



# Strengths supporting resilience in individuals with learning disabilities: A scoping review

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## ABSTRACT

Having a learning disability heightens an individual's risk of developing mental health concerns, decreased educational attainment, and decreased workplace and academic performance. Although the negative impacts of learning disabilities are well-defined, little is known about the internal strengths and external resources that foster resilience in individuals with learning disabilities. In this scoping review, we synthesized research on resilience and learning disabilities using the Resilience Portfolio Model. We searched PubMed and PsycINFO and identified 51 articles as eligible for inclusion. Strengths were identified across all four Resilience Portfolio domains. Important regulatory strengths for individuals with learning disabilities included determination, perseverance, self-efficacy, and self-advocacy. For interpersonal strengths, the most widely beneficial form of social support was a social network that understood the impacts of learning disabilities. Individuals with learning disabilities cultivated meaning by becoming mentors to others with learning disabilities and connecting to spiritual and cultural groups. For environmental strengths, several environmental modifications and policy changes were identified, including extra time on exams, smaller class sizes, and utilizing technological resources. An overarching theme between all the identified strengths was the value of not only supportive, but also informed communities in helping children, youth, and emerging adults with learning disabilities foster resilience.

## 1. Introduction

Learning disabilities are common conditions that have lifelong consequences for school and work. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR; American Psychiatric Association, 2022), 5–15 % of children across cultures and languages will be diagnosed with a specific learning disorder (SLD), highlighting a need for understanding the experiences of those with learning disabilities (such as dyslexia). Much previous empirical data has focused on negative outcomes associated with learning disabilities, such as decreased educational attainment, poor academic and workplace performance (McLaughlin et al., 2014), and increased mental health concerns (Azam et al., 2009). However, little work has examined resilience factors among individuals with learning disabilities outside of academic achievement. By developing a better understanding of how people cope with their learning disabilities, researchers, clinicians, and educators can develop more effective support and intervention strategies. In this paper, we present a scoping review of psychosocial strengths that

promote resilience for children, youth, and emerging adults) with learning disabilities using the resilience portfolio model as a theoretical framework (Hamby et al., 2018).

### 1.1. Negative consequences of learning disabilities

Specific Learning Disorder (SLD) is a neurodevelopmental disability characterized by neurodivergent cognitive processes associated with understanding or using language that may result in difficulties speaking, writing, listening, thinking, reading, spelling, or doing mathematical calculations (American Psychiatric Association, 2022). The most common learning disability is dyslexia, a reading disability characterized by difficulties with phonological processing (Dominguez & Carugno, 2023). Other common forms of learning disabilities include dysgraphia, characterized by disordered writing and difficulty forming letters, and dyscalculia, characterized by difficulties in conducting and understanding mathematical operations (Dominguez & Carugno, 2023).

In childhood, learning disabilities can be very frustrating and upsetting

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(Stein et al., 2024). Academic ability is increasingly being used as the standard of success for children, and children with learning disabilities often receive criticism from others on their academic performance and judge themselves for their perceived lack of academic achievement (Panicker & Chelliah, 2016). Research suggests that children with learning disabilities often have increased feelings of low self-esteem, low self-worth, incompetence, and do not believe that they will improve at learning (Chieffo et al., 2023; Panicker & Chelliah, 2016; Stein et al., 2024). The added stress of having a learning disorder in childhood can also result in school maladjustment and behavioral difficulties (Aro et al., 2024), and children with learning disabilities often receive poor intervention and support services, which further complicate school adjustment (Butler, 2008; Kuriakose & Amaresha, 2024). Additionally, children with learning disabilities are more likely to be bullied by their peers and feel socially isolated (Berchiatti et al., 2021). Stress and life difficulties associated with learning disabilities often continue into adulthood. Although data is more limited, adults with learning disabilities report that their learning disabilities continue to interfere with their education and employment attainment, social relationships, and mental health (Azam et al., 2009; McLaughlin et al., 2014; Piers & Duquette, 2016; Shessel & Reiff, 1999).

### 1.2. Psychosocial strengths and the resilience portfolio model

Given the lifelong impact of learning disabilities, exploring how to foster resilience for youths and emerging adults with learning disabilities is of uppermost importance; however, much of the existing literature surrounding learning disabilities is focused on negative academic and mental health outcomes. In recent years, researchers have moved away from deficit-based models and have begun to focus on identifying resilience and strengths that support thriving in the face of adversity (Hamby et al., 2018). Resilience has often been defined as a character trait; however, more recent literature suggests that resilience is a multidimensional process operating at many levels (e.g., individual and community) that can be developed and utilized while facing adversity (Masten et al., 2023; Panzeri et al., 2021; Southwick et al., 2014; Ungar, 2021). Due to changing perspectives about resilience, research is shifting towards identifying psychosocial strengths that promote mental well-being instead of focusing on determining risk factors (Grych et al., 2015; Hamby et al., 2018).

The resilience portfolio model (RPM) is a framework for strengths-based resilience research (Hamby et al., 2018). The model posits that people have many psychological resources and assets and that resilience is best captured by exploring individuals' full portfolios of psychosocial strengths. The original resilience portfolio model had three domains that focused more on strengths that resided within individuals (Hamby et al., 2018) and has recently been expanded to four (Banyard et al., 2025a; Banyard et al., 2025b) in an effort to include more ecological strengths that may be a part of the resilience process. The four domains are regulatory strengths, meaning-making strengths, interpersonal strengths, and environmental strengths, which is the newest domain of the model. Regulatory strengths are strengths that contribute to an individuals' ability to manage emotions and behaviors. Regulatory strengths encompass a wide range of skills that contribute to emotional, cognitive, and behavioral control including psychological endurance, emotion regulation, and adaptive coping strategies (Banyard et al., 2025a). Meaning-making strengths are strengths that connect individuals to a purpose and/or something larger than themselves. Meaning making is generally expressed as the adoption of missions, roles, or beliefs. For youth, meaning making also involves identity development. Meaning-making strengths encompass aspects like hope, spirituality/religion, and cultural connection (Banyard et al., 2025a).

