EMPOWERMENT THROUGH UNDERSTANDING: A DEEP DIVE INTO LEARNING DIFFICULTIES

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Abstract:

This qualitative study focuses on a detailed investigation into the complexities of learning difficulties, aiming to uncover the underlying causes, identify prevalent symptoms, discern societal attitudes, and evaluate the efficacy of various intervention strategies. By engaging a substantial participant base of 863 individuals, the study leverages qualitative methodologies to shed light on the nuanced experiences of those with learning disabilities, including challenges related to perception, skill acquisition, and social integration. The research outcomes emphasize the critical need for a holistic understanding of learning difficulties, taking into account the intricate interplay between psychological, genetic, environmental, and educational influences. Such comprehensive insights are pivotal for the development of tailored support and intervention programs, with the potential to significantly impact educational policies and practices. This study not only enriches the academic and clinical discourse surrounding learning disabilities but also advocates for enhanced societal support mechanisms, thereby aiming to improve the educational journey and quality of life for individuals facing these challenges.

Keywords: learning difficulties, societal perceptions, intervention strategies, educational practices, qualitative analysis

1. Introduction

The concept of learning difficulty refers to a wide range of challenges that hinder students' ability to achieve learning objectives. These difficulties can manifest in various forms, such as mathematical learning disabilities, general learning difficulties, and foreign language learning difficulties. Sparks *et al.* (1992) found that foreign language learning difficulties may be linked to underlying native language deficits, particularly in phonological and syntactic codes. Geary (2011) emphasized that mathematical learning disabilities are common and not necessarily related to intelligence. Furthermore,

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Kraayenoord & Elkins (2004) suggested that learning difficulties in numeracy may stem from a lack of alignment between instructional materials/practices and students' learning characteristics. Additionally, Al-Rawafi & Syihabuddin (2019) highlighted the interest in researching different aspects of language learning difficulties, including low achievement and learning styles.

Inclusive education of students with general learning difficulties was the focus of a meta-analysis by (Krämer *et al.*, 2021), which highlighted the impact of these difficulties on students' performance across various subjects. Liang & Li (2019) further emphasized that learning difficulties in children can be attributed to environmental, psychological, and quality factors, leading to poor academic achievements. Fitriana *et al.* (2022) defined learning difficulties as obstacles that impede students' learning objectives, while Holborow & Berry (1986) found a correlation between hyperactivity and learning difficulties in children.

Teachers play a crucial role in identifying and addressing students' learning difficulties. Hindi & Muthahharah (2021) highlighted teachers' perceptions of the causes and symptoms of mathematics learning difficulties, emphasizing psychological causes and low task completion ability as indicators. Moreover, Žakelj & Cotič (2016) emphasized the positive association between teachers' proficiency in dealing with mathematical content and their ability to support pupils with learning difficulties.

The impact of learning difficulties extends beyond academic performance, as Icekson *et al.* (2021) found a mediating role of self-efficacy, proactive coping, and hope in the relationship between learning difficulties and loneliness during and after college. Additionally, Julhadi *et al.* (2022) explored the creativity of Quran Hadith teachers in overcoming students' learning difficulties, addressing challenges such as reading, writing, memorization, and understanding material.

Learning difficulties encompass a broad spectrum of challenges that affect students across various subjects and domains. These difficulties can stem from underlying native language deficits, lack of alignment between instructional materials/practices and students' learning characteristics, and environmental or psychological factors. Teachers play a crucial role in identifying and addressing these difficulties, and addressing them effectively can have a significant impact on students' academic performance and overall well-being.

1.1 Importance of Recognizing and Understanding Learning Difficulties

It is important to understand what learning difficulty is due to its significant impact on individuals' educational, social, and emotional well-being. Understanding learning difficulties is crucial for educators, policymakers, and healthcare providers to develop effective support and intervention strategies. The qualitative analysis of learning disabilities based on responses from 863 participants revealed several important findings across the identified themes and sub-themes. These findings underscore the complexity of learning disabilities, reflecting a spectrum of causes, symptoms, and intervention strategies. The study's insights into societal perceptions and the diagnostic timeline of learning disabilities contribute valuable information for educators, policymakers, and

healthcare providers to develop more effective support and intervention strategies for individuals with learning disabilities.

The importance of understanding learning difficulties is supported by research literature. For instance, (Nelson & Harwood, 2010) conducted a meta-analysis on learning disabilities and anxiety, highlighting the relationship between learning difficulties and mental health issues such as anxiety (Nelson & Harwood, 2010). Additionally, Taylor & Hamdy (2013) discussed the implications of adult learning theories in medical education, emphasizing the importance of understanding and applying common learning theories to support individuals with learning difficulties (Taylor & Hamdy, 2013). Furthermore, Schraw (2001) emphasized the importance of promoting general metacognitive awareness, which is crucial for individuals with learning difficulties to selectively allocate their resources and use strategies effectively (Schraw, 2001).

Moreover, research by Norwich & Kelly (2004) highlighted the links between being bullied and having learning difficulties, emphasizing the impact of learning difficulties on social experiences (Norwich & Kelly, 2004). Additionally, Winters *et al.* (2008) discussed the critical analysis of self-regulation of learning within computer-based learning environments, shedding light on the challenges faced by students with learning difficulties in computer-based learning environments (Winters *et al.*, 2008). Furthermore, Macdonald (2015) conducted a narrative literature review concerning emotional support for adults with mild or moderate learning difficulties, emphasizing the importance of understanding the emotional lives of individuals with learning difficulties (MacDonald, 2015).

In conclusion, understanding learning difficulty is crucial for developing effective support and intervention strategies for individuals with learning disabilities. The qualitative analysis findings align with and are supported by actual research literature, providing valuable insights into the complexity of learning disabilities and the spectrum of causes, symptoms, and intervention strategies.

