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## Resilience in Students with Learning Disabilities: A Systematic Review of Positive Outcomes and Contextual Protective Factors

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**Abstract.** Resilience helps explain how students with learning disabilities (LD) overcome academic, emotional, and social challenges, although research on its development and functioning across domains remains limited. This review sought to synthesize recent empirical studies examining the benefits of resilience and to identify contextual protective factors that contribute to enhancing resilience in students with LD. A total of 17 studies were selected from 1,692 publications indexed between 2016 and 2025 across Scopus, ScienceDirect, ERIC, PubMed, ProQuest, and Google Scholar for further analysis using the PRISMA 2020 flow diagram. The database search utilized a combination of keywords such as “resilience”, “psychological resilience”, “impact”, and “protective factors”. A thematic synthesis approach was employed to identify and map the pattern of meaning derived from the collected research findings. Resilience was found to enhance academic engagement and competence, socio-emotional wellbeing, the quality of social relationships, and a sense of belonging at school. Two primary categories of factors supporting resilience were also identified: internal protective factors (such as self-efficacy, coping, and emotional regulation) and external supportive factors (like family, teacher, peers, and inclusive school support). The integration of personal capacity and ecological support systems was

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crucial to facilitating sustainable adaptive development in students with LD. This review emphasized the integration of psychological, educational, and socio-ecological perspective within the framework of inclusive education to foster sustainable adaptive growth, including resilience. Future research needs to develop integrated interventions to strengthen both internal and external protective factors to foster resilience and inclusive learning outcomes among students with LD.

**Keywords:** resilience; learning disabilities; positive outcomes; protective factors; systematic literature review

## 1. Introduction

Inclusive education offers equal access to education for all students, including those with learning disabilities (LD). Students with LD typically struggle to master one or more academic skills—such as reading, writing, or mathematics—due to neurobiological conditions (American Psychiatric Association, 2022), rather than intellectual disabilities, sensory impairments, or environmental factors (Romadhon & Supena, 2021). The neurobiological condition impacts an individual's ability to acquire, process, and retain information effectively (Khatout, 2024). Common LD in schools include specific learning disabilities (SLD), which cover dyslexia (difficulty in reading), dysgraphia (difficulty in writing), and dyscalculia (difficulty in understanding mathematics concepts) (Dominguez & Carugno, 2023). It is estimated that SLD has affected about 5% to 15% of the school-age population around the globe (Grigorenko et al., 2020).

Individuals with LD face challenges that extend beyond the classroom activities, ultimately impacting their educational, work, and family life. Students with LD experience various difficulties, academic, psychological, and social difficulties—that can make school adaptation particularly stressful and frustrating for them (Stein et al., 2024). Research shows that students with LD are often criticized for their academic performance, causing them to view themselves as incompetent compared to their peers (Panicker & Chelliah, 2016), and they tend to extend higher levels of self-criticism and social rejection (Goad & Parker, 2021). Additionally, they are frequently labeled as “lazy” or “stupid,” and perceived to have less motivation to improve their academic performance (Wiliyanto et al., 2025).

Additionally, students with LD often encounter emotional and behavioural difficulties, including anxiety (Xu et al., 2025), low self-worth, aggressive behavior, and tendencies toward delinquency (Zupardo et al., 2023). Socially, these students are frequently targeted for bullying by their peers and often experience feelings of social isolation (Berchiatti et al., 2022). Some studies reported that the stress and daily challenges associated with learning difficulties often carry over into adulthood (Reid & Hamby, 2025). Although research on the challenges faced by students with LD remains relatively scarce, existing studies have identified association between LD and difficulties across multiple domains of adult life, including employment, interpersonal relationships, and mental health (McLaughlin et al., 2014; Piers & Duquette, 2016). These findings

underscore the importance of strengthening resilience among people with LD especially during school age. Enhanced resilience plays a critical role in helping students with LD manage and overcome current difficulties, eventually reducing the likelihood of future adverse outcomes.