Interpersonal strengths highlight the importance of connection to others and include both positive interpersonal relationships and social networks as well as individual characteristics that promote and maintain positive relationships. Strengths that focus on positive relationships include feelings of support, connection, and understanding, as well as

structural aspects of relationships such as number of connections or diversity of connections (Banyard et al., 2025a). Individual attributes that promote positive relationships can include understanding, warmth, altruism, and empathy (Banyard et al., 2025a). Finally, environmental strengths include all external resources outside of the social network that promote resilience. These include elements of the physical environment that support well-being, such as access to green space or parks, as well as human-built factors such as policies within schools and workplaces (Banyard et al., 2025a). Additionally, the RPM recognizes the importance of context-specific strengths that may have greater importance depending on the population of interest. Overall, the RPM is a flexible and adaptable framework for studying resilience in populations where strengths-based resilience research is lacking and provides information on strengths and protective factors that can be integrated into support and prevention services.

The flexible and adaptable nature of the RPM makes it well-suited for studying resilience in more vulnerable populations such as people with learning disabilities. When taken together, all four domains of the RPM account for the intrinsic and extrinsic factors that contribute to resilience and positive functioning, contrasting with much of the previous research on resilience factors for individuals with learning disabilities. Most current learning disability resilience research focuses on one global domain of resilience, usually focusing on regulatory strengths such as emotion regulation and perseverance, rather than the many factors the RPM captures (e.g., Ofiesh & Mather, 2023). The lack of research synthesizing resilience factors is a significant limitation of the current learning disabilities resilience literature. Using the RPM to develop a broader understanding of strengths that support resilience for individuals with learning disabilities can support well-being and achievement across the lifespan.

### 1.3. The current study

Two recent reviews have begun exploring the impacts of learning disabilities on mental health. Wilcox et al. (2024) examined mental health outcomes of attention-deficit-hyperactivity disorder (ADHD) and learning disabilities in emerging adults, and Wilmot et al. (2023) examined the impact of dyslexia on child mental health. While both reviews identified positive mental health factors that supported individuals with learning disabilities, their findings did not cover the full breadth of the domains of the RPM. The Wilcox review, unlike this one, largely focused on studies that included people with comorbid ADHD and focused on associations with mental health functioning, with relatively minimal attention to the association of protective factors with outcomes. The Wilmot study does include some of the same studies as ours, however, their focus was largely limited to regulatory and interpersonal factors. One benefit of a theoretically informed review is that we made a specific effort to review studies for content related to the meaning making and environmental domains. Thus, ours has a larger scope in terms of resilience factors and also includes more recently published articles.

The current study aims to build on the findings of these reviews by using the RPM to build a more detailed understanding of the psychosocial strengths, resilience factors, and adaptive strategies used by children, youth, and emerging adults with learning disabilities to navigate life with learning disabilities as well as cope with academic and psychological adversities. A scoping review was utilized, including quantitative and qualitative research, to better understand how those with learning disabilities overcome the challenges associated with learning disabilities. The results can be used to inform children, youth, and emerging adults with learning disabilities of practices to increase their resilience/academic performance/well-being and to inform teachers, therapists, and parents of children with learning disabilities of strategies to foster resilience.

## 2. Methods

We searched PubMed and PsycINFO for articles that included the terms (“learning disability\*” OR “learning impairment” OR “learning deficit”) AND (“resilienc\*”). This process yielded 1857 articles; after removing duplicates, 1215 articles were screened for inclusion in the review. All articles were screened for inclusion by one independent reviewer (MR) and another independent reviewer (SP, AT, or CY). Initial agreement between reviewers was 92 %, and all conflicts were resolved with a third reviewer (SH). The learning disability focused search terms were defined broadly to provide an overview of the learning disability literature and to not exclude articles that may not have defined learning disabilities according to their diagnostic category. We chose to broadly define resilience in this search to better understand how resilience has been characterized for people with learning disabilities, and no articles were excluded based on how they defined or operationalized resilience.

Exclusion criteria included if the learning deficit was related to a traumatic brain injury, illness such as Parkinson’s disease, intellectual disability, attention deficit hyperactivity disorder, or autism spectrum disorder. Articles were excluded if they had no data (review articles or commentaries), were case studies, only had parent or teacher reports, or

did not include a resilience/well-being outcome. For studies of comorbid conditions or studies with samples including multiple disabilities, papers were excluded if they did not present specific results for learning disabilities. This left 87 articles for full-text review. Another 36 articles were excluded during full-text review due to not meeting inclusion criteria leaving a total of 51 articles included in the review; see Fig. 1 for the PRISMA diagram. A search protocol was not preregistered but is available from the authors. Each article was reviewed for population (children/youth  $\leq 19$ ; emerging adults, or adults reflecting on their childhood experiences), gender, race/ethnicity), the location where the study took place, study design (qualitative, cross-sectional quantitative surveys, mixed methods, pretest/posttest, or randomized controlled trial), outcomes (resilience scores, mental health outcomes, or qualitative themes), strengths included (such as social support or academic performance), resilience measures (if applicable for quantitative studies), and resilience portfolio domains represented (meaning making, interpersonal, regulatory, and environmental).

