. Specifically, increased self-reported global (Wang et al., 2022), physical and verbal (Román and Murillo, 2011) peer victimization was associated with poorer reading assessment performance. Adolescents in classrooms with increased occurrences of physical and verbal peer victimization had poorer reading

assessment performance (Román and Murillo, 2011). Thirdly, adolescents with increased self-reports of experiencing and witnessing peer victimization had poorer reading and writing (spelling) assessment performance (Baker-Henningham et al., 2009). However, one study found no evidence that peer victimization was associated with performance on a province-mandated reading test (Gietz and McIntosh, 2014).

Second, studies ($n = 4$) found peer victimization related to adolescents' state/province- or school-mandated literacy test performance, and school literacy test performance. Increased peer- and teacher- reports of global peer victimization were associated with poorer academic functioning–a latent variable that included school-mandated language test performance (Schwartz et al., 2001). Increased self-reported global peer victimization was associated with poorer state-mandated reading test performance (Gaskins et al., 2012). Teacher-reported victims of global peer victimization had poorer reading test performance than self-reported victims of global peer victimization (Wienke Totura et al., 2009). Increased teacher-reported schoolwide peer victimization was negatively associated with school reading and writing test performance (Lacey et al., 2017). Lacey et al. (2017) also found that adolescent self-reports of individual and school-wide peer victimization were negatively associated with school reading test performance.

Lastly, studies ($n = 3$) found increased peer victimization to be negatively associated with teacher-reported (Beran et al., 2008; Hoglund, 2007), or parent- and teacher-reported (Beran, 2009), reading and writing achievement (i.e., ratings of students' performance, grades). Increased self-reported peer victimization was associated with poorer teacher-reported ratings in reading and writing ("1 = near the top of the class" to "5 = near the bottom of the class"; Beran et al., 2008). Increased self-reported relational and physical peer victimization was associated with poorer school achievement—a latent variable that included teacher-reported Language Arts grade (Hoglund, 2007). Increased self-reported verbal and physical peer victimization was also associated with poorer Language Arts achievement when measured using parent-reported ratings ("1 = very well" to "5 = very poorly") and teacher-reported ratings ("1 = near the top of the class" to "5 = near the bottom of the class"; Beran, 2009). Taken together, the majority of evidence supports a concurrent association between increased peer victimization and poorer literacy ability, irrespective of the measure of literacy and peer victimization, and regardless of the informant (self, teacher, or peer).

3.7 Peer victimization indirectly related to literacy abilities

Evidence from two studies supported an indirect, rather than direct, link between adolescents' self-reported peer victimization and literacy by way of mediating variables (Jenkins and Demaray, 2015; Wienke Totura et al., 2014). In the first study, Wienke Totura et al. (2014) found an indirect effect of internalizing behaviors (i.e., depressive symptoms) and low school engagement on the link between increased self-reported global peer victimization and poorer academic achievement—a latent variable that included adolescents' state-mandated reading test performance. In the second study, Jenkins and Demaray (2015) reported similar results. The authors found an indirect effect of academic self-concept, or an adolescent's belief about

their ability to complete academic tasks, on the link between increased self-reported global peer victimization and poorer academic achievement—a latent variable that included school-reported reading class grades. As such, peer victimization not only directly impacts literacy but also has been shown to have an indirect effect, negatively impacting factors (i.e., internalizing behaviors, academic self-concept) which, in turn, lowered literacy achievement. A discussion of mediating roles is discussed in more detail later in this results section.

3.8 Poorer literacy ability predicts increased peer victimization

Across cross-sectional and longitudinal studies, six studies evaluated the impact of reading ($n = 2$), writing ($n = 2$), or reading and writing ($n = 1$) on peer victimization. The only study to examine the impact of both reading and writing on peer victimization found this relation to be predictive rather than a concurrent association (Adams and Hannum, 2018). Specifically, the authors found poorer performance on a standardized psychoeducational literacy assessment predicted increased self-reported physical peer victimization 4 years later. In contrast, two studies found the relation between poorer reading and increased peer victimization to be a concurrent, rather than predictive, association. Indeed, Turunen et al. (2017) found that adolescents' self-reported reading difficulties were concurrently associated with increased likelihood of being viewed as a victim by peers. The authors also found that reading ability was positively associated with, not predictive of, peer victimization in grades seven and nine (Turunen et al., 2021). Likewise, Schwartz et al. (2005) found no predictive relation between fourth graders' academic functioning—a latent variable that included state/province-mandated reading test performance, and teacher- and peer-reports of global peer victimization a year later.

Intriguingly, results differed for writing. Findings supported a predictive relation between writing and peer victimization. Specifically, poorer third grade writing, measured via a province-mandated writing test, predicted increased self-reported global peer victimization in fifth grade (Vaillancourt et al., 2013). A finding echoed by Davidson et al. (2017), who reported that sophisticated narrative writing (e.g., inclusion of evaluative statements) in third and fourth grade predicted reduced peer-reported global peer victimization in fourth and fifth grade, respectively (Davidson et al., 2017). As such, evidence suggests a concurrent association between poorer reading ability and increased peer victimization, while a predictive association was found between poorer writing ability and increased peer victimization.

3.9 The role of internalizing and externalizing behaviors

Preliminary evidence from two studies supported negative behaviors as mediators in the peer-victimization-literacy connection. Indeed, one study reported that increased teacher-reported externalizing behaviors (i.e., aggression and hyperactivity) partially mediated the link between self-reported relational peer victimization and school achievement for males, as well as the link between self-reported physical peer victimization

and school achievement for females (Hoglund, 2007). In this study, school achievement was a latent variable that included teacher-reported grades in language arts. As such, increased peer victimization was associated with increased externalizing behaviors, which in turn led to poorer school achievement (Hoglund, 2007).

A more complex relation appears to exist for internalizing behaviors. Indeed, Schwartz et al. (2005) found that increased self-reported internalizing behaviors (i.e., depressive symptoms) fully mediated the relation between increased teacher- and peer-reported peer victimization in fourth grade and poorer fifth grade academic functioning—a latent variable that included state/province-mandated standardized reading test performance. However, Hoglund (2007) found no evidence to support self-reported internalizing behaviors (i.e., depression, anxiety, and social stress) as a mediator in the link between self-reported relational and physical peer victimization and school achievement–a latent variable that included teacher-reported grades in English language arts (reading and writing). As such, across both studies increased peer victimization resulted in increased self-reported internalizing behaviors; however, the relation between internalizing behaviors and literacy remains uncertain.

Substantiating the mediation results described in the previous work, 10 studies reported bivariate correlations or a significant univariate relation between (a) internalizing or (b) externalizing behaviors, and either peer victimization or a measure of literacy. While not direct evidence of mediation, these studies provide complementary evidence that supports the role of internalizing and externalizing behaviors in the peer victimization-literacy connection.