Resilience is an important quality for every individual, including those with special needs such as students with LD (Azwar et al., 2021). It is defined as the ability to recover from adversity and effectively utilize available resources to maintain and enhance wellbeing, while also promoting the community's capacity to provide meaningful support (Ungar, 2011). Resilience not only helps individuals cope with difficult situations but also enables them, including those with special needs, to stay motivated and find meaning in challenging life experiences. People with resilience tend to have greater emotional stability, better stress management skills, and the ability to build healthy social connections through strong interpersonal and problem-solving skills (Reivich & Shatté, 2002). Additionally, they can also sustain both mental and physical health while continuously improving their skills and competencies (Konaszewski et al., 2021).

Some previous research has shown that resilience plays a significant role in reducing anxiety, as well as improving well-being, life satisfaction, self-esteem, and optimism (Davey et al., 2003; Downie et al., 2010; Nurhayati et al., 2023; Svetaz et al., 2000). Students who tend to handle academic stress more effectively and are less likely to quit when faced with learning challenges at schools are reported as having higher resilience than students with lower resilience (Mulia & Khaira, 2025).

In this sense, resilience is a crucial resource for supporting the learning progress and academic performance, including among students with LD. These students frequently encounter academic, social, and emotional barriers which ultimately affect their learning process and outcomes. Difficulties related to memory and attention, as characterized by students with LD, also influence their self-esteem and motivation (Antonis, 2022). These situations, especially occur when they struggle to keep up with classmates in activities such as reading and writing. Resilience, therefore, plays a pivotal role in helping students with LD adapt to these challenges.

There are some theoretical models of resilience, such as the Protective Risk Framework (Rutter, 1987, 2006) and the Social-Ecological Model (Ungar, 2011). Both models emphasize that resilience is shaped not only by individual factors but also external factors. The external factors are also known as social environment, which include family, school, and community. Recent studies further affirm that resilience is not stagnant, but rather dynamic and is a developable process (Ofiesh & Mather, 2013). Resilience refers to the ability to recover when facing adversity, which arises from the interaction of both internal and external characteristics (Straus et al., 2020). Adversity may emerge from factors across multiple environmental levels that hinder an individual's adaptation or development (Wright et al., 2013). Such adversity may take the form

of direct threats (e.g., bullying) and/or deprivation (e.g., neglect) (McLaughlin & Sheridan, 2016).

Resilience is shaped by both personal qualities (internal factors) and external factors. The internal factors include individual traits and abilities, while external factors include support from the social environment, such as family and wider community (Stein et al., 2024). A number of research has identified a range of elements that contribute to building resilience in students with LD. These contributing elements consist of internal and external factors, indicating that both factors play a vital role in shaping resilience.

The internal traits, which include self-esteem, self-concept, and self-efficacy are vital in deciding how challenges impact the emotional and mental well-being of students with LD (Giovagnoli et al., 2020; Iznardo et al., 2023). On the other hand, external factors are equally important in shaping resilience of students with LD. These elements include strong support from parents or family, teachers, and peers, as well as an inclusive school environment which accepts students from different backgrounds (Aro et al., 2025; Dasika & Suma, 2025; Putri & Tarsidi, 2025).

More recent studies also emphasize that parental involvement can enhance the self-confidence of students with LD in many schools' activities as they feel supported and encouraged by parents (Dasika & Suma, 2025). Ultimately, this external factor can improve the academic performance and achievement of students with LD in schools. Other external factors from school such as teacher support, especially through differentiated approaches and personalized learning plans, also play a critical role in nurturing resilience among students with LD as the instruction accommodate their learning needs (Putri & Tarsidi, 2025). External factors such as positive relationships with peers and a sense of belonging in the school community are also reported as crucial psychological support, helping students with LD overcome challenges (Aro et al., 2025).