*Reflexivity statements:* MR is a white female master’s student and intern at Life Paths Research Center from middle Tennessee. She has family members with learning disabilities and saw firsthand the adversity learning disabilities can cause across the lifespan. SH is a white,

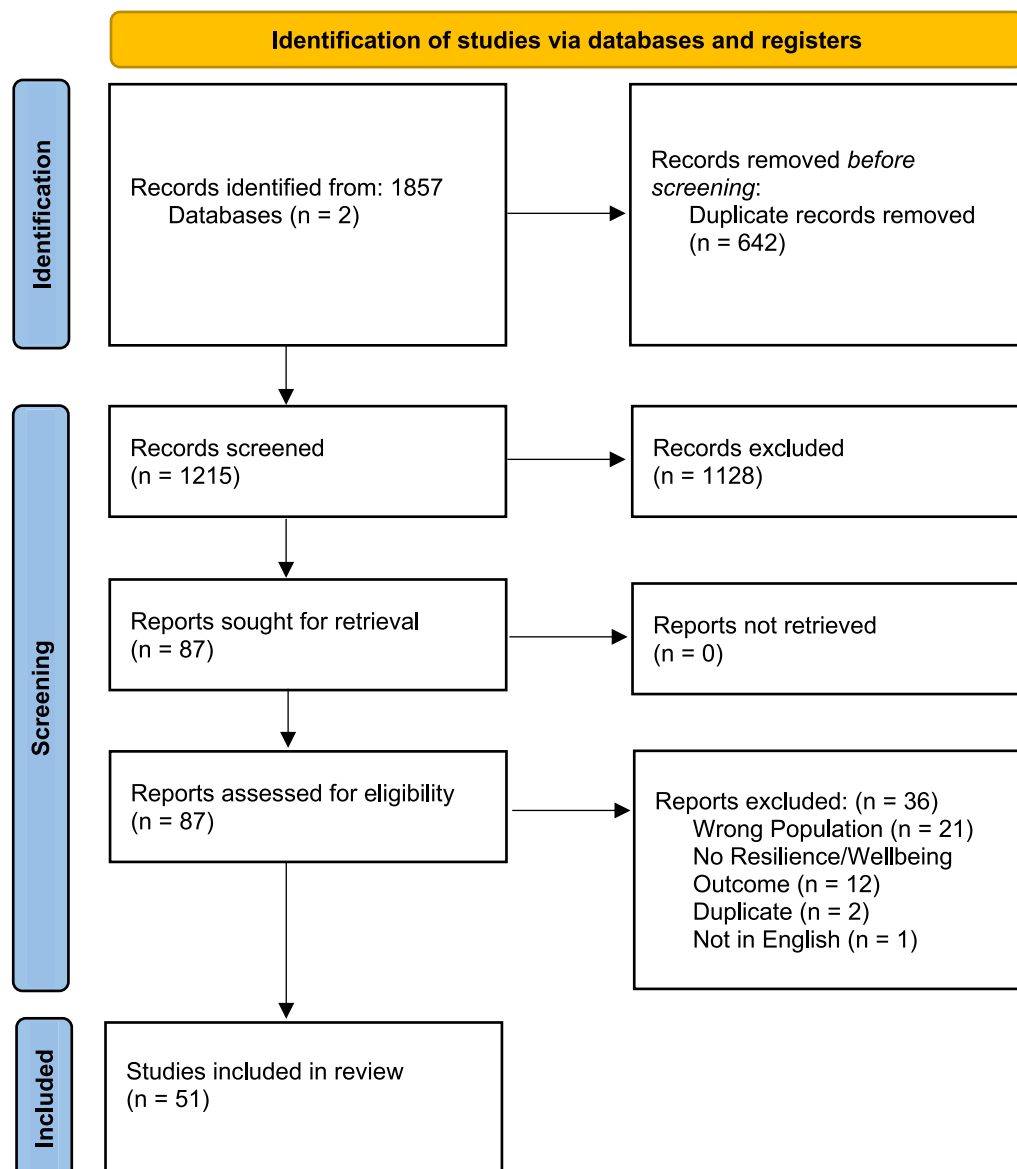


Fig. 1. The PRISMA diagram.

female psychology professor who also has family members with SLD as well as clinical experience providing assessment and therapy to people with SLD. She is also a co-developer of the RPM and is interested in how resilience manifests among people facing a range of different challenges and traumas. Our personal experiences enhance our capacity to understand and reflect on the findings of this scoping review. We also used multiple readings and discussions of the articles and input from others so that our experiences did not constrain our conclusions.

3. Results

This scoping review identified various strengths utilized by individuals with learning disabilities. A breakdown of the article demographics will be presented and then strengths will be discussed by resilience portfolio domain. See Table 1 for a summary of key themes and Table 2 for a summary of strengths included in each study.

3.1. Overall demographics

Child and adolescent populations (ages 6–19 years) were the focus of 25 studies (49 %) while emerging adults (ages 18 to 24) were represented in 20 studies (39.2 %), while 4 (7.8 %) studies included older adults reflecting on their earlier experiences. One longitudinal study (2 %) contained data from participants’ childhoods and adulthoods. The gender of participants was reported in 47 (92.1 %) studies. The majority of the studies that provided gender (43, 91.5 %) information included both male and female participants, however, four studies (8.5 %) only analyzed a single gender with 3 studies including an all-female sample and 1 study including an all-male sample. None of the included studies reported non-binary or transgender participants.

Over half of the studies (27, 53 %) were conducted in the United States. Six studies (11.7 %) were conducted in Canada and five studies (9.8 %) in Israel. Italy and Finland both had 3 studies (5.8 % each). Two studies (3.9 %) were conducted in South Africa. Australia, India, England, Scotland, and Iceland each had 1 study represented in the sample (6 %). Race and ethnicity were reported in only 17 studies (33.4 %). For the majority of those 17 studies (15, 88.2 %), the participants were representative of the ethnic and racial demographics of the country in which the study was conducted. Two studies (11.8 %) specifically focused on recruiting participants of non-majority racial or ethnic backgrounds, both of which focused on Latin/o/a/x populations in the United States.