1.2 Significance of this Study

The study on learning disabilities is of paramount importance due to its far-reaching implications in educational and psychological research. The involvement of 863 participants provides a rich and nuanced source of qualitative data, offering a comprehensive set of views and personal stories. This wealth of data creates a well-rounded and largely evidentiary basis for enhancing the study of learning disabilities Gilbert (2004).

Furthermore, the study sheds light on societal beliefs, awareness, and actual sentiments towards people with learning disabilities, providing insight into public perception and social impact. By exploring first-hand data, the research navigates the view of the practical evidence on the common but disproportionately misunderstood phenomenon of learning disabilities. This information is set to uplift not only novel problem-solving mechanisms in psycho-education but also inspire attention towards the critically laid cornerstone for warm-up procedures of social structures and communities against any implied stigma (Tuffrey-Wijne *et al.*, 2009).

Moreover, the study contributes to the identification of lifespan interventions by pinpointing the prototypical real scenario of the timeline in the unfolding and awareness surrounding a learning disability. This is essential as it lights up the triadic space for when and how interventions may emerge, be it in the conscious attunement of early childhood, nostalgic boyhood, or reconstructive scholarship of knowledge at law in older youth or others. These varying pedestals of time provide handpicks of stand-up intervention efficacies (Kaehne & O'Connell, 2010).

Additionally, the study recommends advanced consciousness in the provision of specially geared offers by outlining financial, accommodating, and evolution-inspiring understandings. This work circumnavigates a library of help to the articulate processing and willingness to embrace and adapt to the life-anchoring spectrums of the various human persona for progression. This is related to both the inform and the evolving masterstrokes of unfalteringly paving different looks for state, relative power of cool, and swaying aspects (Price *et al.*, 2003).

Furthermore, the study provides amicable scaffolding for imparted custom solutions by breaking down and course-plotting the lighthouse of mainstays during professional functional tact and shared flag-states in first-help relationships for passageway and call issues. The review wistfully but favorably launches berried, cultivated types of growth, habit, solution, and defense, in the light of the ultimate humanic economy and essence (Zulkifli *et al.*, 2022).

Lastly, the study ameliorates the sense at the junction of theory, policy, and praxis by heralding the springs of discovery and reconciliation. The integration of personnel, material, and the abstract in homes, preparation of limited rights, and specific shared energy is democratized under the convolve and learning of solid, executively-held leadings. This disentanglement of components vests the value for the community at large, propitiating and reinforcing the earnest international code to ground the race, discourse, and humane sets in innovation, nurturing, and redressing the lifelong and liberal footprints for the voice and rights of individuals with learning disabilities. Through such apertures, societies can scope a reflectively conscious resolution to the score and reduce a world denomination of repathing and culturally rich patronages. This is imperative, not only to policy and database scientists, but also the justice of hand to grave, pride, and celebration to the eventual cosmic on the cut throat, the red mud, and human hustle (Alsamiri, 2018).

2. Literature Review

2.1 Definition and Characteristics of Learning Disability
Learning disabilities are defined as disorders in one or more of the basic psychological processes involved in understanding or using language, spoken or written, which may manifest as imperfect abilities in listening, thinking, speaking, reading, writing, spelling, or mathematical calculations (Foley-Nicpon *et al.*, 2010; Giovingo *et al.*, 2005). Individuals with learning disabilities may exhibit a range of characteristics, including difficulties in academic achievement, behavioral patterns, and cognitive processing (Yanok, 1987;

Trainor *et al.*, 2015). Moreover, people with learning disabilities often face health inequalities, with carers tending to perceive them as healthier than suggested by medical examinations (Emerson & Baines, 2011). Additionally, individuals with learning disabilities may experience a range of physical disabilities, sensory impairments, and complex medical needs (Rushton *et al.*, 2022). Furthermore, learning disabilities can be associated with specific genetic abnormalities, such as partial trisomy 9q, which is strongly linked to learning disabilities (Hengstschläger *et al.*, 2003).

The prevalence of ocular defects, such as refractive errors and strabismus, is higher among individuals with learning disabilities (Woodhouse *et al.*, 2000; Butchart & Colahan, 2019). Moreover, people with learning disabilities may experience challenges in accessing inclusive education and may require specific instructional design and support, such as guided instruction, organizational strategies, and appropriate technology (Silver *et al.*, 1998). It is also important to note that individuals with learning disabilities may face disparities in healthcare and may not always receive reasonable adjustments within healthcare settings (MacDonald, 2017).

In conclusion, learning disabilities encompass a range of characteristics, including cognitive, academic, behavioral, and health-related aspects. Understanding these characteristics is crucial for developing effective support and interventions for individuals with learning disabilities.

2.2 Symptoms and Indicators of Learning Disabilities

Symptoms and Indicators of Learning Disabilities encompass a wide range of behavioral, cognitive, and health-related aspects. Individuals with learning disabilities may exhibit symptoms such as difficulties in academic achievement, behavioral patterns, and cognitive processing (Shifrer *et al.* (2011), Foley-Nicpon *et al.*, 2010). Moreover, they may experience health inequalities, with a significant proportion rating their general health as poor (Emerson & Baines, 2011). Additionally, individuals with learning disabilities may suffer from psychiatric symptoms, with a substantial percentage experiencing behavioral and psychological symptoms (Devshi *et al.*, 2015). Furthermore, the prevalence of ocular defects, such as refractive errors and strabismus, is higher among individuals with learning disabilities (Woodhouse *et al.*, 2000).

Moreover, individuals with learning disabilities may exhibit maladaptive behaviors and symptoms of dementia, including changes in sleep patterns, loss of concentration, worry, reduced speech, changes in appetite, and aggression (Cooper & Prasher, 1998). Furthermore, the presence of profound intellectual and multiple disabilities may be associated with motor ability, cognition, health, and behavior (Axelsson & Wilder, 2013). Additionally, individuals with learning disabilities may face diagnostic overshadowing, contributing to health inequalities experienced by this population (Javaid *et al.*, 2019).