Of those 10 studies, the majority (n = 8) reported a significant bivariate correlation between peer victimization and internalizing behaviors (n = 7), and/or reported a significant bivariate correlation between peer victimization and externalizing behaviors (n = 4). First, increased peer victimization was associated with increased internalizing behaviors, including self-reported depression (Adams and Hannum, 2018; Schwartz et al., 2005; Wienke Totura et al., 2009; Vaillancourt et al., 2013), anxiety (Adams and Hannum, 2018; Wienke Totura et al., 2009; Vaillancourt et al., 2013), social withdrawal (Adams and Hannum, 2018), psychological distress (Wienke Totura et al., 2014), negative emotions (Turunen et al., 2021), and teacher-reported submissive-withdrawn behaviors (Schwartz et al., 2001). An association that held across a variety of peer victimization measures, including peer (Schwartz et al., 2005; Turunen et al., 2021) and teacher-reported global peer victimization (Schwartz et al., 2005) and self-reported global (Schwartz et al., 2001; Wienke Totura et al., 2009; Wienke Totura et al., 2014; Vaillancourt et al., 2013) and physical peer victimization (Adams and Hannum, 2018).

Second, four studies found increased peer victimization to be associated with increased externalizing behaviors. Self-reported global peer victimization was associated with self-reported inattentive and hyperactive externalizing behaviors (Beran, 2009; Turunen et al., 2021), self-reported disruptive behaviors (Beran, 2009), and self-reported relational and overt aggressive behaviors (Vaillancourt et al., 2013). Likewise, Schwartz et al. (2001) found teacher-, peer-, and self-reported global peer victimization were associated with teacher-, peer-, and self-reported aggressive externalizing behaviors. Thus, there is a clear connection between peer victimization and negative behaviors that occur both internally (e.g., depression) and externally (e.g., aggression) in adolescents.

Next, fewer studies (n = 4) reported a relation between measures of literacy and either internalizing or externalizing behaviors. One study found middle schoolers with poorer province-mandated writing test performance had increased self-reported internalizing behaviors, including symptoms of depression and anxiety (Vaillancourt et al., 2013). The remaining studies (n = 3) found low reading or low writing performance was associated with increased externalizing behaviors. Specifically, poorer performance on standardized psychoeducational reading assessments was linked with increased self-reported externalizing behaviors, including both disruptive and aggressive behaviors (Gaskins et al., 2012) as well as inattention/hyperactivity and conduct problems (Turunen et al., 2021). Analogously, poorer parent- and teacher-reported language arts achievement was associated with increased self-reported externalizing behaviors, including disruption and inattention/hyperactivity (Beran, 2009). Thus, adolescents who struggle in literacy are also likely to display negative behaviors.

Taken together, although only two studies assessed the mediating roles of internalizing and externalizing behaviors, findings indicated that externalizing behaviors fully mediated (Hoglund, 2007), and internalizing behaviors partially mediated (Schwartz et al., 2005), the association between peer victimization and literacy performance. Moreover, several studies (n = 10) provided substantiation of these mediating roles, reporting significant bivariate correlations between internalizing and externalizing behaviors and peer victimization or literacy. Taken together, this provides evidence that the relation between increased peer victimization and poorer literacy is likely altered by the presence of internalizing and externalizing behaviors.

3.10 The role of school engagement

Evidence from a single study supported school engagement as a mediator in the peer-victimization-literacy connection. Lacey et al. (2017) found self-reported cognitive and affective/emotional school engagement fully mediated the association between adolescents' self-reported schoolwide peer victimization and state/province-mandated literacy (reading and writing) test performance. Additionally, the authors also found that school engagement partially mediated the association between teacher-reported schoolwide peer victimization and literacy test performance. Thus, there is direct evidence of school engagement as both a full and partial mediator of the relation between peer victimization and literacy.

A few studies (n = 5) reported a significant bivariate correlation between school engagement and literacy or peer victimization. Of these, two studies found a significant bivariate correlation between school engagement and literacy. First, low self-reported affective (i.e., bonding with school, classmates, and teachers) and teacher-reported behavioral (i.e., gets off tasks) school engagement was associated with poorer state-mandated reading test performance (Wienke Totura et al., 2014). Second, low self-reported affective school engagement (i.e., belonging) was associated with poorer standardized psychoeducational reading and writing assessment scores (Barrera-Osorio et al., 2020).

Four studies found low school engagement was associated with increased reports of peer victimization, including higher self- or teacher-reported global peer victimization (Lacey et al., 2017; Ladd

et al., 2017; Wienke Totura et al., 2014), as well as self-reported relational and physical peer victimization (Hoglund, 2007).

In terms of school engagement measured, increased peer victimization was found to be associated with lower self-reported cognitive (e.g., perception of one's academic ability; Lacey et al., 2017; Wienke Totura et al., 2014), behavioral (e.g., participation; Hoglund, 2007), motivational (school avoidance; Ladd et al., 2017), and affective/emotional (e.g., enjoyment of class; Hoglund, 2007; Lacey et al., 2017; Ladd et al., 2017; Wienke Totura et al., 2014) school engagement, as well as teacher-reported cognitive (e.g., investment in one's own learning; Hoglund, 2007), and behavioral (e.g., ability to stay on task; Hoglund, 2007; Ladd et al., 2017) school engagement.

In sum, only one study supported the full and partial mediating role of school engagement in the peer victimization-literacy connection. Additionally, five studies provided evidence for significant bivariate correlations between diverse types of school engagement and multiple forms of peer victimization or literacy. Thus, adolescents who experience peer victimization and struggle in literacy are likely to have diminished school engagement—a negative behavior that may in turn contribute to poorer academic performance and negative peer interactions.

3.11 Sex differences in the peer victimization-literacy connection

Sex differences were reported in the context of peer victimization, literacy, and the peer victimization-literacy connection ($n = 11$). Of these, four studies examined the effect of sex differences on the peer victimization-literacy connection, and only one study found a significant effect of sex differences. Specifically, Hoglund (2007) found sex to moderate the indirect impact of teacher-reported externalizing behaviors (i.e., aggression and hyperactivity) on the association between peer victimization and school achievement—a latent variable that included teacher-reported language arts grades. Specifically, increased externalizing behaviors partially mediated the link between self-reported relational peer victimization and school achievement for males, as well as the link between self-reported physical peer victimization and school achievement for females. While Hoglund (2007) results are intriguing, three studies reported no effect of sex differences on the peer victimization-literacy connection (Schwartz et al., 2001; Schwartz et al., 2005; Vaillancourt et al., 2013). Thus, to date, there is ambiguous support for the effect of sex on the peer victimization-literacy connection.

There is preliminary evidence that sex differences correspond to peer victimization type and/or frequency ($n = 9$) and to literacy performance ($n = 5$); however, evidence from one study lacked support of sex differences in self-reported peer victimization (Jenkins and Demaray, 2015). When comparing the type of peer victimization, males reported significantly more physical (Adams and Hannum, 2018; Hoglund, 2007; Román and Murillo, 2011) and verbal (Román and Murillo, 2011) peer victimization than females, and females reported significantly more global peer victimization than males (Vaillancourt et al., 2013). However, what is clearer are differences reported in frequency of peer victimization by sex. Four studies found that males reported more instances of peer victimization than females (Hoglund, 2007; Ladd et al., 2017; Turunen et al., 2017; Wang et al., 2022), and one study found females reported more instances of peer

victimization than males (Vaillancourt et al., 2013). Therefore, the majority of studies indicate males self-report more frequency of peer victimization than females. Longitudinally, from kindergarten to grade 12, males and females had a similar pattern of change: decreased peer victimization was associated with increased grade level (Ladd et al., 2017). As such, the majority of evidence suggests that males experience more peer victimization but, like females, the frequency of male peer victimization appears to decrease over time.