Over half of the studies (27, 53 %) collected data with cross-sectional quantitative surveys, and 17 studies (33.3 %) used qualitative methods. Four studies (7.8 %) were mixed methods using both interviews and survey measures, 2 studies (3.9 %) were longitudinal quantitative surveys, and 1 study (2 %) was a randomized controlled trial. Learning disabilities were the primary diagnosis in all included studies. The primary adversity in all the papers was coping with the experience of having a learning disability. However, 10 studies (19.6 %) discussed additional types of adversity, such as the Covid-19 pandemic, adjudication, and other types of psychological diagnoses.

3.2. Regulatory strengths

Forty-six studies (90.2 % of included studies) discussed regulatory strengths. Regulatory strengths are strengths that contribute to behavioral, emotional, and cognitive management. Twenty-four (52.2 %) of these studies collected data using cross-sectional surveys, fifteen (32.6 %) used a qualitative design, four (8.7 %) utilized a mixed methods approach (interviews and surveys), two (4.3 %) were longitudinal, and one (2.2 %) was a randomized controlled trial. We included studies using scales such as the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) or The Resilience Scale (Wagnild & Young, 1993) in this domain, based on an item analysis indicating that most of their items focused on regulatory strengths such as perseverance and emotion

Table 1  
Summary of key strengths identified across resilience portfolio domains.

Domain	Themes
Regulatory Strengths	<u>Coping</u> : Skills in navigating adversity, including adaptability, acceptance, and problem-solving. These skills are associated with improved mental health and functioning.
	<u>Emotion Regulation</u> : The ability to recognize and handle emotions of all types, including negative emotions such as distress, anger, and fear, and positive emotions such as joy and happiness. Possessing strong emotion regulation is related to decreased distress, fewer adjustment problems, increased life satisfaction, and increased academic performance.
	<u>Psychological Endurance</u> : Abilities for persisting during stressors, including determination and perseverance. Psychological endurance is associated with overcoming difficulties and feelings of success.
	<u>Self-esteem &amp; Self-efficacy</u> : Positive beliefs about one's self-worth and value, and positive beliefs about one's abilities and abilities to succeed. These are associated with increased resilience, life satisfaction, creativity, and decreased adjustment problems.
	<u>Self-advocacy</u> : Ability to advocate for oneself and one's needs in times of adversity. Self-advocacy is associated with overcoming challenges and improved mental health.
	<u>Goal Setting</u> : The ability to set and meet achievable goals. Goal setting is associated with increased positive beliefs in the self and positive beliefs about the future.
	<u>Creating Independence</u> : Finding ways both to feel independent and to perform independent actions. Creating independence is associated with feelings of empowerment.
	<u>Mindfulness</u> : Abilities related to self-reflection, acceptance, and non-judgmental attitudes towards one's thoughts. Mindfulness is associated with improved quality of life.
Meaning Making Strengths	<u>Mentoring Others</u> : Desire to mentor others facing similar adversity and connect to a larger purpose. Mentoring others is associated with improved mental health.
	<u>Growth Mindset</u> : A growth mindset is the belief that qualities about the self are not fixed, but moldable. A growth mindset is associated with increased feelings of empowerment.
	<u>Hope</u> : Belief that things will improve and/or that work will pay off. Hope is associated with self-efficacy, effort, and feelings of mastery.
	<u>Faith &amp; Spirituality</u> : Belief in a higher power and/or connections to traditions of organized religions. Faith and spirituality may act as resilience enablers and are sources of pride.
	<u>Future Orientation</u> : Connecting to the future, planning for it, and thinking positively about it. Future orientation is associated with improved mental health and academic achievement.
	<u>Culture &amp; Tradition</u> : Connection to one's culture and heritage, participating in cultural events. This connection may act as a resilience enabler and is a source of pride.
Interpersonal Strengths	
	<u>Social Support</u> : Help from others dealing with adversity. Social support can include tangible support such as additional availability from trusted individuals and peers or support during transition periods, and intangible support such as encouragement and emotional support. Social support is associated with improved mental health and performance.
	<u>Social Connectedness</u> : A subjective sense of belonging and understanding from social networks. Emphasis is on the quality of relationships and feelings of being understood. Social connectedness is associated with improved mental health and performance.
	<u>Individual Social Skills</u> : Skills that facilitate the development and maintenance of positive relationships, such as social competency and communication skills. Social skills may act as a resilience enabler and are associated with improved academic performance.
Environmental Strengths	
	<u>Aspects of the Built Environment</u> : Ways to improve the environment to increase well-being and functionality, findings include: 1. Separate rooms for testing (including space for oral administration) 2. Removing distractions from study/learning spaces 3. Using headphones to decrease noise 4. Clean, neat spaces for studying 5. Smaller class sizes 6. Using technological resources <u>Policy</u> :

(continued on next page)



Table 1 (continued)

Domain	Themes
	Organizational policies in place to increase well-being and functionality, findings include policies that make the following available: 1. Extra time for tests 2. Oral test administration 3. Testing on the computer instead of paper 4. Sharing instructor's notes 5. Recording classes/lectures 6. Interactive classrooms

Note: This table provides a summary of the strengths in children, youth, and emerging adults identified across all four resilience portfolio domains.

Table 2

Studies presenting data for specific strengths by resilience portfolio domain.