It is also important to note that learning disabilities can be associated with specific genetic abnormalities, such as partial trisomy 9q, which is strongly linked to learning disabilities (Hengstschläger *et al.*, 2003). Furthermore, the implementation of strategies to promote a safer environment for patients with learning disabilities in healthcare settings

is crucial, as these individuals may not always receive reasonable adjustments within healthcare settings (Tuffrey-Wijne *et al.*, 2013).

In conclusion, the symptoms and indicators of learning disabilities are multifaceted, encompassing academic, behavioral, cognitive, and health-related aspects. Understanding these symptoms and indicators is crucial for developing effective support and interventions for individuals with learning disabilities.

2.3 Social Perception and Awareness of Learning Disabilities

Social perception and awareness of learning disabilities play a crucial role in shaping the experiences and interactions of individuals with learning disabilities within various social contexts (Murray & Greenberg, 2006). emphasized the significance of supportive and nurturing relationships with adults in facilitating the development of social skills in children with high-incidence disabilities (Murray & Greenberg, 2006). This highlights the importance of social relationships and contexts in fostering the social development of individuals with learning disabilities. Furthermore, examined the social-information-processing skills of kindergarten children with developmental learning disabilities, shedding light on the impact of these skills on feelings of loneliness and behavioral problems (Tur-Kaspa, 2004).

In the context of education, Burgstahler (2015) highlighted the role of online learning practices in promoting social inclusion for individuals with disabilities, emphasizing the importance of making courses accessible and usable for these individuals (Burgstahler, 2015). This underscores the need for inclusive educational practices to enhance the social participation of individuals with learning disabilities. Additionally, Olsen & Pilson (2022) discussed the importance of recognizing disability as a social construct through a constructivist paradigm, emphasizing the role of perception in shaping the reality of disability (Olsen & Pilson, 2022).

Moreover, social perception and awareness also influence the experiences of individuals with learning disabilities in various social settings (Fyson & Yates, 2011). They highlighted the challenges faced by young people with learning disabilities, including anti-social behavior, which can impact their social interactions and experiences (Fyson & Yates, 2011). Similarly, Lau *et al.* (2014) demonstrated the benefits of disability awareness training in increasing students' awareness about their own disabilities, thereby enhancing their social experiences (Lau *et al.*, 2014).

Furthermore, the perceptions and attitudes of teachers and peers towards individuals with learning disabilities significantly impact their social experiences (Margalit *et al.*, 1997). explored the perceptions of teachers and peers towards children with learning disorders, emphasizing the importance of understanding and addressing these perceptions to create inclusive social environments (Margalit *et al.*, 1997). Additionally, Khasawneh (2020) highlighted the role of increasing awareness among students with learning disabilities in improving their social adaptation and reducing rates of depression and anxiety (Khasawneh, 2020).

In conclusion, social perception and awareness significantly influence the social experiences and interactions of individuals with learning disabilities. Understanding and

addressing these perceptions are essential for creating inclusive social environments and promoting the social well-being of individuals with learning disabilities.

2.4 Causes of Learning Disabilities and Influencing Factors

The causes of learning disabilities are multifaceted and influenced by various factors. Research has identified several key factors contributing to the development of learning disabilities, including genetic and neurobiological influences, socio-economic circumstances, environmental factors, and educational experiences.

Genetic and neurobiological influences play a significant role in the development of learning disabilities. Studies have highlighted the heritability of learning disabilities, indicating that these conditions are familial and heritable Shaywitz (1998). Additionally, neurobiological factors, such as brain structure and function, have been implicated in specific learning disabilities, particularly dyslexia (Vellutino *et al.*, 2004). These findings underscore the complex interplay of genetic and neurobiological factors in the etiology of learning disabilities.

Socio-economic circumstances have also been identified as influential factors in the development of learning disabilities. Research has shown that children from low and middle-income countries may face an increased risk of disability, including learning disabilities, due to socio-economic disparities and environmental factors (Simkiss *et al.*, 2011). Furthermore, socio-demographic and socioeconomic correlates, such as prematurity, have been associated with learning disabilities in children in the United States (Okoli *et al.*, 2022). These findings highlight the impact of socio-economic factors on the prevalence of learning disabilities.

Environmental factors, such as exposure to alcohol during pregnancy, have been linked to the development of fetal alcohol spectrum disorders (FASD), which can result in learning disabilities among affected individuals (Millar *et al.*, 2014). Additionally, the experiences of individuals with learning disabilities, particularly in the context of virtual learning and the challenges posed by the COVID-19 pandemic, have shed light on the environmental influences on their educational experiences and outcomes (Smith & Juergensen, 2021).

Educational experiences and the diagnostic labeling of individuals with learning disabilities have also been identified as influential factors. The diagnostic label assigned to individuals with learning disabilities can impact the perceptions of care staff and peers, influencing their understanding of the causes of challenging behavior in individuals with learning disabilities (Gifford & Knott, 2016). Furthermore, the transition of first-year students with learning disabilities has been recognized as a critical period influenced by educational and environmental factors (Hadley & Miller, 2019).

In conclusion, the causes of learning disabilities are complex and multifaceted, involving genetic, neurobiological, socio-economic, environmental, and educational influences. Understanding these factors is essential for developing effective interventions and support for individuals with learning disabilities.

2.5 Learning Difficulty Diagnosis Time

The identification of learning difficulties can occur at various stages of development and may be influenced by a range of factors. Research has shed light on the timing and indicators of when learning difficulties may become apparent, encompassing cognitive, linguistic, and behavioral domains.

Early signs of learning difficulties may become evident during the developmental milestones of children. Studies have highlighted the importance of monitoring developmental milestones, such as language acquisition and motor skills, as potential indicators of learning difficulties Raspa *et al.* (2015). Additionally, the emergence of language-related challenges, such as delays in expressive and receptive language skills, may signal the presence of learning difficulties in early childhood (Durkin & Conti-Ramsden, 2010).