Recent research on resilience among students with LD has increasingly shifted to examining protective factors that support their positive adaptation and academic success (Feraco et al., 2025a; Mawila, 2023; Piers & Duquette, 2016). In line with this trend, contemporary systematic reviews point to the complex role of protective factors, encompassing the contribution of both internal and external supports in shaping resilience (Iznardo et al., 2023; Walter & Hazan-Liran, 2024). At the same time, researchers have emphasized that resilience among students with LD is shaped by a dynamic interaction between individual characteristics and environmental contexts, when they face adversities and psychosocial stressors (Lawrence et al., 2019; Ugwuanyi et al., 2021).

Despite the growing body of evidence, comprehensive syntheses that systematically address the benefits of resilience and the contextual protective factors that contribute to the well-being, academic achievement, and social adjustment in this population are still limited (Casali et al., 2024). Consequently, literature remains fragmented (Goodley et al., 2018), with many studies targeting

specific outcomes or narrow samples, hence a holistic picture on how protective factors were implemented and the extent to which those factors are effective in inclusive education settings is still limited (Iaia et al., 2024; Marks et al., 2023).

In addition to classical perspectives, contemporary research increasingly conceptualizes resilience within a socio-ecological and developmental system framework, emphasizing its dynamic, context-dependent, and process-oriented nature. Within this perspective, resilience is understood not merely as an individual trait but as an outcome of ongoing interactions between individuals and their environments across time and contexts (Stein et al., 2024; Ungar, 2011). Consistent with this view, existing literature has widely recognized the role of both internal and external protective factors in shaping resilience among students with LD, including personal capacities and contextual supports (Iznardo et al., 2023; Walter & Hazan-Liran, 2024).

However, many studies continue to examine these factors in isolation, rather than as components of an interconnected ecological system, resulting in a predominantly descriptive understanding of resilience (Ungar, 2011). This limitation is further reflected in the lack of comparative analysis across studies, particularly regarding how different configurations of protective factors influence outcomes in diverse cultural and educational contexts (Casali et al., 2024; Aro et al., 2025). Therefore, a more integrative and analytical synthesis is needed to explain how internal capacities and external supports interact dynamically to produce positive academic, social, and emotional outcomes in students with LD. This systematic review aimed to address the following research questions: “(1) What positive outcomes are associated with resilience in students with LD? and (2) What contextual protective factors contribute to fostering resilience among students with LD?”

This systematic literature review (SLR) aimed to present a novel contribution by systematically synthesizing recent studies on resilience of students with LD. This review attempted to map the benefits of resilience for students with LD and integrate various contextually relevant protective factors within educational and social environments. This SLR identified protective factors that influence academic adaptation, socio-emotional development, and overall quality of life among students with LD through a thematic analysis of empirical studies across different countries, age groups, and educational levels. The synthesis of this review expectedly provides a robust scientific foundation for the development of evidence-based and contextually grounded interventions, inclusive education policies, and innovative support services on education for students with LD.

## **2. Method**

### **2.1 Research Design**

This study employed a Systematic Literature Review (SLR) method to critically synthesize empirical evidence on the benefits of resilience and the contextual protective factors that support resilience in students with LD. In conducting the review, the procedures were aligned with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to promote

methodological rigour and transparency throughout the identification, screening, and selection stages (Mu, 2024; Stein et al., 2024).

## 2.2 Search Strategy

To enhance transparency, the search strategy was developed using combinations of keywords and Boolean operators adjusted to each database. The core search string included terms such as (“resilience” OR “psychological resilience”) AND (“learning disabilities” OR “learning disorder” OR “dyslexia” OR “dysgraphia” OR “dyscalculia”) AND (“protective factors” OR “support” OR “outcomes”). Minor adjustments were made across databases to align with their specific indexing systems and search functionalities.

## 2.3 Inclusion and Exclusion Criteria

To ensure the rigor and relevance of the review, a set of inclusion and exclusion criteria was systematically applied. Studies were included if they met the following criteria: (a) involved students with LD across any level of formal education; (b) employed quantitative, qualitative, or mixed-method research designs to capture diverse forms of empirical evidence; (c) explicitly examined resilience-related constructs, including resilience, psychological resilience, or related adaptive capacities; (d) were published in peer-reviewed academic journals to ensure scholarly quality; (e) were written in English to maintain consistency in analysis; (f) were published between 2016 and 2025 to capture both recent developments and relevant foundational studies; and (g) were indexed in major academic databases, including Scopus, ScienceDirect, ERIC, ProQuest, PubMed, and Google Scholar. These databases were selected due to their comprehensive coverage and relevance to education, psychology, and interdisciplinary research, thereby ensuring a broad yet credible representation of the literature.