Themes	Quantitative	Qualitative
<b>Regulatory Strengths</b>		
Coping	4, 5, 20, 35, 39, 44, 51	6, 7, 11, 17, 23, 36, 37, 43
Emotion Regulation	10, 22, 25, 28	27
Psychological Endurance		7, 11, 12, 15, 16, 17, 32, 33, 36, 37, 41, 42, 46, 47
Self-esteem & Self-efficacy	3, 9, 10, 13, 14, 29, 30, 31, 38, 45, 46, 51	7, 12, 16, 23, 24, 33, 34, 42, 48
Self-advocacy		6, 23, 32, 36
Goal Setting		12, 17, 18, 32, 36, 37, 40, 41
Creating Independence		12, 41
Mindfulness	21	
<b>Meaning Making Strengths</b>		
Mentoring Others		26, 32, 43
Growth Mindset	20, 51	32, 42
Hope	24, 40	
Faith & Spirituality	29, 30	
Future Orientation	6, 46	7
Culture & Tradition	29, 30	
<b>Interpersonal Strengths</b>		
Social Support	1, 2, 5, 8, 22, 29, 30, 31, 44, 45, 49, 50, 51	6, 11, 15, 16, 17, 19, 23, 26, 27, 32, 33, 34, 36, 37, 41, 42, 48
Social Connectedness	1, 2, 30	6
Individual Social Skills	22, 24, 25, 30, 39, 46,	42
<b>Environmental Strengths</b>		
Safe & Supportive Spaces		7, 11, 26, 27, 36, 41
School Accommodations	41, 44	
Technological Resources		11, 27, 36, 37
Policy		7, 11, 27, 36, 37

Note. Table 2 details the articles in which each strength was discussed. Articles were numbered in the order they are presented in the reference list.

regulation.

Many regulatory strengths were identified, and most were associated with improved outcomes. Strong coping skills were associated with better mental health and academic improvements in populations with learning disabilities (Aro et al., 2024; Davis, 2014; Goldberg et al., 2003). Some important coping skills for individuals with learning disabilities were understanding and accepting what having a learning disability will look like through different developmental stages (Blocher, 2009; Butler, 2008; Goldberg et al., 2003; Kreider et al., 2024; Piers & Duquette, 2016; Rapp, 1998) and learning how to remain adaptable and problem-solve the challenges this will pose (Davis, 2014; Goldberg et al., 2003; Shessel & Reiff, 1999; Werner, 1993). In most studies, self-efficacy, positive belief about one's abilities, and self-esteem correlated with resilience, creativity, and life satisfaction in individuals with

learning disabilities (Amitay & Gumpel, 2015; Butler, 2008; Casali et al., 2024; Firth et al., 2010; Goegan et al., 2023; Kreider et al., 2024; Mawila, 2019; Mawila, 2022; McGee, 2007; Mize et al., 2024; Rhodes-Stanford, 2007; Seeger & McNemar, 2020; Sorenson et al., 2003; Stack-Cutler et al., 2015), and were shown to reduce adjustment problems in children and adolescents with learning disabilities (D'Amico & Guastafarro, 2017; Ebo, 2016). However, Eloranta et al. (2019) did not find a significant relationship between self-esteem and resilience outcomes. They also did not find a relationship between perseverance and positive outcomes. In two studies, focusing on positive beliefs and feelings about the self after successes supported resilience (Miller, 2002; Werner, 1993). Emotion regulation skills are associated with decreased internalized distress, fewer adjustment problems, increased life satisfaction, and increased academic performance (D'Amico & Guastafarro, 2017; Kortteinen et al., 2021; Lawrence et al., 2019; Marks et al., 2023).

Additional regulatory strengths were identified in qualitative studies. Individuals with learning disabilities reported that fostering determination and perseverance helped them overcome academic difficulties and negative experiences related to learning disabilities (Butler, 2008; Davis, 2014; Ebo, 2016; Freeman et al., 2004; Goegan et al., 2023; Goldberg et al., 2003; McNaught & Pope, 2022; Miller, 2002; Piers & Duquette, 2016; Rapp, 1998; Sarver, 2000; Seeger & McNemar, 2020; Stack-Cutler et al., 2015; Terras et al., 2009). One example of determination that frequently supported resilience was building and maintaining one's grade-point average in school (Ebo, 2016). Setting achievable goals was reported to increase positive beliefs about the self and positive beliefs about the future (Ebo, 2016; Goldberg et al., 2003; Hall et al., 2002; McNaught & Pope, 2022; Piers & Duquette, 2016; Rapp, 1998; Sapio, 2010; Sarver, 2000). Self-advocacy was associated with overcoming challenges in schools and workplaces and improved mental health (Butler, 2008; Kreider et al., 2024; McNaught & Pope, 2022; Piers & Duquette, 2016). Self-advocacy was especially important to individuals with previous negative experiences with psychological or school services (Butler, 2008). Creating ways to be independent, such as advocating for themselves at school or university, helped individuals with learning disabilities feel more empowered and overcome stereotypes (Ebo, 2016; Sarver, 2000). Finally, in an adult sample, remembering that they overcame childhood adversities helped maintain perseverance when facing new challenges (Tuffrey-Wijne et al., 2010).

One randomized controlled trial of a mindfulness mind-body intervention was conducted with adults, comparing whether people with neurofibromatosis and learning disabilities differed from those with neurofibromatosis only (Kanaya et al., 2024). This mindfulness intervention was classified as a regulatory strength due to its focus on improving coping and problem-solving skills. Individuals were randomized to either the mind-body intervention group or a standard health education group. Post-treatment, both interventions improved quality of life regardless of learning disability status, but only psychological quality of life improved to clinical significance in the learning disabilities population. However, individuals with learning disabilities did not maintain these improvements at the 12-month follow-up while those without learning disabilities did.

3.3. Meaning-making strengths

Of the included RPM domains, information on meaning-making strengths was reported in twelve studies (23.5 % of included studies). Meaning-making strengths refer to strengths that connect individuals to a purpose or something larger than themselves. Six of these studies (50 %) had cross-sectional designs, four studies (33.4 %) used qualitative interviews, one study (8.3 %) used mixed methods (survey and interviews), and one (8.3 %) was a longitudinal survey.