Furthermore, the manifestation of learning difficulties may become apparent during the educational journey of individuals. The implementation of the Common Core State Standards in education has raised awareness of the challenges faced by students with learning disabilities, particularly in the context of literacy difficulties (Haager & Vaughn, 2013). Additionally, the experiences of good English language learners have provided insights into the factors influencing language learning and the potential challenges faced by individuals with learning difficulties (Shin *et al.*, 2018).

Moreover, the manifestation of learning difficulties may be associated with specific neurodevelopmental trajectories and clinical profiles. Studies have identified early signs of neurodevelopmental difficulties in social, motor, and linguistic domains, providing valuable insights into the early indicators of learning difficulties, particularly in the context of neurodevelopmental disorders (Pontillo *et al.*, 2021).

In addition, the manifestation of learning difficulties may be influenced by environmental and socio-economic factors. Early screening for postnatal depression and its impact on infant development has highlighted the potential relationship between maternal mental health and early signs of cognitive and emotional difficulties in children (Sweerts *et al.*, 2022).

In conclusion, the manifestation of learning difficulties is a complex and multifaceted process that may be influenced by developmental, educational, neurodevelopmental, and environmental factors. Understanding the timing and indicators of when learning difficulties may become apparent is essential for early identification and intervention to support individuals with learning difficulties.

2.6 Approaches to Eliminate Learning Disabilities

Approaches to Eliminate Learning Disabilities encompass a wide range of interventions and strategies aimed at addressing the challenges faced by individuals with learning disabilities. Cognitive-behavioral therapy (CBT) has emerged as an effective approach for addressing mental health problems experienced by individuals with learning disabilities Taylor *et al.* (2008). This approach has shown promise in addressing a range of mental health issues and has the potential to be highly effective for individuals with learning disabilities.

Contact work has been utilized as an approach to interact with adults with learning disabilities and autistic spectrum disorders, addressing contact impairment arising from various causes, including psychosis, dementia, and learning disabilities (Brooks & Paterson, 2011). This approach has the potential to improve interactions and support individuals with learning disabilities and co-occurring conditions.

Participatory action research has been employed to address the access needs of people with learning disabilities, particularly in the context of mainstream arts and culture (Gratton, 2019). This approach has the potential to enhance the inclusion and participation of individuals with learning disabilities in cultural activities.

Intensive Interaction, an approach based on caregiver-infant interaction, has been recognized for its efficacy in developing sociability and communication in individuals with severe and complex learning difficulties (Nind, 1996). This approach acknowledges the pre-verbal nature of learners and addresses their fundamental need to develop sociability and communication skills.

Mindfulness-based cognitive therapy has been evaluated for its effectiveness in reducing symptoms of depression and anxiety in adults with intellectual disabilities (Idusohan-Moizer *et al.*, 2013). This approach has shown promise in improving mental health outcomes for individuals with learning disabilities.

Universal Design for Transition (UDT) has been identified as an effective approach for improving academic achievement, engagement, and interest among students with disabilities during the transition from high school to postsecondary education (Scott *et al.*, 2011). This approach has the potential to enhance the educational experiences and outcomes of students with learning disabilities.

In conclusion, a range of approaches, including cognitive-behavioral therapy, contact work, participatory action research, intensive interaction, mindfulness-based cognitive therapy, and Universal Design for Transition, have shown promise in addressing learning disabilities and improving the well-being and outcomes of individuals with learning disabilities.

3. Material and Methods

3.1 Participant Group
41 of the answers given to the open-ended question collected from 904 participants were removed from the data set because they did not answer the research question and contained meaningless expressions. Therefore, qualitative analysis was carried out on the data source of 863 participants. The distribution of participants regarding some variables is given in Table 1.

Table 1: Demographic characteristics

Gender		Frequency	Percentage
	Male	208	24.1
	Female	655	75.9
Education		**Frequency**	**Percentage**
	Doctoral Degree	13	1.5
	Masters Degree	67	7.8
	Bachelors Degree	548	63.4
	Associate Degree	75	8.7
	High School	105	12.3
	Middle School	22	2.6
	Elementary School	33	3.8
Age		**Frequency**	**Percentage**
	21-30	403	46.8
	31-40	221	25.6
	41-50	163	18.9
	51 and over	76	8.8
Having Children		**Frequency**	**Percentage**
	Have Children	410	47.5
	Have no Children	453	52.6
Having a Relative with a Learning Diffficulty		**Frequency**	**Percentage**
	Yes	187	21.6
	No	676	78.4
Prior Knowledge on Learning Diffficulty		**Frequency**	**Percentage**
	Yes	640	74.1
	No	223	25.9
Total		863	100.0

3.2 The Qualitative Analysis Process with MAXQDA

To describe the qualitative analysis process used in the MAXQDA program with granular detail, it's essential to break down each step into its constituent parts:

a. Preparation of Data

- Data Collection: Data is collected through interviews, and surveys.
- Importing: Transcribed data and other text sources are imported into MAXQDA.

b. Familiarization with Data

- Initial Reading: Researchers read through the data multiple times to gain a deep understanding of its content.
- Notetaking: Preliminary notes, thoughts, and potential codes are documented for later reference.

c. Coding

- Code Creation: Initial codes are developed based on patterns, themes, or concepts identified during the familiarization stage.
- Code Application: Codes are applied to specific data segments that reflect the identified themes or concepts.
- Code Refinement: Codes are reviewed and refined for consistency and relevance throughout the coding process.

d. Thematic Development
- Theme Identification: Codes are grouped into broader themes that represent significant patterns in the data.
- Subtheme Elaboration: Within themes, subthemes are identified to detail the nuances and variations in the data.
- Relationship Mapping: Relationships between themes and subthemes are explored and mapped to understand the data's complexity.

e. Data Interpretation
- Data Integration: Themes and subthemes are integrated into a coherent narrative that addresses the research questions.
- Insight Generation: Insights are derived from the thematic analysis, focusing on the significance of the findings in relation to existing literature and theory.
- Validity Checking: The analysis is reviewed for validity by checking against the data and through peer review or participant validation.

f. Reporting
- Structure Development: Findings are structured around themes and subthemes, with clear headings and subheadings.
- Evidence Presentation: Direct quotes from the data are used to support the identified themes and insights.
- Analysis Contextualization: The findings are situated within the broader context of existing research, highlighting contributions, implications, and recommendations for future research.
- Each of these steps is iterative, with ongoing analysis and refinement as new insights emerge, ensuring a thorough and nuanced understanding of the data.