Notably, there are also sex differences in literacy performance. Five studies found that females outperformed males on measures of literacy (Baker-Henningham et al., 2009; Hoglund, 2007; Schwartz et al., 2001; Turunen et al., 2017; Vaillancourt et al., 2013). Across four studies, females outperformed males on measures of reading and writing (Baker-Henningham et al., 2009; Hoglund, 2007; Schwartz et al., 2001; Vaillancourt et al., 2013). Further, Turunen et al. (2017) found that females reported reading difficulties significantly less than males. One study reported no significant sex differences in adolescents' school-reported reading class grades (Jenkins and Demaray, 2015). Thus, across the studies reviewed here, the majority of evidence indicated that across diverse literacy measures (i.e., literacy test performance, language arts grades, self-reported literacy ability), there were clear sex differences, such that males were at greater risk for poorer literacy performance than females.

3.12 Grade-level differences

The current review included only those studies that examined the relation between peer victimization and literacy in fifth through eighth graders. Across those grades, most studies ($n = 15$) found increased peer victimization to be directly or indirectly related to poorer literacy in fifth (Baker-Henningham et al., 2009; Gaskins et al., 2012; Ladd et al., 2017; Schwartz et al., 2001; Schwartz et al., 2005; Wang et al., 2022), sixth (Barrera-Osorio et al., 2020; Hoglund, 2007; Jenkins and Demaray, 2015; Ladd et al., 2017; Román and Murillo, 2011; Schwartz et al., 2001; Schwartz et al., 2005; Wienke Totura et al., 2009; Wienke Totura et al., 2014), seventh (Hoglund, 2007; Jenkins and Demaray, 2015; Lacey et al., 2017; Ladd et al., 2017; Wienke Totura et al., 2009; Wienke Totura et al., 2014), and eighth (Jenkins and Demaray, 2015; Lacey et al., 2017; Ladd et al., 2017; Wienke Totura et al., 2009; Wienke Totura et al., 2014) grades. Beran et al. (2008) demonstrated the peer victimization-literacy connection in 10- and 11-year-old, school-aged adolescents. Beran (2009) demonstrated the peer victimization-literacy connection in 12–15-year-old school-aged adolescents. There was only one study that found no significant relation between peer victimization and literacy in seventh grade (Gietz and McIntosh, 2014).

In terms of the ability of literacy to predict (or associate with) peer victimization, studies ($n = 5$) found a significant relation between poorer literacy and increased peer victimization in fifth (Davidson et al., 2017; Turunen et al., 2017; Vaillancourt et al., 2013), sixth (Turunen et al., 2017), seventh (Turunen et al., 2017, 2021), and eighth (Turunen et al., 2017) graders. Adams and Hannum (2018) demonstrated a significant relation between poorer literacy and increased peer victimization in 13–16-year-old, school-aged adolescents. Only one study showed no support for a predictive relation between poorer literacy and future increased peer victimization (Schwartz et al., 2005). However, Schwartz et al. (2005)

investigated literacy in fourth grade and peer victimization in fifth grade, which may account for the resulting discrepancy. Thus, we conclude that evidence largely indicates adolescents, particularly those in the fifth through eighth grades, with increased peer victimization have poorer literacy performance, and those who struggle in literacy are likely to be at risk for increased peer victimization.

4 Discussion

Peer victimization and literacy are often not considered as interacting constructs nor included within the same frameworks. However, evidence suggests that peer victimization and literacy impact similar areas of adolescents' lives, such as their academic achievement (e.g., Buhs and Ladd, 2001; Savolainen et al., 2008). Our synthesis of the literature established a clear connection between peer victimization and literacy. Further, within the context of the *Developmental Cascades Framework* (Masten and Cicchetti, 2010), one possibility is that peer victimization and literacy are directly linked via a transactional association, wherein maladjustment in one domain (e.g., social–emotional) contributes to poorer functioning in the other domain (e.g., academic). Another possibility within this framework is that peer victimization and literacy are indirectly linked through various mediating pathways (i.e., internalizing and externalizing behaviors, school engagement, sex, grade-level). Our results provide support for both perspectives.

4.1 Peer victimization and literacy are directly related

The current study sought to determine if peer victimization directly impacted literacy (RQ1), and if literacy directly impacted peer victimization (RQ2). Findings indicated that, peer victimization and literacy are directly linked via a transactional association, wherein increased peer victimization contributed to poorer literacy, and poorer literacy contributed to increased peer victimization. In support of RQ1, across literacy measures and peer victimization informants (i.e., self, teacher, peer), results indicated that peer victimization predicted concurrent poorer literacy. Peer victimization also predicted poorer future literacy irrespective of grade level and across several standardized psychoeducational assessments. With respect to RQ2, poorer literacy was found to predict increased peer victimization.

We also demonstrate variation in the peer victimization-literacy connection by illustrating how reading and writing differentially relate to peer victimization. While most studies found poorer reading ability was associated with increased concurrent peer victimization, we also found evidence that poorer writing ability predicted increased future peer victimization. These findings align with a facet of the *Developmental Cascades Framework* (Masten and Cicchetti, 2010) that positions two developmental domains as transactional influences toward one another. In other words, adolescents who experience peer victimization are also likely to struggle in literacy, and adolescents who struggle with literacy are also likely to experience peer victimization. As such, this systematic literature review is the first to elucidate a bidirectional link between peer victimization and literacy,

such that increased peer victimization and low literacy co-occur and predict future negative outcomes for one another.

4.2 Peer victimization and literacy are indirectly related through negative behaviors

We then aimed to identify what roles internalizing and externalizing behaviors (RQ3), and school engagement (RQ4), played in the peer victimization-literacy connection. Findings indicated that peer victimization and literacy were indirectly linked through full and partial mediating pathways. We found preliminary evidence in support of full mediation of the peer victimization-literacy connection via internalizing behaviors and school engagement, as well as partial mediation via externalizing behaviors and school engagement. In short, studies reported that peer victimization exacerbated internalizing and externalizing behaviors and decreased school engagement, which, in turn, corresponded to poorer literacy. These preliminary results align with a second facet of the *Developmental Cascades Framework* (Masten and Cicchetti, 2010) that posits that different developmental domains, such as peer relations and academic development, can be indirectly related via various mediating pathways.

While there was limited evidence for the indirect link between peer victimization and literacy via negative behaviors, a more substantial body of evidence revealed significant bivariate correlations between internalizing behaviors, externalizing behaviors, school engagement, and either peer victimization or literacy. In other words, increased internalizing and externalizing behaviors, and low school engagement were associated with increased peer victimization and poorer literacy outcomes. The bivariate correlations further suggest the likelihood of mediation in the peer victimization-literacy connection, and demonstrate a similar association between peer victimization, literacy, and adolescents' behaviors. However, due to limited evidence of the indirect influences of adolescents' negative behaviors, further research is needed to provide a better understanding into how these behaviors shape and influence the association between peer victimization and literacy.