Conversely, studies were excluded if they were non-empirical in nature (e.g., opinion papers, editorials, or theoretical commentaries), systematic or scoping reviews, or if they did not directly address the outcomes or protective factors associated with resilience among students with LD. Following the initial screening, all eligible studies were further evaluated for relevance, conceptual contribution, and methodological clarity to ensure that only studies with sufficient analytical value were included in the final synthesis.

## 2.4 Screening and Selection

From 1,692 articles initially identified across six databases, 54 duplicates were found and 28 were removed. After title, abstract, and full-text screening following PRISMA guidelines, 17 studies met the inclusion criteria, focusing on students with LD in school contexts. Screening was conducted independently by two reviewers. The screening and selection process is summarized using the PRISMA flow diagram below.

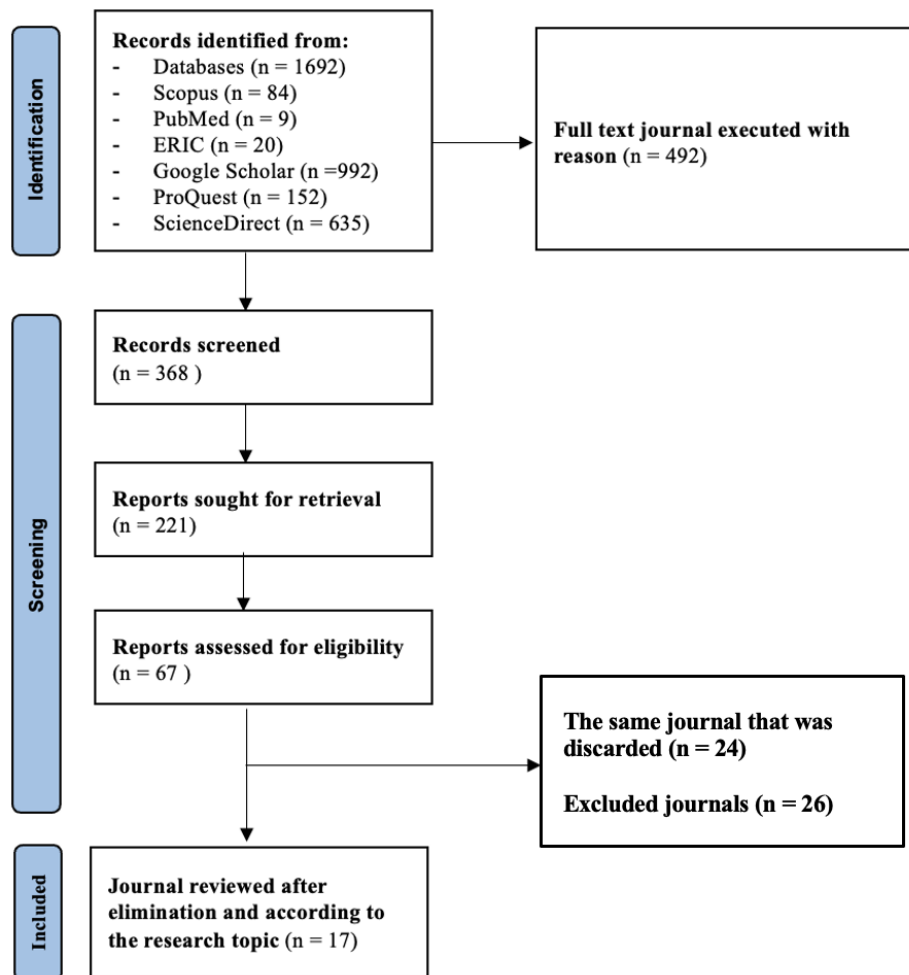


Figure 1: PRISMA flow chart of the study selection process

## 2.5 Data Extraction and Thematic Analysis

Data extraction was conducted using a structured matrix that included key information such as authors, year of publication, country, study design, sample characteristics, identified protective factors, and reported outcomes. The extracted data were then analysed using a thematic synthesis approach. This process involved three stages: (1) initial coding of relevant findings from each study, focusing on patterns related to resilience outcomes and supporting factors; (2) grouping of similar codes into descriptive categories to identify recurring concepts across studies; and (3) development of higher-order analytical themes that capture broader patterns and relationships among the identified categories.

Through this iterative process, two overarching themes were generated: (1) positive outcomes of resilience and (2) contextual protective factors supporting resilience development. These themes were further refined into sub-themes, including academic adaptation, socio-emotional well-being, and social functioning under positive outcomes, as well as internal and external protective factors within contextual influences. The identified themes served as an analytical framework to organize and interpret the findings presented in the results and discussion sections.

### 3. Results and Findings

Based on the PRISMA guideline, a total of 17 articles were included in the review. These articles identify the benefits of resilience in supporting students with LD and examine both internal and external protective factors that contribute to their protective functioning. In summary, the key findings from these studies are presented in the following table.

**Table 1: Systematic Review**

No	Authors	Year	Country	Positive Outcomes	Protective factors
1.	Mawila, D.	2023	South Africa	Positive adaptation, navigating life's challenges	The role of caregivers and context factors