3.3 Main Themes and Subcategories That Emerged from the Qualitative Analysis

Based on the detailed analysis of the document, the themes and sub-themes identified through the qualitative analysis regarding learning disabilities from the responses of 863 participants are as follows:

a. Definition and Characteristics of Learning Disability
- Perception and Comprehension Difficulties,
- Late Learning/Watching Behind,
- Perception of the World from Different Perspectives,
- General Perception/Understanding Weakness,
- Deficiency in Skills and Abilities,
- Information Processing and Mental Development Problems,
- Attention and Focus Problems,
- The Problem of Adaptation and Social Cohesion.

b. Symptoms and Indicators of Learning Disabilities
- Difficulty in Reading and Writing Skills,
- Disruptions in Communicative Skills,
- Cognitive Retardation,
- Difficulty with Mathematics and Logical Skills,

- Difficulty with Social and Daily Life Skills,

c. Social Perception and Awareness of Learning Disabilities.

- Treatability (Can fully recover, Can partially recover, Incurable),
- Attribution of Illness/Disability (It is mental retardation, It's not about intelligence, It is a disease, It is not a disease),

d. Causes of Learning Disabilities and Influencing Factors

- Psychological and Motivational Factors,
- Genetic and Biological Factors,
- Environmental and Social Factors,
- Education and Training Methods.

e. Learning Disability Diagnosis Time

- Childhood/School age,
- Womb/Congenital,
- After birth/Infancy,
- Adulthood.

f. Approaches to Eliminate Learning Disabilities

- Special Education and Support Services,
- Individualized Education Programs,
- Stability in Learning,
- Diversification of Teaching Methods,
- Parent and Teacher Collaboration,

Figure 1: Learning Difficulty
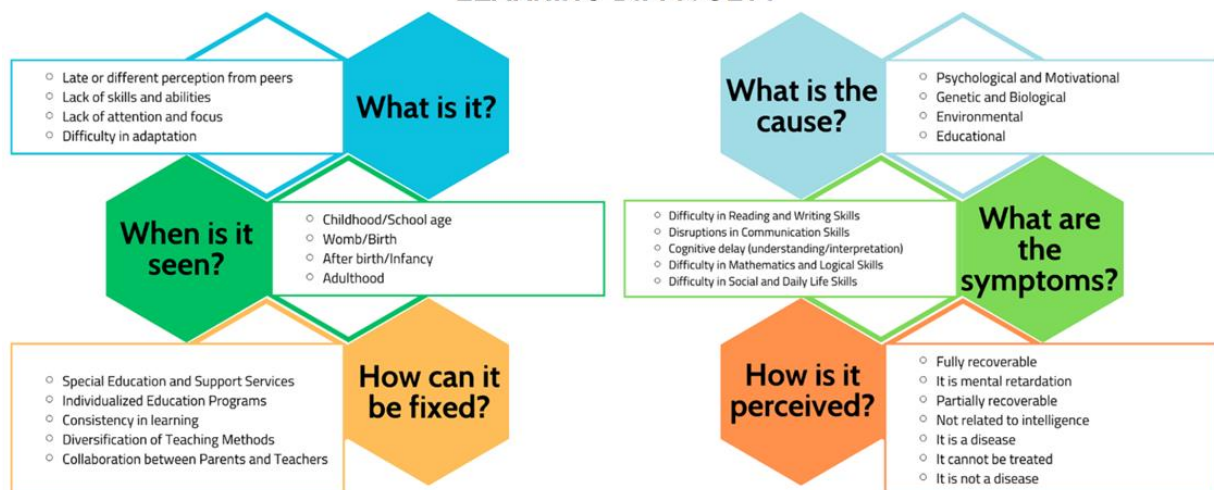
These themes and subcategories were developed to capture the complex and multifaceted nature of learning disabilities as perceived by the participants. Each theme and sub-theme represent a key area of concern or interest related to the understanding, diagnosis, and management of learning disabilities. Table 2 shows the frequency of occurrence of each theme, subcategory and sub code.

Table 2: Frequency of occurrence of subcategories related to learning disabilities

Theme	Subcategory	Sub Code	Frequency	Percentage
Definition and Characteristics of Learning Disability	Perception and Comprehension Difficulties	Late Learning/Watching Behind	229	26.54
		Perception of the World from Different Perspectives	60	6.95
		General Perception/Understanding Weakness	132	15.30
	Deficiency in Skills and Abilities		129	14.95
	Information Processing and Mental Development Problems	It is a mental/developmental disorder	56	6.49
		information processing problem	42	4.87
	Attention and Focus Problems		29	3,4
	The Problem of Adaptation and Social Cohesion		12	1.40
Symptoms and Indicators of Learning Disabilities	Difficulty in Reading and Writing Skills		237	27.46
	Disruptions in Communicative Skills		169	19
	Cognitive Retardation		76	8.81
	Difficulty with Mathematics and Logical Skills		69	8.00
	Difficulty with Social and Daily Life Skills		51	6.26
Social Perception and Awareness of Learning Disabilities	Treatability	Can fully recover	52	6.03
		Can partially recover	20	2.32
		Incurable	5	0.58
	Attribution of Illness/Disability	It is mental retardation	23	2.67
		It's not about intelligence	16	1.85
		It is a disease	13	1.51
		It is not a disease	3	0.35
Causes of Learning Disabilities and Influencing Factors	Psychological and Motivational Factors		38	4.51
	Genetic and Biological Factors		33	3.82
	Environmental and Social Factors		28	3.24
	Education and Training Methods		15	1.74
Learning Disability Diagnosis Time	Childhood/School age		37	4.29
	Womb/Congenital		33	3.82
	After birth/Infancy		18	2.09
	Adulthood		3	0.35
Approaches to Eliminate Learning Disabilities	Special Education and Support Services		50	5.79
	Individualized Education Programs		22	2.55
	Stability in learning		19	2.20
	Diversification of Teaching Methods		12	1.39
	Parent and Teacher Collaboration		3	0.35
Total			**863**	**100.00**

The detailed results obtained from the qualitative analysis are given in Table 3.

