

Research Paper

Comprehending Specific Learning Disabilities (SLDs): Challenges, Cognitive Factors, Psychosocial Aspects, and Intervention Approaches for Adolescents

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ABSTRACT

The term "specific learning disabilities" (SLDs) refers to a variety of academic challenges, particularly in reading, writing, and math. Children with SLDs, despite having normal or above-average intelligence, struggle with tasks that require working memory, phonological processing, attention, and processing speed, which negatively impacts their academic performance. A common emotional response to these challenges is frustration, which can worsen associated emotional and social issues such as anxiety, low self-esteem, and behavioral problems. Issues like academic anxiety, behavioral difficulties, and challenges with emotional regulation are prevalent and can affect social relationships and overall well-being. Frustrated teens with SLDs may face mental health issues, social isolation, and poor academic outcomes. This study explores the cognitive and psychological traits of children with SLDs, the impact of frustration on their learning, and the reasons behind their academic struggles. It also highlights the significance of tailored interventions and early diagnosis. The study identifies specialized instruction, assistive technology, support services, and Individualized Education Programs (IEPs) as crucial educational resources to meet the diverse needs of these students. Furthermore, it emphasizes the link between frustration and learning difficulties, stressing the necessity for more personalized interventions to enhance learning, reduce emotional distress, and foster social and emotional well-being in adolescents with SLDs.

Keywords: *Specific Learning Disabilities, Frustration, Cognitive, Psychosocial, Adolescents*

Specific Learning Disabilities (SLDs) are learning disabilities based in the areas of reading, written language and mathematics. These conditions are not because of developmental, neurologic or sensory/orthopedic disabilities, mental health factors or inadequate school (Bonti et al., 2020; Cortiella & Horowitz, 2014; Nicolson & Fawcett, 2011; Reddy, Alku & Rao, 2019; Sofologi, 2014; Sorrenti et al., 2019; Stanford & Delage, 2019) Typically, individuals with learning disabilities have an average to high intelligence quotients (IQs) but struggle with reading (dyslexia) or math (dyscalculia) or both (dyslexia graphemia) (Bonti et al., 2020; Kakia & Kougioumtzis, 2016; Nicolson et al., 2011).

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Attention- Language and Behavioral Disorders Co-morbid (Cortiella et al., 2014). According to Selikowitz (2012), SLD is "unintended and unexpected condition" related to the high- functioning child with average or above-average brain potential marked by uneven (disorganized?) learning profile (p. 4). The diagnosis of these disorders normally requires assessment of low standardized test performance in language, that is designed to tap language comprehension or expression (Stanford et al. 2019).

Cognitive challenges related to SLDs include attention, memory, and processing speed difficulties. Reading too slowly or inaccurately, even though a child works hard; problems with reading comprehension; difficulty in expressing oneself through written words; challenges in remembering math facts and reasoning about numbers (Stanford et al 2019). Calculated according to specific psychological processes (disruptions), that are considered to have a neurological, both from biological as well as congenital perspective (Sofologi, 2014; Xia, Hancock, & Hoeft, 2017). Of the 80% of children with SLDs that have reading difficulties it is also not always the case that emotional and social issues are not further up 79. Children with these disabilities are more likely to suffer depression, anxiety-self esteem problems and sleep/eating disorders due to internalizing problems. Furthermore, they might face challenges in social interactions and starting friendships and act out socially with externalizing behaviours as delinquency (Cortiella & Horowitz, 2014). These children who are typically either average or above average intelligence generally lack good learning strategies, a contributing factor for much of their academic difficulty. Findings indicate that phonological processing and working memory are important deficit domains in children with SLD [8–10,28,29] (Bonti et al., 2020; Nicolson et al., 2011; Reddy et al., 2019).

This is the case of dyslexia, where a major reading deficiency (in word reading) stemming from a phonological processing deficit affects one's ability to store, retrieve and manipulate phonological representations (Stanford et al., 2019). Dyscalculia means that numerical processing is impaired but time perception remains intact, although not everything points to this being a specific deficit (Moll Göbel, Gooch & Landerl & Snowling, 2016). Entertainingly, reading and mathematics learning disability often occur together; the evidence is that at least one of the disabilities share a genetic origin (Moll et al., 2016). 44% of the 5.7 million school-aged children who live in the United States are said to have learning disabilities, 19% have speech/ language impairments (Cortiella et al., 2014). Over the years 2002 to 2011, learning disabilities decreased by 18 points as a percentage of students (Cortiella et al.,2014). Students with dyslexia are classified in special educational facilities 50% of them in Greece (80% have difficulties mostly reading difficulties according Padeliadu, 2011).

Cognitive Profile of Children with SLDs

Children with Specific Learning Disabilities (SLDs) typically manifest specific cognitive profiles that interfere with their academic functioning as well as functioning outside of school. Cognitive profiles can be distinct learning disabilities (e.g., dyslexia vs. dyscalculia vs. dysgraphia). There are however some common cognitive traits that are routinely found in children with SLDs which includes processing deficits, working memory & executive functioning and phonological processing.

1. Phonological Processing Deficits

Phonological processing: A term used to describe the ability to identify and manipulate sound in speech. This is especially important for tasks pertaining to reading and spelling. Children with dyslexia and SLD in general often struggle to identify rhyming words, sounds in blended words or to break words down into smaller pieces of phonemes (Bonti, Moser, and Lacey, 2020). These deficits result in enormous difficulties to read as a result, which in turn significantly influences reading fluency and comprehension (Cortiella & Horowitz, 2014).