4.3 Adolescent characteristics shape peer victimization and literacy

Next, we determined if sex and grade-level played a role in the peer victimization-literacy connection (RQ5). Only one study found that sex differences influenced the peer victimization-literacy connection, specifically showing that sex moderated the indirect effect of low school engagement on the association between increased peer victimization and poorer literacy outcomes. However, substantial evidence did emerge for bivariate correlations between sex and both peer victimization and literacy. Many studies found that males and females differed in their reports of peer victimization, with males reporting higher frequencies and different forms (e.g., physical) when compared to females. Additionally, females generally outperformed males in literacy performance. These bivariate correlations indicate

that adolescents' reports of peer victimization (in terms of frequency and type), as well as their literacy performance, differs across sex. Despite these findings, there was very limited evidence for sex differences in the peer victimization-literacy connection, indicating that males and females with increased reports of peer victimization may have similar risk for poorer literacy, and males and females with poorer literacy may have similar risk of peer victimization. Further research into sex differences would enhance our knowledge of how males and females are differentially impacted by the peer victimization-literacy connection.

Moreover, the reviewed studies demonstrated the peer victimization-literacy connection to occur across the secondary grades. Findings indicated that in Grades 5 through 8, adolescents who experienced increased peer victimization were at higher risk of poor concurrent and future literacy outcomes. Additionally, adolescents with poorer reading ability were at higher risk for concurrent peer victimization, while those with poorer writing ability were at higher risk for future peer victimization. These findings suggest interplay between academic and social–emotional development, such that maladaptive functioning in one domain is likely to co-occur with or increase the risk of maladaptive functioning in the other, particularly during adolescence. In view of the academic and social–emotional demands of adolescence, the peer victimization-literacy connection is important to consider and elucidate to better support our youth's maturation and successful transition into adulthood.

4.4 Limitations

While most studies in this systematic literature review included adolescents' self-report of their own peer victimization, others obtained peer- or teacher-reports of adolescents' peer victimization. The lack of a consistent peer victimization informant type across the reviewed studies could be considered a limitation. Specifically, multiple informant types may result in the biased reporting of peer victimization, reducing the validity of the synthesized findings. However, previous meta-analyses of peer victimization that did not consider literacy have shown self-, peer-, and teacher-reports to be significant, reliable indicators of adolescents' peer victimization (Nakamoto and Schwartz, 2010; Pouwels et al., 2016). Thus, differences in the peer victimization informant type are unlikely to pose a threat to the validity of our synthesized findings. Rather, the inclusion of studies with differing, yet reliable peer victimization informant types allow us to mitigate reporting biases associated with each informant type and to form a more comprehensive understanding of the peer victimization-literacy connection.

Next, the small number of articles on peer victimization and literacy showed little overlap in included populations. As such, the current review could not examine bidirectional literacy and identity-based peer victimization during adolescence, in populations previously reported to experience greater rates of peer victimization, such as sexual orientation (Aragon et al., 2014) and race-based discrimination (Fisher et al., 2015). Therefore, the synthesized articles only provided a broad, decontextualized examination of the peer victimization-literacy connection, allowing for what is perhaps a more generalizable but less nuanced interpretation.

Lastly, we were limited by the number of studies that focused on writing. However, this is consistent with the body of literature on literacy, in which the number of studies investigating reading far exceed writing studies. In short, this limitation is not specific to our study but rather the field of literacy at large. While the number of studies may differ, both reading and writing play integral roles in literacy development and should be considered when examining how literacy relates to peer victimization. As such, the current systematic literature review included results from writing studies to emphasize writing as a crucial component of literacy in the peer victimization-literacy connection. We demonstrate that writing is impacted by and predicts future peer victimization. As such, writing and reading each plays an important role in the peer victimization-literacy connection.

4.5 Future directions

Our work highlights the need for studies to look at both peer victimization and literacy during adolescence. The current systematic literature review synthesized results from 21 studies on the link between peer victimization and low literacy in fifth through eighth graders. While a direct, concurrent association between increased experiences of peer victimization and low literacy was evident, the ability of peer victimization and low literacy to later predict one another was less clear. Preliminary evidence revealed a likely role of internalizing behaviors, externalizing behaviors, and school engagement as mediators in the peer victimization-literacy connection. Preliminary evidence also suggested the role of sex as a moderator in the peer victimization-literacy connection, and this connection was observed across the 5th through eighth grades. Thus, future work examining the predictive nature of the peer victimization-literacy connection is an evident need, as is future investigations into mediators with the potential to ameliorate the negative cascading impact of the peer victimization-literacy connection. Researchers may also wish to examine the varied manifestation of the peer victimization-literacy connection across categories of adolescents' identities (e.g., race, sexual orientation). This would allow for a more nuanced, contextualized, and inclusive understanding of the peer victimization-literacy connection during this developmental time period. Lastly, this systematic literature review brings to light the need to examine longitudinal evidence of the peer victimization-literacy connection. While peer victimization and low literacy have negative immediate impacts on social–emotional and academic skills, adolescents' responses and resilience to such experiences may vary across adolescent development. As such, longitudinal investigations are likely to reveal unique patterns of social–emotional and academic dysfunction, as well as help focus intervention efforts on individuals at the greatest risk.

5 Conclusion

Increased peer victimization and low literacy are prevalent during adolescence, both conferring similar risk to adolescents' academic, social–emotional, and behavioral functioning. Yet, scant research has considered the peer victimization-literacy connection during adolescence. The current systematic literature review synthesized evidence from 21 studies to elucidate the direct and indirect link

between peer victimization and literacy. Results indicated a bidirectional link between increased peer victimization and poorer literacy across Grades 5 through 8, multiple literacy measures, and various peer victimization informants (self, peer, and teacher). There was also preliminary evidence for an indirect link between peer victimization and literacy via internalizing and externalizing behaviors, and school engagement. There was ambiguous support for the effect of sex differences in the peer victimization-literacy connection. However, there were reported sex differences in peer victimization (frequency and type), and in performance on literacy measures. Unpacking the complexity of the peer victimization-literacy connection is an important precursor to developing effective interventions and support systems for struggling adolescents. It is our hope that the current systematic literature review encourages future intervention and instructional efforts, which focus on adolescents who face peer victimization and who also struggle in literacy. By providing adolescents with curated academic and social–emotional support, mental health resources, and the skills needed to build positive peer relationships, we can work to mitigate the academic, social–emotional, and behavioral consequences of peer victimization and low literacy.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

AC: Conceptualization, Formal analysis, Investigation, Writing – original draft, Writing – review & editing. ST: Conceptualization, Formal analysis, Investigation, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

Adams, J., and Hannum, E. (2018). School violence in China: a multilevel analysis of student victimization in rural middle schools. *Res. Sociol. Educ.* 20, 41–69. doi: 10.1108/S1479-353920180000020003