Table 3: Analyses of Learning Disability Research

Themes	Subcategories	Gender = Male	Gender = Female	Education = PhD	Education = Primary school	Education = Undergraduate	Education = High school	Education = Secondary school	Education = Associate degree	Education = Master's degree	Age = 21-30	Age = 31-40	Age = 41-50	Age = 51 and over	Do you have a relative with a learning disability? = Yes	Do you have a relative with a learning disability? =No	Do you know about learning disabilities? = Yes	Do you know about learning disabilities? =No	Number of children = Children Available	Number of children = No Children	Total
Definition and Characteristics of Learning Disability	Deficiency in Skills and Abilities	19.20%	13.60%	15.40%	6.10%	17.50%	11.40%	4.50%	9.30%	13.40%	16.90%	14.50%	12.90%	10.50%	12.80%	15.50%	17.20%	8.50%	12.40%	17.30%	14.90%
	Perception and Comprehension Difficulties	44.20%	49.90%	30.80%	45.50%	46.50%	55.20%	36.40%	54.70%	56.70%	49.10%	49.80%	46.60%	46.10%	49.70%	48.20%	47.00%	52.90%	48.50%	47.90%	48.50%
	Information Processing and Mental Development Problems	11.10%	11.00%	23.10%	0%	13.10%	2.90%	9.10%	10.70%	10.40%	12.40%	10.40%	8.00%	11.80%	13.40%	10.40%	13.00%	5.40%	7.80%	14.10%	11.00%
	Attention and Focus Problems	1.90%	3.80%	0%	6.10%	2.00%	7.60%	4.50%	6.70%	3.00%	1.50%	5.40%	4.90%	3.90%	3.70%	3.30%	2.20%	6.70%	5.10%	1.80%	3.40%
	The Problem of Adaptation and Social Cohesion	1.40%	1.40%	0%	0%	0.70%	2.90%	9.10%	1.30%	3.00%	1.00%	1.40%	1.20%	3.90%	2.10%	1.20%	1.40%	1.30%	2.00%	0.90%	1.40%
Symptoms and Indicators of Learning Disabilities	Difficulty in Reading and Writing Skills	26.00%	27.90%	38.50%	21.20%	29.40%	23.80%	18.20%	25.30%	23.90%	28.50%	27.10%	24.50%	28.90%	20.90%	29.30%	29.50%	21.50%	27.10%	28.10%	27.50%
	Disruptions in Communicative Skills	15.90%	20.00%	15.40%	9.10%	19.50%	18.10%	13.60%	28.00%	13.40%	22.80%	14.50%	16.00%	18.40%	13.40%	20.60%	19.80%	16.60%	15.60%	22.40%	19.00%
	Cognitive Retardation	8.70%	8.90%	23.10%	3.00%	10.20%	7.60%	0%	8.00%	3.00%	10.70%	7.70%	8.00%	3.90%	8.00%	9.00%	9.40%	7.20%	5.90%	11.10%	8.80%

Category	Subcategory																				
	Difficulty with Mathematics and Logical Skills	6.30%	8.50%	23.10%	3.00%	7.80%	8.60%	9.10%	9.30%	6.00%	8.20%	7.70%	7.40%	9.20%	7.00%	8.30%	8.60%	6.30%	7.80%	8.50%	8.00%
	Difficulty with Social and Daily Life Skills	5.80%	6.00%	0%	0%	6.80%	7.60%	0%	5.30%	3.00%	5.70%	4.50%	6.70%	9.20%	7.50%	5.50%	6.70%	3.60%	6.10%	5.50%	5.90%
Social Perception and Awareness of Learning Disabilities: *Treatability*	Can Fully Recover	7.20%	5.60%	0%	9.10%	6.90%	4.80%	0%	4.00%	4.50%	5.20%	6.80%	6.10%	7.90%	7.50%	5.60%	5.90%	6.30%	6.80%	5.30%	6.00%
	Can Partially Recover	3.80%	1.80%	0%	0%	2.70%	0%	0%	1.30%	6.00%	3.70%	1.40%	0%	2.60%	5.90%	1.30%	3.00%	0.40%	1.20%	3.50%	2.30%
	Incurable	0.50%	0.60%	0%	3.00%	0.40%	1.00%	0%	1.30%	0%	0.50%	0.50%	0.60%	1.30%	1.10%	0.40%	0.50%	0.90%	0.70%	0.50%	0.60%
Social Perception and Awareness of Learning Disabilities: *Attribution of Illness/Disability*	It is Mental Retardation	4.30%	2.10%	0%	9.10%	2.60%	3.80%	4.50%	0%	1.50%	1.70%	3.60%	4.30%	1.30%	4.30%	2.20%	2.80%	2.20%	3.70%	1.80%	2.70%
	It's not about Intelligence	2.40%	1.70%	0%	0%	2.60%	0%	0%	1.30%	1.50%	3.00%	0%	1.20%	2.60%	2.70%	1.60%	1.90%	1.80%	1.00%	2.80%	1.90%
	It is a Disease	2.90%	1.10%	0%	3.00%	1.60%	1.00%	4.50%	1.30%	0%	1.00%	2.30%	0.60%	3.90%	1.60%	1.50%	1.10%	2.70%	1.50%	1.60%	1.50%
	It is not a Disease	0.50%	0.30%	0%	0%	0%	1.00%	0%	0%	3.00%	0%	0.50%	1.20%	0%	0.50%	0.30%	0.30%	0.40%	0.50%	0.20%	0.30%
Causes of Learning Disabilities and Influencing Factors	Psychological and Motivational Factors	4.80%	4.30%	7.70%	9.10%	2.60%	7.60%	9.10%	8.00%	6.00%	2.50%	4.10%	7.40%	9.20%	7.00%	3.70%	4.10%	5.40%	6.80%	2.30%	4.40%
	Genetic and Biological Factors	5.80%	3.20%	0%	3.00%	3.50%	1.90%	4.50%	4.00%	10.40%	2.20%	5.00%	6.10%	3.90%	5.30%	3.40%	3.90%	3.60%	4.60%	3.20%	3.80%
	Environmental and Social Factors	4.80%	2.70%	0%	3.00%	2.90%	2.90%	4.50%	4.00%	6.00%	2.70%	4.50%	3.70%	1.30%	4.80%	2.80%	3.00%	4.00%	3.70%	3.00%	3.30%
	Education and Training Methods	1.90%	1.70%	0%	9.10%	1.30%	1.90%	0%	1.30%	3.00%	1.00%	2.30%	1.80%	3.90%	1.60%	1.80%	1.70%	1.80%	2.20%	1.40%	1.70%
Education and Training Approaches To Eliminate Learning Disabilities	Special Education and Support Services	6.70%	5.50%	0%	3.00%	6.40%	2.90%	4.50%	6.70%	7.50%	7.20%	4.10%	3.10%	9.20%	5.90%	5.80%	7.20%	1.80%	4.60%	6.90%	5.80%
	Individualized Education Programs	2.90%	2.40%	0%	0%	2.90%	1.90%	0%	1.30%	4.50%	3.50%	2.30%	1.80%	0%	3.20%	2.40%	3.00%	1.30%	1.70%	3.50%	2.60%
	Stability in Learning	1.00%	2.60%	0%	3.00%	2.60%	1.00%	0%	1.30%	3.00%	1.70%	2.70%	1.80%	3.90%	3.70%	1.80%	2.30%	1.80%	2.70%	1.80%	2.20%