2.	Piers, L, & Duquette, C.	2016	Canada	Empowering coping, shaping academic and personal journeys	Early diagnosis and intervention; family support; social, individual capacity
3.	Mawila, D.	2023	South Africa	Addressing adversity, preventing negative outcomes, positive development	Individual factors (self-efficacy, problem solving, self-confidence), relationships (support from caregivers, friends), context (engagement, spirituality, role models)
4.	Iznardo et. al	2023	Canada	Buffer in facing academic and social challenges, positive developmental outcomes	Strong student-teacher relationships, individual and environmental support
5.	Benassi et. al	2021	Italy	Children's quality of life improves, especially in physical aspects, learning processes, and emotional health.	Maternal resilience helps reduce children's stress and emotional problems, strengthening children's coping abilities.
6.	Carnazzo et. al	2018	California	Academic and social success, reducing the risk of behavioral problems	Internal factors (self-esteem, persistence), external (family, friends, school support), strength-based assessment, socio-emotional programs
7.	Feraco, et.al.	2024	Italy	Resilience skills contribute to life satisfaction	Personal character, system support, psychological & emotional factors, skill development

No	Authors	Year	Country	Positive Outcomes	Protective factors
8.	Hossain, et.al	2021	California	Reduce anxiety & depression, better quality of life	Personal strength (grit), social skills, family support, educational environment, coping strategies, positive self-perception
9.	Lawrence et.al	2019	Canada	Protective mechanisms, stress and distress management, positive development	Development of socio-emotional skills, parenting support (monitoring, nurturing)
10.	Mawila, D.	2022	South Africa	Adversity navigation, achieving positive results	Individual agency in utilizing resources, the role of socio-ecological stakeholders
11.	Marks, et.al	2022	United States (Northeast)	Academic success, socio-emotional management, effective response to problems	Socio-emotional competence, executive function (self-regulation), coping & reframing problems
12.	Casali, et.al	2024	Northern Italy	Study resilience contributes to achievement and life satisfaction	Strengthening intraindividual factors, coping skills, independent motivation
13.	Walter, O., & Hazan-Liran, B.	2024	Israel	Academic performance and well-being improved	Institutional support, special education services, self-involvement
14.	Ugwuanyi et.al	2021	Nigeria	Positive adjustment to stress, quality of life, independence	Mother-child interaction, Mediated Learning Experience (MLE), MCML strategies
15.	Iaia, et.al	2024	Italy	Protective factors against stress, study success	Social support from family and school, remediation treatment, proactive attitude
16.	Ghisi, et.al	2016	Italian	Negative protective factors, reducing distress	Early diagnosis, speech therapy, teacher support, positive academic attitude
17.	Lyons & Roulstone	2018	United States	Well-being, resilience in the face of adversity	Hope, agency, positive family/friend relationships