Aragon, S. R., Poteat, V. P., Espelage, D. L., and Koenig, B. W. (2014). The influence of peer victimization on educational outcomes for LGBTQ and non-LGBTQ high school students. *J. LGBT Youth* 11, 1–19. doi: 10.1080/19361653.2014.840761

Arnold, E. M., Goldston, D. B., Walsh, A. K., Reboussin, B. A., Daniel, S. S., Hickman, E., et al. (2005). Severity of emotional and behavioral problems among poor and typical readers. *J. Abnorm. Child Psychol.* 33, 205–217. doi: 10.1007/s10802-005-1828-9

Bacher-Hicks, A., Goodman, J., Green, J. G., and Holt, M. K. (2022). The COVID-19 pandemic disrupted both school bullying and cyberbullying. *Am. Econ. Rev.* 4, 353–370. doi: 10.1257/aeri.20210456

Baker-Henningham, H., Meeks-Gardner, J., Chang, S., and Walker, S. (2009). Experiences of violence and deficits in academic achievement among urban primary school children in Jamaica. *Child Abuse Negl.* 33, 296–306. doi: 10.1016/j.chiabu.2008.05.011

Baker-Ward, L., Bauer, P. J., Fivush, R., Haden, C. A., Ornstein, P. A., and Reese, E. (2007). "Coding coherence in autobiographical narratives" in Symposium conducted at the biennial meetings of the society for research in memory and cognition (Lewiston, ME).

Barrera-Osorio, F., De Barros, A., Dryden-Peterson, S., Mulimbi, B., Nakajima, N., and Uccelli, P. (2020). Levers for learning: relationships between school-level factors and literacy outcomes in low-income schools in Colombia. *Comp. Educ. Rev.* 64, 269–298. doi: 10.1086/708431

Beran, T. (2009). Correlates of peer victimization and achievement: an exploratory model. *Psychol. Sch.* 46, 348–361. doi: 10.1002/pits.20380

Beran, T. N., Hughes, G., and Lupart, J. (2008). A model of achievement and bullying: analyses of the Canadian national longitudinal survey of children and youth data. *Educ. Res.* 50, 25–39. doi: 10.1080/00131880801920379

Blakemore, S. J., and Mills, K. L. (2014). Is adolescence a sensitive period for sociocultural processing? *Annu. Rev. Psychol.* 65, 187–207. doi: 10.1146/annurev-psych-010213-115202

Boyce Rodgers, K., and Rose, H. A. (2001). Personal, family, and school factors related to adolescent academic performance: a comparison by family structure. *Marr. Fam. Rev.* 33, 47–61. doi: 10.1300/J002v33n04_05

Boyes, M. E., Tebbutt, B., Preece, K. A., and Badcock, N. A. (2018). Relationships between reading ability and child mental health: moderating effects of self-esteem. *Aust. Psychol.* 53, 125–133. doi: 10.1111/ap.12281

Bradshaw, C. P., Waasdorp, T. E., and O'Brennan, L. M. (2013). A latent class approach to examining forms of peer victimization. *J. Educ. Psychol.* 105, 839–849. doi: 10.1037/a0032091

British Columbia Ministry of Education. (2008). FSA 2008 technical notes. Available at: https://www2.gov.bc.ca/gov/content/education-training/k-12/administration/program-management/assessment/foundation-skills-assessment

Buhs, E. S., and Ladd, G. W. (2001). Peer rejection as antecedent of young children's school adjustment: an examination of mediating processes. *Dev. Psychol.* 37, 550–560. doi: 10.1037/0012-1649.37.4.550

Buhs, E. S., Ladd, G. W., and Herald, S. L. (2006). Peer exclusion and victimization: processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *J. Educ. Psychol.* 98, 1–13. doi: 10.1037/0022-0663.98.1.1

Caygill, R., and Chamberlain, M. (2004). Progress in international reading literacy study (PIRLS): New Zealand's year 5 student achievement 2001: Comparative Education

Research Unit, Research Division, Ministry of Education Available at: https://www.educationcounts.govt.nz/__data/assets/pdf_file/0017/9251/pirls-8-6-04.pdf.

Chall, J. S. (1983). Stages of reading development. New York: McGraw-Hill.

Chi, B.S., Jastrzab, J., and Melchior, A. (2006). "Developing indicators and measures of civic outcomes for elementary school students." Center for Information and Research on civic learning and engagement (CIRCLE), CIRCLE working paper 47.

Cole, M., John-Steiner, V., Scribner, S., and Souberman, E. (1978). Mind in society: the development of higher psychological processes. L. S. Vygotsky: Harvard University Press.

Connolly, J. (1989). Social self-efficacy in adolescence: relations with self-concept, social adjustment, and mental health. *Can. J. Behav. Sci.* 21, 258–269. doi: 10.1037/h0079809

Cornell, D. G., Huang, F., Konold, T., Meyer, P., Lacey, A., Nekvasil, N., et al. (2013). Technical report of the Virginia secondary school climate survey: 2013 results for 7th and 8th grade students and teachers. Available at: https://www.dcjs.virginia.gov/sites/dcjs.virginia.gov/files/publications/law-enforcement/2013-secondary-school-climate-survey.pdf

Crick, N. R., and Grotpeter, J. K. (1996). Children's treatment by peers: victims of relational and overt aggression. *Dev. Psychopathol.* 8, 367–380. doi: 10.1017/S0954579400007148

Davidson, A. J., Walton, M. D., Kansal, B., and Cohen, R. (2017). Narrative skills predict peer adjustment across elementary school years. *Soc. Dev.* 26, 891–906. doi: 10.1111/sode.12219

Davis, T. C., Byrd, R. S., Arnold, C. L., Auinger, P., and Bocchini, J. A. Jr. (1999). Low literacy and violence among adolescents in a summer sports program. *J. Adolesc. Health* 24, 403–411. doi: 10.1016/S1054-139X(98)00148-7

Dotterer, A. M., and Lowe, K. (2011). Classroom context, school engagement, and academic achievement in early adolescence. *J. Youth Adolesc.* 40, 1649–1660. doi: 10.1007/s10964-011-9647-5

Finkelhor, D., Ormrod, R. K., and Turner, H. A. (2007). Poly-victimization: a neglected component in child victimization. *Child Abuse Negl.* 31, 7–26. doi: 10.1016/j.chiabu.2006.06.008

Finn, J. D. (1989). Withdrawing from school. *Rev. Educ. Res.* 59, 117–142. doi: 10.3102/00346543059002117

Fisher, S., Middleton, K., Ricks, E., Malone, C., Briggs, C., and Barnes, J. (2015). Not just black and white: peer victimization and the intersectionality of school diversity and race. *J. Youth Adolesc.* 44, 1241–1250. doi: 10.1007/s10964-014-0243-3

Foulkes, L., and Blakemore, S. J. (2021). Individual differences in adolescent mental health during COVID-19: the importance of peer relationship quality. *Neuron* 109, 3203–3205. doi: 10.1016/j.neuron.2021.07.027

Fredricks, J. A., Blumenfeld, P. C., and Paris, A. H. (2004). School engagement: potential of the concept, state of the evidence. *Rev. Educ. Res.* 74, 59–109. doi: 10.3102/00346543074001059