2. Working Memory Constraints

Working memory is essential to keep information in your mind and move it around through rapid recall or solution of task as it occurs. For numerous children with SLDs, working memory is not so great which means they cannot remember the steps they are told to do or new information long enough to carry out tasks in their heads (Smith Johnson Williams, 2022). Such limitations might affect academic and learning in general, especially in quantitative subjects (Danopoulou & Pittas, 2020).

3. Slow Processing Speed

Children with SLDs frequently demonstrate slower processing speeds when compared to their peers. Two of its main elements are the slowness of understanding and responding to information quickly (e.g., reading, math or other scholastic regions) meaning in Sainio et al., 2019 That is why tasks requiring fast responses or time-pressured tasks become harder as a result of slow processing speed and cause academic underperformance (Thomas & Uthaman, 2019)

4. Executive Function Deficits

Executive functioning refers to a broad array of cognitive skills that include planning, organizing, problem solving and self-monitoring. For example, in many cases of SLD, especially for those with dysgraphia or other types of writing disabilities; the children have difficulty in arranging concepts and task so that they need to focus too much to basic-mind performance (Selikowitz 2012). As a result, children with such deficits struggle with time-management, completing chores and prioritizing activities (Cavioni et al., 2017).

5. Visual Spatial Processing Impairment

For some children with SLDs, visual-spatial processing difficulty (the ability to process visual input) occurs [1]. Which can impact abilities for example, reading a graph, comprehension of visual directions or disorganized written work (Bonti, Moser, & Lacey, 2020). In children with dyscalculia, deficits in visual-spatial processing are often demonstrated by their inability to represent number symbols in a spatial domain.

Psychosocial Characteristics of Children with SLDs

Children with Specific Learning Disabilities (SLDs) have several psychosocial characteristics that impact their emotional, social and behavioural development. These characteristics often arise from their experiences in academic settings and interactions with peers, teachers and family members.

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1. Emotional Regulation Difficulties

Children with SLDs often struggle to regulate their emotions. They can become more frustrated, anxious and sad especially when they struggle with academic tasks. These emotional difficulties can arise from frequent failure or not meeting academic expectations (Bonti, Moser, & Lacey, 2020).

2. Social Skills Deficits

Children with SLDs find it hard to understand social cues and engage in age appropriate social behaviours. As a result they may struggle to make and maintain friendships which can lead to feelings of social isolation and in some cases bullying (Cavioni, Grazzani, & Ornaghi, 2017).

Swiss psychologist Jean Piaget relied on quantitative data in his work on cognitive development. Cognitive Development Theory is, at its heart, stage theory. It introduces mechanisms to facilitate cognitive development; changes observed in children's behavior as they mature, pre-operational reasoning and the formative years when deductive reasoning evolves, functional play, and types of play.

3. Emotional Stability

The child's self-esteem is severely damaged by repeated academic failures and problem social interactions. They internalize negative experiences, resulting in poor self-concept and diminished self-worth (Sainio et al., 2019). This is particularly true for children who are constantly berated by failure, those without socially functional means of repairing the damage an inferiority complex does (Smith, Johnson, & Williams, 2022).

4. Behavioral Problems

Behavioral problems are numerous outbursts of anger and noncompliance often witnessed in children diagnosed with specific learning disabilities (SLD). These problems may occur in the classroom as well as at home, and usually relate to issues regulating emotions (Selikowitz, 2012). This may lead to the child withdrawing or causing a distraction during academic tasks (Thomas & Uthaman, 2019).

5. Mental Health Issues

Children diagnosed with SLDs are at higher risks for developing additional psychological conditions, including anxiety and depression. Academic distress and social difficulties will magnify or aggravate the concerns of mental health and well-being (Cortiella & Horowitz, 2014). As they face insurmountable academic challenges without adequate support, these children may feel hopeless or worthless, which can lead them into mental ailments (Danopoulou & Pittas, 2020).

6. Academic Anxiety

Academic complications are often quite substantial for children with SLDs, provoking a fear of school or revulsion against academic subjects due to repeated disappointments. It is this alarming anxiety that at times hampers only their motivation and attention to school (Smith, Johnson, & Williams, 2022). Performance pressure, coupled with negative self-images, leads to avoidance behavior, which, in turn, leads to further academic failures (Sainio et al., 2019).

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Frustration in adolescents with SLDs

Frustration in adolescents with LDs is an all-too-common reaction to working hard while succeeding poorly. School is often the place where they are doubly beaten down—on one side, there's unrealistic expectations that are never met, and on the other, there is a conspicuous absence of adequate support. Such incidents as low grades, questions from teachers about why they didn't do well, or mocking from their peers easily push them into feelings of inadequacy and helplessness (National Institute of Child Health and Human Development [NICHD], 2023). And increasingly, such psychological issues, as anxiety, depression, and low self-esteem, place strong emotional strains on adolescents with LDs. These adolescents suffer significantly more emotional distress than their peers, with one report stating that as many as 70% of students with LDs reported anxiety and frustration with the school environment (Smith et al., 2022).

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Conflict of Interest

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