The main findings in this SLR indicated consistent positive outcomes of resilience among students with LD. These outcomes encompass positive adaptation to life challenges, improved coping and academic progress, growth in both emotional

and social domain, as well as psychological well-being. Furthermore, the body of evidence consistently demonstrates that students with LD experience positive adaptation, improved quality of life, academic achievement, and strengthened psychological health, despite the cultural and social systems differences in each country. Studies in this review illustrate a cross-national comparison on how contextual factors shape the outcome of resilience. For instance, studies from South Africa underscore how caregiver and broader contextual influences play a pivotal role in supporting positive adjustment and preventing negative outcomes in children and adolescents with LD (Mawila, 2022, 2023).

Studies from Canada and the United States identify early diagnoses that strong family and teacher support, and the development of individual competencies serve as key contributors to empowered coping and improved academic performance (Hossain et al., 2022; Iznardo et al., 2023; Lawrence et al., 2019; Marks et al., 2023; Piers & Duquette, 2016). Research from Italy suggests the importance of maternal resilience as it plays a key role in improving children's quality of life, both physically and emotionally, and strengthens children's coping mechanisms for effectively dealing with stress (Casali et al., 2024; Feraco et al., 2025b; Ghisi et al., 2016; Giovagnoli et al., 2020; Iaia et al., 2024). Meanwhile, studies carried out in Nigeria emphasize the importance of mother-child interactions and mediated learning experiences (MLE/MCML) in fostering independence and promoting healthy adjustment to stress.

The degree to which these protective factors exert their influence differs across national and community contexts. In South Africa, for instance, caregivers and spirituality serve as a key pillar in individual adaptation and development (Mawila, 2022, 2023). In contrast, evidence from countries such as Canada and the United States shows that strong relationships between individuals and educational institutions, working together with robust social support, has a direct impact on positive coping and academic progress (Hossain et al., 2022; Iznardo et al., 2023; Lawrence et al., 2019; Marks et al., 2023; Piers & Duquette, 2016).

## **4. Discussion**

### **4.1 Positive outcomes**

The This SLR confirms that positive outcomes from resilience interventions or support not only result in effective adaptation but also strengthen protective mechanisms such as self-efficacy, problem-solving skills, family support, and the development of socio-emotional skills. Globally, modifying the balance between risk and protective factors has a significant impact on strengthening resilience and improving personal and social outcomes.

Several other studies have also shown a close relationship between resilience and various positive psychological outcomes, such as life satisfaction, happiness, and general well-being (Sclanavo, 2023). Other research also demonstrates that effective cognitive reappraisal strategies can moderate the link between stress exposure and adverse developmental outcomes, thereby supporting various resilience-related benefits (Riepenhausen et al., 2022). In similar vein, Sayed et al. (2024) found a strong connection between individuals' resilience levels and their

well-being throughout the COVID-19 pandemic. In addition to psychosocial aspects, positive outcomes are also related to improved academic performance and self-regulation skills. Marks et al. (2023) found that in America, socio-emotional competence and executive function help students achieve academic success and manage emotions and problems effectively. This is supported by Walter & Hazan-Liran (2024) who show the role of institutional support and special education in improving student academic achievement and well-being.

These findings indicate that resilience in students with LD functions as a multidimensional construct that simultaneously supports academic performance, psychological well-being, and social adaptation. The consistency of these positive outcomes across different cultural and educational contexts suggests that resilience is shaped through the dynamic interactions between individual capacities and contextual support, rather than through an isolated personal trait (Marks et al., 2023). Furthermore, the evidence implies that resilience becomes most effective when internal strength, such as coping and self-regulation, is reinforced by external support, including family involvement and institutional support systems. This highlights that resilience should be understood not only as an outcome but also as a dynamic adaptive process that contributes to sustainable positive development among students with LD across diverse contexts.