Results showed the desire to mentor younger children and teens among emerging and older adults and older youth was associated with improved mental health outcomes (Leamy, 2008; McNaught & Pope 2022, Shessel & Reiff, 1999). Another important strength for people

with learning disabilities is having a growth mindset. A growth mindset is the belief that qualities about the self are not fixed and can be improved upon (Dweck, 1999). Having a growth mindset toward academic abilities was shown to increase empowerment and the desire to overcome academic adversity in students with learning disabilities (Hutchings, 2022; McNaught & Pope, 2022; Seeger & McNemar, 2020; Werner, 1993). Future orientation, that is thinking and planning for later years, is closely related to a growth mindset (Johnson et al., 2014). Two studies found that a positive future orientation supports academic achievement and mental health in youth and emerging adults with learning disabilities (Butler, 2008; Stack-Cutler et al., 2015). However, Blocher (2009) found no significant association between future orientation and academic or mental health outcomes.

Hope was found to be correlated with academic, social, and emotional self-efficacy in middle school students with learning disabilities (Lackaye et al., 2006). Additionally, Sapio (2010) found higher levels of hope to be correlated with higher levels of effort and mastery goal orientation in middle and high school students with learning disabilities. Spirituality and connection to culture were found to be enablers of resilience and sources of pride for children with learning disabilities (Mawila, 2022; Mawila, 2019).

### 3.4. Interpersonal strengths

Thirty-four studies (66.6 % of the included studies) reported information on interpersonal strengths. Interpersonal strengths refer to positive social relationships and the intrapersonal abilities that support and maintain them. Fifteen studies (44.1 %) used cross-sectional quantitative surveys with single-wave data collection, fourteen (41.1 %) used a qualitative design (interviews or focus groups), three (8.8 %) were mixed method (interview and quantitative survey), and two (6 %) were longitudinal quantitative surveys collecting data at multiple time points.

Social support networks for children, youth, and emerging adults with learning disabilities manifest in many ways and are related to academic achievement, the experience of learning, and attending school. Having a social support network that understands learning disabilities and their impact was the most frequently mentioned interpersonal strength ( $n = 21$ , 61.8 %), with more understanding social networks being associated with more positive outcomes in 19 studies (90.5 % of the studies including this construct). However, two studies (McGee, 2007; Smitley, 2000) did not find significant associations between social support networks and resilience. Some studies focused specifically on professional relationships, such as teachers who do extra work to promote student understanding (Harðardóttir et al., 2015; Piers & Duquette, 2016), non-judgmental and non-stigmatizing teachers (Kreider et al., 2024; Leamy, 2008), encouraging and available teachers (Al-Yagon & Margalit, 2006; Miller, 2002), and accessible teachers with clear communication (Sarver, 2001). Others demonstrated the importance of understanding, connected parents (Al-Yagon & Mikulincer, 2004; Benassi et al., 2021; Harðardóttir et al., 2015; Sorenson et al., 2003; Tzuriel & Shomron, 2018). Peer support from other students in the classroom (Blocher, 2009; Freeman et al., 2004; Goegan et al., 2023; Goldberg et al., 2003; Leamy, 2008; Mawila, 2022; Mawila, 2019; McNaught & Pope, 2022; Miller, 2002; Piers & Duquette, 2016; Rapp, 1998) and extracurricular activities (Carpenter, 2013) also promoted resilience during school years. The positive impacts of encouraging teachers and parents are not limited to childhood. Several studies reported that the effects of social support experienced in childhood were still felt into adulthood (Davis, 2014; Freeman et al., 2004; Piers & Duquette, 2016; Vogel et al., 1993).

Interestingly, three studies found that extra support around transition times promoted feelings of competence and better academic or employment achievement for individuals with learning disabilities (Licht, 2015; McNaught & Pope, 2022; Seeger & McNemar, 2020). McNaught & Pope (2022) and Seeger & McNemar (2020) found that social support during transitions between grade levels or schools helped

students adjust to new academic expectations. Licht (2015) obtained similar findings with college students, with more social support during the transition to college easing distress associated with increased academic loads. Sarver (2001) also noted that transitions between schools was a particularly challenging time when college students needed more support.

An important distinction made by some studies suggests that individuals with learning disabilities not only need strong social support from others but also need to feel socially competent and have strong social skills to offset the challenges of navigating life with a learning disability (Kortteinen et al., 2021; Lackaye et al., 2006; Lawrence et al., 2019; Mawila, 2019; Robertson et al., 1998; Stack-Cutler et al., 2015). Mawila (2019) and Stack-Cutler et al. (2015) both found social competence to be a resilience enabler that helped individuals with learning disabilities build resilience across RPM domains. Within the school setting, higher social competence was associated with higher academic performance (Lackaye et al., 2006) and more educational attainment (Kortteinen et al., 2021).

### 3.5. Environmental strengths

Environmental strengths were the least reported in this sample of studies with only 7 studies (13.7 %) reporting information on environmental strengths. Environmental strengths refer to the ways that the natural and built environment promote resilience. Six of the studies (85.7 %) utilized a qualitative design, and 1 (14.3 %) study used mixed-method (survey and reflection) approaches.

Few studies made any specific effort to assess the impact of environmental factors, but environmental strengths emerged from some studies, especially in qualitative interviews. No paper mentioned contact with nature in any way. One of the most commonly mentioned environmental features was the benefit of modifying environments to minimize distractions and potentially improve test performance. This could involve the availability of separate rooms to take tests in, including rooms where tests could be administered orally (Butler, 2008; Davis, 2014; Licht, 2015; Piers & Duquette, 2016). It also involved taking steps such as removing distractions from study spaces and using headphones to minimize surrounding noise (Davis, 2014). One participant in the Davis study also mentioned that having a cleaner, neater room also helped them feel secure and calm. Similarly, students also mentioned that smaller classrooms with fewer students were helpful (Butler, 2008; Leamy, 2008; Piers & Duquette, 2016; Sarver, 2001).