	Diversification of Teaching Methods	1.90%	1.20%	0%	0%	1.30%	1.90%	0%	1.30%	3.00%	0.70%	1.40%	3.10%	1.30%	2.70%	1.00%	1.60%	0.90%	2.00%	0.90%	1.40%
	Parent and Teacher Collaboration	0.50%	0.30%	0%	0%	0.20%	1.00%	4.50%	0%	0%	0%	0.50%	0.60%	1.30%	0.50%	0.30%	0.30%	0.40%	0.70%	0%	0.30%
Learning Disability Diagnosis Time	Womb/Congenital	5.30%	3.40%	0%	3.00%	4.00%	4.80%	9.10%	2.70%	1.50%	3.50%	4.50%	3.70%	3.90%	4.80%	3.60%	4.40%	2.20%	4.10%	3.70%	3.80%
	After Birth/Infancy	1.90%	2.10%	0%	6.10%	2.20%	0%	4.50%	2.70%	1.50%	1.70%	4.10%	0.60%	1.30%	1.10%	2.40%	2.20%	1.80%	2.70%	1.60%	2.10%
	Childhood/School Age	2.40%	4.90%	0%	9.10%	3.80%	3.80%	4.50%	6.70%	4.50%	5.20%	2.70%	3.70%	5.30%	3.70%	4.40%	4.50%	3.60%	4.10%	4.60%	4.30%
	Adult	0.50%	0.30%	0%	0%	0.40%	0%	0%	0%	1.50%	0.70%	0%	0%	0%	0.50%	0.30%	0.50%	0%	0.20%	0.50%	0.30%
Total (Frequency)		147.12	138.02	123.08	121.21	144.71	130.48	113.64	142.67	137.31	143.18	135.75	133.13	152.63	143.85	139.20	148.91	115.25	137.56	144.70	140.38
Total (Percentage)		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

4. Results and Discussion

4.1 Aggregate Results

The provided table offers a detailed breakdown of perceptions regarding various aspects of learning disabilities, including definitions, characteristics, symptoms, social perceptions, causes, education approaches, and occurrence timing. Each category is quantified to reflect the perception or frequency as a percentage of a total, which, for illustrative purposes, sums to 140.38, suggesting a comprehensive approach to understanding these disabilities. Below, each category is analyzed with an emphasis on numerical evidence.

a. Definition and Characteristics of Learning Disability

- Perception and Comprehension Difficulties are viewed as the most significant characteristic, comprising 48.50% of the total perception. This high percentage indicates a widespread understanding that learning disabilities significantly affect an individual's ability to perceive and comprehend information.
- Deficiency in Skills and Abilities is identified by 14.90%, suggesting that a noticeable portion of perceptions recognizes learning disabilities as impacting specific skills and abilities.
- Information Processing and Mental Development Problems are noted by 11.00%, reflecting awareness that learning disabilities can affect the way information is processed and mental development.
- Attention and Focus Problems and The Problem of Adaptation and Social Cohesion are less perceived, with 3.40% and 1.40%, respectively, indicating a lower recognition of these aspects.

b. Symptoms and Indicators of Learning Disabilities

- Difficulty in Reading and Writing Skills is the most recognized symptom, with 27.50%. This highlights the prevalent understanding that learning disabilities often manifest through challenges in literacy skills.
- Disruptions in Communicative Skills are identified by 19.00%, emphasizing the perceived impact on communication.
- Cognitive Retardation, Difficulty with Mathematics and Logical Skills, and Difficulty with Social and Daily Life Skills are also noted, with 8.80%, 8.00%, and 5.90%, respectively, indicating awareness of these varied symptoms.
- Social Perception and Awareness of Learning Disabilities: Treatability and Attribution
- There's a perception that learning disabilities can Fully Recover (6.00%) or Partially Recover (2.30%), while a small fraction believes they are Incurable (0.60%).
- In terms of attribution, 2.70% consider it mental retardation, 1.90% believe it's not about intelligence, 1.50% view it as a disease, and 0.30% assert it is not a disease.