#### **4.2 Contextual protective factors**

The findings of this systematic literature review emphasized the importance of contextual protective factors as key determinants of positive developmental outcomes in individuals from diverse cultural and social backgrounds. Protective factors within social, educational, and family contexts not only act as buffers against risk but also increase the chances of achieving resilience and well-being. The engagement from caregivers, constructive interactions with teachers and peers, and support provided by institutional and learning environments have been shown to strengthen adaptive functioning and promote recovery in the face of adversity.

Consistent with the findings of this SLR, international studies have also confirmed that social support serves as a specific protective factor for mental health following adverse childhood experiences, while educational domain represents a strong protective factor for overall well-being and socioeconomic development (Buchanan et al., 2023). According to Pearson et al. (2025), the negative consequences of adversity can be significantly reduced within supportive environment, with stable and nurturing parenting identified as a particularly influential actor in strengthening resilience outcome.

This insight suggests that global resilience is shaped by several factors, namely the quality of social interactions, the availability of support systems at both home and school, and the degree of access to community resources. In similar vein, Orbuch et al. (2022) also emphasized that long term adverse effect of childhood hardship can be mitigated through safe, stable, and supportive relationships. As a result, individuals' capacity to cope with risks and attain sustained adaptive

functioning is reinforced by the protective roles played by families and communities.

To further synthesize these findings, a conceptual framework can be proposed to illustrate how resilience among students with LD is shaped through the dynamic interaction between contextual protective factors and individual adaptation processes. The evidence consistently demonstrates that support from caregivers, teachers, peers, and inclusive educational environments plays a critical role in strengthening adaptive functioning and promoting recovery in the face of adversity. However, the influence of these protective factors is not uniform across contexts, as cultural and community-specific conditions shape how such supports are accessed and experienced.

These variations suggest that resilience is constructed through context-sensitive interactions between social support systems and individual responses to adversity, reinforcing the role of family, school, and community as interconnected ecological resources (Buchanan et al., 2023). Consequently, the framework highlights that effective resilience-building efforts require integrated and contextually responsive approaches that align protective factors across multiple levels to support sustainable positive outcomes.

These findings carry important implications for educational practice and policy. Schools and educators should adopt integrated approaches that simultaneously strengthen students' internal capacities and enhance the quality of external support systems, particularly through inclusive teaching practices, family engagement, and supportive school climates. At the policy level, there is a need to design context-sensitive interventions that consider cultural and institutional differences in shaping resilience. Future research should focus on developing and evaluating intervention models that systematically integrate internal and external protective factors to promote sustainable learning outcomes among students with LD.

## **5. Conclusion**

Adaptive functioning, academic achievement, and socio-emotional stability are increasingly linked to resilience in students with LD. This evaluation of 17 foreign studies shows that contextual protective variables regularly improve adaptation, academic achievement, well-being, and behavioral issues. Sustained caregiver support, positive family and community relationships, supportive and inclusive educational environments, well-developed socio-emotional competencies, and specialized learning support are observed across cultures.

Importantly, the findings show that resilience involves a dynamic relationship between internal capacities and external supports. This highlights the need for integrative approaches that improve students' personal competencies and learning settings. This study improves our understanding of resilience in inclusive education by analyzing positive outcomes and protective factors. It also provides a conceptual foundation for context-sensitive interventions to support students with LD.

The resilience level of children and adolescents with LD can be increased by positive interactions with parents, teachers, and access to institutional and special education services which accommodate their learning needs. Positive outcomes in academic and social domains can be enhanced by strengthening character, coping skills, and internal motivation among these students. Taken together, these findings underscore the greater attention to local priorities for developing interventions and policy initiatives intended to support learners with diverse needs. Ultimately, these strategies are capable of fostering positive developmental trajectories and reinforcing individual resilience across varied cultural landscape.

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## 7. AI Statement

Chat-GPT were used to refine the language and grammar of the manuscript, followed by professional proofreading by a language editor.

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