There were policies in many schools that also supported student performance, such as policies that allow extra time on tests, policies that instructors' notes can be shared, the ability to use a computer instead of handwriting a test, and the option to take a lighter academic load in college (Butler, 2008; Davis, 2014; Licht, 2015; Rapp, 1998). Students with learning disabilities also preferred courses that were structured to be more interactive (less lecturing) and involve face-to-face learning (Licht, 2015; Piers & Duquette, 2016). One study noted the benefit of special high schools dedicated to the arts (Piers & Duquette, 2016).

Some studies also mentioned technological resources, which we also place in the environmental domain. This included access to reading, dictation, and editing programs (Davis, 2014; Piers & Duquette, 2016; Rapp, 1998). Also, the ability to bring a laptop to the classroom and being allowed to record lectures (Piers & Duquette, 2016; Rapp, 1998). However, some students had mixed views on online learning. Some found it flexible and beneficial to be able to go at one's own pace, while others found it too fast and impersonal (Licht, 2015).

Quantitative studies of the impacts of accommodations were much rarer and limited in scope. Sarver (2000) examined students with greater or lesser usage of accommodations and did not find a link to feelings of self-determination. Smitley (2000) did not find a link between a count of accommodations used and academic adjustment. However, both used indices that combined numerous strategies instead of examining the effects of specific environmental resources.

#### 4. Discussion

In this study, a scoping review of psychosocial strengths and resilience among children, youth, and emerging adults with learning disabilities was conducted. The main goal of the scoping review was to identify strengths and resilience factors that promote well-being and positive functioning for individuals with learning disabilities because learning disabilities have a significant lifetime burden (Azam et al., 2009; McLaughlin et al., 2014). The 51 identified articles included strengths that promote resilience across all the resilience portfolio model domains: regulatory, interpersonal, meaning-making, and environmental strengths. Many of the identified strengths, such as hope and social support, have been established in other resilience literature (Hamby et al., 2024a; Hamby et al., 2024b). However, in each resilience portfolio model domain, strengths more specific to those with learning disabilities were also identified.

Articles identifying regulatory strengths comprised the largest body of research for this scoping review, with 90.2 % of the articles included identifying regulatory strengths, compared to 66.6 % for interpersonal strengths, 25.3 % for meaning-making strengths, and 13.7 % for environmental strengths. Most of the literature focused on coping skills (Aro et al., 2024; Blocher, 2009; Butler, 2008; Davis, 2014; Goldberg et al., 2003; Kreider et al., 2024; Piers & Duquette, 2016; Rapp, 1998; Shessel & Reiff, 1999; Werner, 1993), self-efficacy and self-esteem (Amitay & Gumpel, 2015; Butler, 2008; Casali et al., 2024; D'Amico & Guastafarro, 2017; Ebo, 2016; Firth et al., 2010; Goegan et al., 2023; Kreider et al., 2024; Mawila, 2019; Mawila, 2022; McGee, 2007; Mize et al., 2024; Rhodes-Stanford, 2007; Seeger & McNemar, 2020; Sorenson et al., 2003; Stack-Cutler et al., 2015), determination and perseverance (Butler, 2008; Davis, 2014; Ebo, 2016; Freeman et al., 2004; Goegan et al., 2023; Goldberg et al., 2003; McNaught & Pope, 2022; Miller, 2002; Piers & Duquette, 2016; Rapp, 1998; Sarver, 2000; Seeger & McNemar, 2020; Stack-Cutler et al., 2015; Terras et al., 2009), and achievable goal setting (Ebo, 2016; Goldberg et al., 2003; Hall et al., 2002; McNaught & Pope, 2022; Piers & Duquette, 2016; Rapp, 1998; Sapio, 2010; Sarver, 2000).

Most of these strengths are the same or similar to those that have been identified in research on strengths that help people with other types of adversities (e.g., Banyard et al., 2025b). However, many papers did specify the unique ways that these strengths were applied to learning disabilities specifically. For one, many articles describe how fostering these regulatory strengths required children or youth to have internal understanding of how learning disabilities impact their daily functioning. Relatedly, another learning disability-specific regulatory strength indicated by the literature was learning to practice self-advocacy needs related to learning disabilities (Blocher, 2009). These findings suggest that for children, youth, and emerging adults with learning disabilities, regulatory strengths that take into account the daily impact of learning disabilities provide the most positive impact.

Meaning-making strengths had one of the smaller literature bases in this scoping review, which is interesting given that meaning-making strengths include some of the more universal and best recognized (e.g., Banyard et al., 2025b; Hamby et al., 2018; Kelmendi & Hamby, 2024) forms of psycho-social strengths within the resilience literature. Hope, spirituality, cultural connection, growth mindset, and future orientation are some of the more recognized meaning-making strengths identified to be beneficial to individuals with learning disabilities (Butler, 2008; Hutchings, 2022; Lackaye et al., 2006; Mawila, 2019; Mawila, 2022; McNaught & Pope, 2022; Seeger & McNemar, 2020; Stack-Cutler et al., 2015; Werner, 1993). In this domain, the primary learning disability-specific strength that emerged from the included studies was the desire to mentor others who also have learning disabilities (Leamy, 2008; McNaught & Pope 2022; Shessel & Reiff, 1999).

Given the limited research focused on meaning-making strengths and learning disabilities, more research is needed to explore the full

influence of meaning-making strengths on resilience in individuals with learning disabilities. One possible explanation for the lack of research focused on meaning-making strengths for individuals with learning disabilities is that much of the literature on learning disabilities is focused on academic performance instead of personal well-being; however, learning disabilities affect more than academic performance (Azam et al., 2009). This indicates the necessity for continued research into fostering meaning-making strengths for children, youth, and emerging adults with learning disabilities.