Gaskins, C. S., Herres, J., and Kobak, R. (2012). Classroom order and student learning in late elementary school: a multilevel transactional model of achievement trajectories. *J. Appl. Dev. Psychol.* 33, 227–235. doi: 10.1016/j.appdev.2012.06.002

Gietz, C., and McIntosh, K. (2014). Relations between student perceptions of their school environment and academic achievement. *Can. J. Sch. Psychol.* 29, 161–176. doi: 10.1177/0829573514540415

Gough, P. B., and Tunmer, W. E. (1986). Decoding, reading, and reading disability. RASE. *Remedial Spec. Educ.* 7, 6–10. doi: 10.1177/074193258600700104

Graham, S., Liu, X., Aitken, A., Ng, C., Bartlett, B., Harris, K. R., et al. (2018). Effectiveness of literacy programs balancing reading and writing instruction: a meta-analysis. *Read. Res. Q.* 53, 279–304. doi: 10.1002/rrq.194

Greenhalgh, T., and Peacock, R. (2005). Effectiveness and efficiency of search methods in systematic reviews of complex evidence: audit of primary sources. *BMJ* 331, 1064–1065. doi: 10.1136/bmj.38636.593461.68

Gresham, F. M., and Kern, L. (2004). "Internalizing behavior problems in children and adolescents" in Handbook of research in emotional and behavioral disorders. eds. R. B. Rutherford, M. M. Quinn and S. R. Mathur (New York, NY: The Guilford Press), 262–281.

Hawker, D. S. J., and Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: a meta-analytic review of cross-sectional studies. *J. Child Psychol. Psychiatry* 41, 441–455. doi: 10.1111/1469-7610.00629

Hinshaw, S. P. (1987). On the distinction between attentional deficits/hyperactivity and conduct problems/aggression in child psychopathology. *Psychol. Bull.* 101, 443–463. doi: 10.1037/0033-2909.101.3.443

Hoglund, W. L. G. (2007). School functioning in early adolescence: gender-linked responses to peer victimization. *J. Educ. Psychol.* 99, 683–699. doi: 10.1037/0022-0663.99.4.683

Hong, J. S., Choi, J., Albdour, M., Willis, T. M., Kim, J., and Voisin, D. R. (2021). Future orientation and adverse outcomes of peer victimization among african american adolescents. *J. Aggress. Maltreat. Trauma* 30, 528–546. doi: 10.1080/10926771.2020.1759747

Hong, J. S., and Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: an ecological system analysis. *Aggress. Violent Behav.* 17, 311–322. doi: 10.1016/j.avb.2012.03.003

Hulme, C., and Snowling, M. J. (2013). Learning to read: what we know and what we need to understand better. *Child Dev. Perspect.* 7, 1–5. doi: 10.1111/cdep.12005

Hwang, M. H., Choi, H. C., Lee, A., Culver, J. D., and Hutchison, B. (2016). The relationship between self-efficacy and academic achievement: a 5-year panel analysis. *Asia Pac. Educ. Res.* 25, 89–98. doi: 10.1007/S40299-015-0236-3

Irwin, V., Wang, K., and Thompson, A. (2022). Report on indicators of school crime and safety: 2021: National Center for Education Statistics at the Institute of Education Sciences Available at: https://nces.ed.gov/pubs2022/2022092.pdf.

Iyer, R. V., Kochenderfer-Ladd, B., Eisenberg, N., and Thompson, M. (2010). Peer victimization and effortful control: relations to school engagement and academic achievement. *Merrill-Palmer Q.* 56, 361–387. doi: 10.1353/mpq.0.0058

Jenkins, L. N., and Demaray, M. K. (2015). Indirect effects in the peer victimization-academic achievement relation: the role of academic self-concept and gender. *Psychol. Sch.* 52, 235–247. doi: 10.1002/pits.21824

John-Steiner, V., and Mahn, H. (1996). Sociocultural approaches to learning and development: a Vygotskian framework. *Educ. Psychol.* 31, 191–206. doi: 10.1207/s15326985ep3103&4_4

Juvonen, J., Nishina, A., and Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *J. Educ. Psychol.* 92, 349–359. doi: 10.1037/0022-0663.92.2.349

Kim, Y. G., Lee, H., and Zuilkowski, S. S. (2020). Impact of literacy interventions on reading skills in low- and middle-income countries: a meta-analysis. *Child Dev.* 91, 638–660. doi: 10.1111/cdev.13204

Kochenderfer, B. J., and Ladd, G. W. (1996). Peer victimization: cause or consequence of school maladjustment? *Child Dev.* 67, 1305–1317. doi: 10.2307/1131701

Lacey, A., Cornell, D., and Konold, T. (2017). The relations between teasing and bullying and middle school standardized exam performance. *J. Early Adolesc.* 37, 192–221. doi: 10.1177/0272431615596428

Ladd, G. W., Ettekal, I., and Kochenderfer-Ladd, B. (2017). Peer victimization trajectories from kindergarten through high school: differential pathways for children's school engagement and achievement? *J. Educ. Psychol.* 109, 826–841. doi: 10.1037/edu0000177

Ladd, B. K., and Ladd, G. W. (2001). "Variations in peer victimization: relations to children's maladjustment" in Peer harassment in school: The plight of the vulnerable and victimized; peer harassment in school: the plight of the vulnerable and victimized. eds. J. Juvonen and S. Graham (New York, NY: The Guilford Press), 25–48.

Landis, D. (2003). Reading and writing as social, cultural practices: implications for literacy education. *Read. Writ. Q.* 19, 281–307. doi: 10.1080/10573560308213

Langer, J. A. (1978). "A sociocognitive perspective on literacy" in Language, literacy, and culture: issues of society and schooling. ed. J. Langer (Norwood, NJ: Ablex), 1–20.

Latin American Laboratory for Assessment of the Quality of Education. (2008). Los aprendizajes de los estudiantes de América Latina y el Caribe: Primer reporte de los resultados del Segundo Estudio Regional Comparativo y Explicativo. Unesco Regional Office for Education in Latin America and the Caribbean. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000160660

Leadbeater, B., Sukhawathanakul, P., Smith, D., and Bowen, F. (2015). Reciprocal associations between interpersonal and values dimensions of school climate and peer victimization in elementary school children. *J. Clin. Child Adolesc. Psychol.* 44, 480–493. doi: 10.1080/15374416.2013.873985

Lee, Y. S., and Jonson-Reid, M. (2016). The role of self-efficacy in reading achievement of young children in urban schools. *Child Adolesc. Soc. Work J.* 33, 79–89. doi: 10.1007/s10560-015-0404-6

Lerner, R. M., Boyd, M. J., and Du, D. (2010). Adolescent development. *Corsini Encycl. Psychol.* 1, 34–36. doi: 10.1002/9780470479216.corpsy0019

Lindeman, J. (1998). Ala-asteen lukutesti ALLU [Reading test for primary school ALLU]. Turku: Center for Learning Research.

Liu, J. (2004). Childhood externalizing behavior: theory and implications. *J. Child Adolesc. Psychiatr. Nurs.* 17, 93–103. doi: 10.1111/j.1744-6171.2004.tb00003.x

Liu, J., Bullock, A., and Coplan, R. J. (2014). Predictive relations between peer victimization and academic achievement in Chinese children. *Sch. Psychol. Q.* 29, 89–98. doi: 10.1037/spq0000044

Masten, A. S., and Cicchetti, D. (2010). Developmental cascades. *Dev. Psychopathol.* 22, 491–495. doi: 10.1017/S0954579410000222

Meneses, A., Uccelli, P., Santelices, M. V., Ruiz, M., Acevedo, D., and Figueroa, J. (2018). Academic language as a predictor of reading comprehension in monolingual Spanish-speaking readers: evidence from Chilean early adolescents. *Read. Res. Q.* 53, 223–247. doi: 10.1002/rrq.192

Met, M. (2008). "Paying attention to language: literacy, language and academic achievement" in Pathways to multilingualism: evolving perspectives on immersion education. eds. T. W. Fortune and D. J. Tedick (Bristol, Blue Ridge Summit: Multilingual Matters), 49–70.

Morgan, P. L., Farkas, G., Tufis, P. A., and Sperling, R. A. (2008). Are reading and behavior problems risk factors for each other? *J. Learn. Disabil.* 41, 417–436. doi: 10.1177/0022219408321123

Morrow, M. T., Hubbard, J. A., and Sharp, M. K. (2019). Preadolescents' daily peer victimization and perceived social competence: moderating effects of classroom aggression. *J. Clin. Child Adolesc. Psychol.* 48, 716–727. doi: 10.1080/15374416.2017.1416618

Morrow, M. T., Hubbard, J. A., and Swift, L. E. (2014). Relations among multiple types of peer victimization, reactivity to peer victimization, and academic achievement in fifth-grade boys and girls. *Merrill-Palmer Q.* 60, 302–327. doi: 10.13110/merrpalmquar1982.60.3.0302

Mullis, I. V. S., Martin, M. O., Foy, P., and Arora, A. (2012). Timss 2011 international results in mathematics: TIMSS and PIRLS International Study Center Available at: https://timssandpirls.bc.edu/timss2011/downloads/T11_IR_Mathematics_FullBook.pdf.

Nakamoto, J., and Schwartz, D. (2010). Is peer victimization associated with academic achievement? A meta-analytic review. *Soc. Dev.* 19, 221–242. doi: 10.1111/j.1467-9507.2009.00539.x

Nicotera, N., Altschul, I., Munoz, A., and Webman, B. (2010). "Conceptual and analytic development of a civic engagement scale for pre-adolescents" in Advances in service learning research: research for what? Making engaged scholarship matter. eds. J. Keshen, B. Moely and B. Holland (Charlotte, NC: Information Age Publishing, Inc), 71–89.

Nishina, A., Juvonen, J., and Witkow, M. R. (2005). Sticks and stones may break my bones, but names will make me feel sick: the psychosocial, somatic, and scholastic consequences of peer harassment. *J. Clin. Child Adolesc. Psychol.* 34, 37–48. doi: 10.1207/s15374424jccp3401_4

Northwest Evaluation Association (2004). Reliability and validity estimates: NWEA achievement level tests and measures of academic progress. Available at: https://docplayer.net/29708384-Reliability-and-validity-estimates-nwea-achievement-level-tests-measures-of-academic-progress-and.html

Olweus, D. (1996). The revised Olweus bully/victim questionnaire. Bergen, Norway: Research Center for Health Promotion.

Olweus, D., and Pellegrini, A. D. (1996). Bullying at school. *Aggress. Behav.* 22, 150–154.

O'Moore, A. M., and Minton, S. J. (2005). Evaluation of the effectiveness of an anti-bullying programme in primary schools. *Aggress. Behav.* 31, 609–622. doi: 10.1002/ab.20098

Pedersen, M. L., Holen, S., Lydersen, S., Martinsen, K., Neumer, S. P., Adolfsen, F., et al. (2019). School functioning and internalizing problems in young schoolchildren. *BMC Psychol.* 7, 88–13. doi: 10.1186/s40359-019-0365-1

Pellegrini, A. D. (2002). Bullying, victimization, and sexual harassment during the transition to middle school. *Educ. Psychol.* 37, 151–163. doi: 10.1207/S15326985EP3703_2

Perfetti, C., and Stafura, J. (2014). Word knowledge in a theory of reading comprehension. *Sci. Stud. Read.* 18, 22–37. doi: 10.1080/10888438.2013.827687

Perry, K. (2012). What is Literacy? –A critical overview of sociocultural perspectives. *J. Lang. Liter. Educ.* 8, 50–71.

Perry, D. G., Kusel, S. J., and Perry, L. C. (1988). Victims of peer aggression. *Dev. Psychol.* 24, 807–814. doi: 10.1037/0012-1649.24.6.807

Pouwels, J. L., Souren, P. M., Lansu, T. A. M., and Cillessen, A. H. N. (2016). Stability of peer victimization: a meta-analysis of longitudinal research. *Dev. Rev.* 40, 1–24. doi: 10.1016/j.dr.2016.01.001

Prior, P. (2006). "A sociocultural theory of writing" in Handbook of writing research; handbook of writing research. eds. C. A. MacArthur, S. Graham and J. Fitzgerald (New York, NY: The Guilford Press), 54–66.

Psychological Corporation (1996). Stanford achievement test. *9th* Edn. San Antonio, TX: Harcourt.

Queen's Printer for Ontario (2012). About EQAO. Available at: https://www.eqao.com/about-eqao/

Reynolds, W. M. (2003). Reynolds bully-victimization scales for schools. San Antonio, TX: Psychological Corporation.

Román, M., and Murillo, J. F. (2011). Latin America: school bullying and academic achievement. *Rev. Cepal.* 2011, 37–53. doi: 10.18356/b5132944-en

Safe Community-Safe School Project (2002). The middle school/high school survey revised: The Center for the Study and Prevention of Violence Boulder, CO.

Sainio, P. J., Eklund, K. M., Ahonen, T. P. S., and Kiuru, N. H. (2019). The role of learning difficulties in adolescents' academic emotions and academic achievement. *J. Learn. Disabil.* 52, 287–298. doi: 10.1177/0022219419841567

Salavera, C., Usán, P., and Teruel, P. (2019). The relationship of internalizing problems with emotional intelligence and social skills in secondary education students: gender differences. *Psicologia* 32:4. doi: 10.1186/s41155-018-0115-y

Salmivalli, C., and Voeten, M. (2004). Connections between attitudes, group norms, and behaviour in bullying situations. *Int. J. Behav. Dev.* 28, 246–258. doi: 10.1080/01650250344000488

Samara, M., Da Silva Nascimento, B., El-Asam, A., Hammuda, S., and Khattab, N. (2021). How can bullying victimisation lead to lower academic achievement? A systematic review and meta-analysis of the mediating role of cognitive-motivational factors. *Int. J. Environ. Res. Public Health* 18:2209. doi: 10.3390/ijerph18052209

Sameroff, A. (2009). The transactional model of development: how children and contexts shape each other: American Psychological Association.