Interpersonal strengths represented the second largest category of literature in the scoping review. Most of the literature focused on the positive impact of supportive social networks including parents, peers, and teachers (Al-Yagon and Margalit, 2006; Al-Yagon & Mikulincer, 2004; Blocher, 2009; Davis, 2014; Freeman et al., 2004; Goegan et al., 2023; Goldberg et al., 2003; Harðardóttir et al., 2015; Kreider et al., 2024; Leamy, 2008; Mawila, 2022; Mawila, 2019; McNaught & Pope, 2022; Miller, 2002; Piers & Duquette, 2016; Rapp, 1998; Sorenson et al., 2003; Tzuriel & Shomron, 2018). These strengths, like most of the regulatory ones, have also been shown to be helpful for a wide range of adversities (Banyard et al., 2025b). Nonetheless, the included articles also demonstrated how these might manifest differently for youth dealing with learning disabilities. As with regulatory strengths, many articles stressed the importance of knowledge about how learning disabilities affect the individual with a learning disability across developmental stages. This time, the results from the articles indicated that knowledgeable people in social networks are needed to provide adequate support. Also, more specific to learning disabilities, increased social support during transitions was highlighted as particularly important (Licht, 2015; McNaught & Pope, 2022; Seeger & McNemar, 2020). Although transitions are typically frequent and often challenging throughout childhood and emerging adulthood, those with learning disabilities may face additional challenges processing the changes and adjusting to new schools or other environments.

Environmental strengths had the least literature present in the scoping review; however, this is a recent addition to the resilience portfolio model and thus needs continued exploration. Despite the relative newness of examining environmental strengths, many strengths were identified for individuals with learning disabilities. Two main categories emerged from the included literature for environmental strengths, environmental modification and policy support, and these were typically found in the school setting. Environmental modifications included the availability of separate rooms to take tests in, oral test administration, (Butler, 2008; Davis, 2014; Licht, 2015; Piers & Duquette, 2016), using headphones to minimize surrounding noise, having a neat space for test-taking (Davis, 2014), smaller class sizes, (Butler, 2008; Leamy, 2008; Piers & Duquette, 2016; Sarver, 2001), and the inclusion of technological resources like computers and reading and dictation programs (Davis, 2014; Piers & Duquette, 2016; Rapp, 1998). School policies included extra time on tests, sharing teacher's notes, using a computer instead of handwriting tests, more interactive, face-to-face learning, and lighter courseloads where applicable, for example, in college (Butler, 2008; Davis, 2014; Licht, 2015; Rapp, 1998). These findings highlight the importance of designing environments to enhance the functionality and well-being of individuals with learning disabilities.

Overall, the theme of understanding the impact of learning disabilities was present across domains and discussed in much of the included literature. Many articles in the scoping review noted that without this understanding, both internally and externally, children, youth, and emerging adults with learning disabilities faced increased hardship, increased negative mental health symptoms, and decreased academic performance (e.g. Al-Yagon & Margalit, 2006; Aro et al., 2024; Harðardóttir et al., 2015; Licht, 2015). This suggests that fostering an understanding of learning disabilities is a unique way to promote positive well-being for people with learning disabilities.



## 5. Limitations

Findings from this scoping review should be interpreted in the context of several limitations. First, the studies in the scoping review were limited to studies published in English, which may have over-represented the experiences of individuals with learning disabilities in North America and other English-speaking regions. Second, it is possible that our search strategies missed some studies that would have met inclusion criteria, particularly grey literature. Though dissertations and theses were included, some may have been missed, and other types of grey literature may have been omitted. Additionally, although our search terms were broad in an aim to include the most literature possible and explore how resilience has been studied within this population, it is possible the search terms missed relevant articles. Finally, due to the limited literature on resiliency and learning disabilities, we included reading and math learning disabilities in the scoping review but did not separate them by subgroup. Future research could include the separation of math and reading learning disabilities.

### 5.1. Implications for research and practice

Several implications for research and practice emerged from this scoping review. In the research domain, only two studies in the scoping review were longitudinal (Sorenson et al., 2003; Werner, 1993) and only one study was a randomized controlled trial (RCT) (Kanaya et al., 2024). Given the lifetime burden of learning disabilities, more longitudinal and RCT studies need to be conducted to reveal how resilience and psychosocial strengths change across childhood and during the transition to adulthood. Next, researchers need to increase attention to well-being and positive functioning versus academic achievement. Academic achievement is important for individuals with learning disabilities but should not be the primary positive outcome explored in research. The field has made some strides in moving away from academic achievement, but most articles in the scoping review still included a measure of academic achievement as a resilient outcome. Additionally, a lack of academic achievement should not be considered a lack of resilience. This shift is necessary to begin building a larger network of strengths and resilience for people with learning disabilities. Finally, more research needs to be dedicated to meaning-making and environmental strengths. Few studies in the scoping review explored either of these strengths, and future research should explore these strengths in children, youth, and emerging adults with learning disabilities. In particular, access to green spaces has shown particular promise in other reviews (Banyard et al., 2025b). In terms of clinical implications, the most significant finding from the scoping review is that many children and youth with learning disabilities feel unsatisfied or victimized by their schools or other services. Understanding the perspectives and needs of individuals with learning disabilities and incorporating them into services may benefit children and youth with learning disabilities.

## 6. Conclusions

This scoping review advances the literature by providing an extensive overview of empirical research on resilience and strengths among children, youth, and emerging adults with learning disabilities. The current review makes several new contributions to the literature, including the review of both qualitative and quantitative studies to identify the foundations of a portfolio of psychosocial strengths for individuals with learning disabilities. The review identified several regulatory, meaning-making, interpersonal, and environmental strengths. Our findings highlight the need for more expansive investigations of resilience among individuals with learning disabilities, including collecting more longitudinal data and stratifying resilience factors by learning disability type.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Data availability

Data will be made available on request.

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