Savolainen, H., Ahonen, T., Aro, M., Tolvanen, A., and Holopainen, L. (2008). Reading comprehension, word reading and spelling as predictors of school achievement and choice of secondary education. *Learn. Instr.* 18, 201–210. doi: 10.1016/j.learninstruc.2007.09.017

Schacter, H. L., Hoffman, A. J., Ehrhardt, A., and Bakth, F. (2023). Peer victimization, schooling format, and adolescent internalizing symptoms during the COVID-19 pandemic: between- and within-person associations across ninth grade. *Dev. Psychopathol.* 35, 823–837. doi: 10.1017/S0954579422000074

Schwartz, D., Chang, L., and Farver, J. M. (2001). Correlates of victimization in Chinese children's peer groups. *Dev. Psychol.* 37, 520–532. doi: 10.1037/0012-1649.37.4.520

Schwartz, D., Gorman, A. H., Nakamoto, J., and Toblin, R. L. (2005). Victimization in the peer group and children's academic functioning. *J. Educ. Psychol.* 97, 425–435. doi: 10.1037/0022-0663.97.3.425

Schwartz, D., Lansford, J. E., Dodge, K. A., Pettit, G. S., and Bates, J. E. (2015). Peer victimization during middle childhood as a lead indicator of internalizing problems and diagnostic outcomes in late adolescence. *J. Clin. Child Adolesc. Psychol.* 44, 393–404. doi: 10.1080/15374416.2014.881293

Sheppard, C. S., Giletta, M., and Prinstein, M. J. (2019). Peer victimization trajectories at the adolescent transition: associations among chronic victimization, peer-reported status, and adjustment. *J. Clin. Child Adolesc. Psychol.* 48, 218–227. doi: 10.1080/15374416.2016.1261713

Smith, P. K., and Ananiadou, K. (2003). The nature of school bullying and the effectiveness of school-based interventions. *J. Appl. Psychoanal. Stud.* 5, 189–209. doi: 10.1023/A:1022991804210

Smith, P. K., Morita, Y., Junger-Tas, J., Olweus, D., and Catalano, R. F. (1999). The nature of school bullying: a cross-national perspective. New York, NY: Routledge.

Smith, J. D., Schneider, B. H., Smith, P. K., and Ananiadou, K. (2004). The effectiveness of whole-school antibullying programs: a synthesis of evaluation research. *Sch. Psychol. Rev.* 33, 547–560. doi: 10.1080/02796015.2004.12086267

Statistics Canada (1999). National longitudinal survey of children and youth: cycle three survey instruments. Ottawa, Ontario: Human Resources Development Canada.

Sweeting, H., Young, R., West, P., and Der, G. (2006). Peer victimization and depression in early-mid adolescence: a longitudinal study. *Br. J. Educ. Psychol.* 76, 577–594. doi: 10.1348/000709905X49890

Troop-Gordon, W. (2017). Peer victimization in adolescence: the nature, progression, and consequences of being bullied within a developmental context. *J. Adolesc.* 55, 116–128. doi: 10.1016/j.adolescence.2016.12.012

Turunen, T., Poskiparta, E., and Salmivalli, C. (2017). Are reading difficulties associated with bullying involvement? *Learn. Instr.* 52, 130–138. doi: 10.1016/j.learninstruc.2017.05.007

Turunen, T., Poskiparta, E., Salmivalli, C., Niemi, P., and Lerkkanen, M. (2021). Longitudinal associations between poor reading skills, bullying and victimization across the transition from elementary to middle school. *PLoS One* 16:e0249112. doi: 10.1371/journal.pone.0249112

U.S. Department of Education. (2022). Institute of Education Sciences, National Center for education statistics, National Assessment of educational Progress (NAEP), 2022 Reading assessment.

Uccelli, P., Barr, C. D., Dobbs, C. L., Galloway, E. P., Meneses, A., and Sanchez, E. (2014). Core academic language skills: an expanded operational construct and a novel instrument to chart school-relevant language proficiency in preadolescent and adolescent learners. *Appl. Psycholinguist.* 36, 1077–1109. doi: 10.1017/S014271641400006X

Vaillancourt, T., Brittain, H. L., McDougall, P., and Duku, E. (2013). Longitudinal links between childhood peer victimization, internalizing and externalizing problems, and academic functioning: developmental cascades. *J. Abnorm. Child Psychol.* 41, 1203–1215. doi: 10.1007/s10802-013-9781-5

Vaillancourt, T., McDougall, P., Hymel, S., Krygsman, A., Miller, J., Stiver, K., et al. (2008). Bullying: are researchers and children/youth talking about the same thing? *Int. J. Behav. Dev.* 32, 486–495. doi: 10.1177/0165025408095553

van Dijk, T. (2015). Tried and tested: academic literacy tests as predictors of academic success. *Tijdschrift voor Taalbeheersing* 37, 159–186. doi: 10.5117/TVT2015.2.VAND

Virginia Department of Education (2007). Virginia SOL assessments: Technical report 2006–2007 administration cycle. Richmond: Author.

Wang, H., Tang, J., Dill, S. E., Xiao, J., Boswell, M., Cousineau, C., et al. (2022). Bullying victims in rural primary schools: prevalence, correlates, and consequences. *Int. J. Environ. Res. Public Health* 19:765. doi: 10.3390/ijerph19020765

Warschauer, M. (1997). "A sociocultural approach to literacy and its significance for CALL" in Nexus: the convergence of research and teaching through new information technologies. eds. K. Murphy Judy and R. Sanders (Durham: University of North Carolina), 88–97.

Wei, H., and Williams, J. H. (2004). Relationship between peer victimization and school adjustment in sixth-grade students: investigating mediation effects. *Violence Vict.* 19, 557–571. doi: 10.1891/vivi.19.5.557.63683

Wentzel, K. R. (1991). Relations between social competence and academic achievement in early adolescence. *Child Dev.* 62, 1066–1078. doi: 10.2307/1131152

Wienke Totura, C. M., Green, A. E., Karver, M. S., and Gesten, E. L. (2009). Multiple informants in the assessment of psychological, behavioral, and academic correlates of bullying and victimization in middle school. *J. Adolesc.* 32, 193–211. doi: 10.1016/j.adolescence.2008.04.005

Wienke Totura, C. M., Karver, M. S., and Gesten, E. L. (2014). Psychological distress and student engagement as mediators of the relationship between peer victimization and achievement in middle school youth. *J. Youth Adolesc.* 43, 40–52. doi: 10.1007/s10964-013-9918-4

Wilkinson, G. (1993). The wide range achievement test. Wilmington, DE: Jastak Associates.

You, S., and Yoon, J. (2016). Peer victimization: exploring psychosocial correlates and reciprocal longitudinal relationships. *J. Community Psychol.* 44, 426–441. doi: 10.1002/jcop.21779

Zychinski, K. E., and Polo, A. J. (2012). Academic achievement and depressive symptoms in low-income Latino youth. *J. Child Fam. Stud.* 21, 565–577. doi: 10.1007/s10826-011-9509-5