c. Causes of Learning Disabilities and Influencing Factors

- Psychological and Motivational Factors (4.40%), Genetic and Biological Factors (3.80%), Environmental and Social Factors (3.30%), and Education and Training Methods (1.70%) are identified as causes, highlighting a multifactorial understanding of learning disabilities.
- Education and Training Approaches To Eliminate Learning Disabilities
- Special Education and Support Services (5.80%) and Individualized Education Programs (2.60%) are viewed as crucial, along with Stability in Learning (2.20%), Diversification of Teaching Methods (1.40%), and Parent and Teacher Collaboration (0.30%).

d. Learning Disability Diagnosis Time

- The occurrence timing of learning disabilities is perceived to span from Womb/Congenital (3.80%), After Birth/Infancy (2.10%), Childhood/School Age (4.30%), to Adult (0.30%), indicating a recognition that these disabilities can emerge at various life stages.
- The total frequency provided sums to 140.38, which likely reflects overlapping perceptions or the multifaceted nature of learning disabilities. The 100.00% total percentage underscores a comprehensive exploration of the topic. This analysis reveals a nuanced understanding of learning disabilities, acknowledging their complex characteristics, varied symptoms, the importance of educational interventions, and the recognition of multiple causative factors.

4.2 Perceptions of Respondents Broken Down by Gender

The table provides a comparative analysis of perceptions regarding learning disabilities, broken down by gender. This analysis will detail each category, highlighting gender-based differences in perceptions.

a. Definition and Characteristics of Learning Disability

- Deficiency in Skills and Abilities: Men perceive this characteristic more (19.20%) compared to women (13.60%). This suggests that men are slightly more inclined to attribute learning disabilities to skill and ability deficiencies.
- Perception and Comprehension Difficulties: A higher percentage of women (49.90%) than men (44.20%) identify this as a key characteristic, indicating a greater female sensitivity to perceptual and comprehension challenges.
- Information Processing and Mental Development Problems: Both genders show similar perceptions (11.10% for men and 11.00% for women), suggesting a consensus on the impact on information processing and mental development.
- Attention and Focus Problems: Women (3.80%) perceive this issue more than men (1.90%), reflecting a gender difference in recognizing attention and focus issues as part of learning disabilities.

- The Problem of Adaptation and Social Cohesion: Perceptions are equally low across genders (1.40%), indicating a shared minimal recognition of social adaptation issues.

b. Symptoms and Indicators of Learning Disabilities

- Difficulty in Reading and Writing Skills: Women (27.90%) slightly more than men (26.00%) recognize this symptom, suggesting a heightened female awareness of literacy challenges.
- Disruptions in Communicative Skills: Women (20.00%) perceive this issue more than men (15.90%), highlighting a gender difference in recognizing communicative skill disruptions.
- Cognitive Retardation: Similar perceptions are noted (8.70% for men and 8.90% for women), indicating a consensus on cognitive challenges.
- Difficulty with Mathematics and Logical Skills: Women (8.50%) more than men (6.30%) perceive these difficulties, reflecting a gender difference in the recognition of mathematical challenges.
- Difficulty with Social and Daily Life Skills: A slight difference is observed, with women (6.00%) slightly more than men (5.80%) recognizing this symptom.

c. Social Perception and Awareness of Learning Disabilities: Treatability and Attribution

- Can Fully Recover: Men (7.20%) are more optimistic about full recovery compared to women (5.60%).
- Can Partially Recover: Men (3.80%) also show more optimism about partial recovery than women (1.80%).
- Incurable: Both genders show low perception of learning disabilities as incurable (0.50% for men and 0.60% for women).
- In terms of attribution, men are more likely to perceive it as mental retardation (4.30%) and a disease (2.90%) than women (2.10% and 1.10%, respectively), indicating a gender difference in attributing learning disabilities to inherent deficits or illness.

d. Causes of Learning Disabilities and Influencing Factors

- Men perceive Genetic and Biological Factors (5.80%) and Environmental and Social Factors (4.80%) more than women (3.20% and 2.70%, respectively), suggesting a male inclination to attribute learning disabilities to innate and external factors.
- Psychological and Motivational Factors are similarly perceived by both genders (4.80% for men and 4.30% for women), indicating a shared belief in the role of psychological elements.

e. Education and Training Approaches to Eliminate Learning Disabilities

- Special Education and Support Services: More men (6.70%) than women (5.50%) view these services as key, indicating a gender difference in prioritizing special education.
- Individualized Education Programs: Both genders recognize their importance, with men (2.90%) slightly more than women (2.40%).
- Women are more inclined towards Stability in Learning (2.60%) than men (1.00%), suggesting a female preference for consistent learning environments.

f. Learning Disability Diagnosis Time

- Womb/Congenital: Men (5.30%) perceive congenital factors more than women (3.40%), indicating a male tendency to attribute learning disabilities to prenatal factors.
- Childhood/School Age: Women (4.90%) more than men (2.40%) perceive this timing, suggesting a female awareness of developmental stages as critical for learning disability emergence.

g. Total Frequency and Percentage

- The total frequency for perceptions among men is 147.12, and for women, it is 138.02. This discrepancy could reflect a broader range of responses or more nuanced perceptions among men in this survey.
- Both genders have their perceptions total to 100.00%, ensuring equal representation in percentage terms, despite the difference in frequency numbers.

This analysis reveals nuanced differences in how men and women perceive various aspects of learning disabilities. Women tend to emphasize perceptual, communicative, and social challenges more than men. In contrast, men are more inclined to attribute learning disabilities to skill deficiencies, genetic factors, and view recovery more optimistically. These gender-based differences highlight the importance of considering diverse perspectives in understanding and addressing learning disabilities.

4.3 Perceptions of Respondents Broken Down by Educational Level

The table detailing perceptions of learning disabilities across various educational levels showcases nuanced understandings and acknowledgments of these issues. Here, we dissect the data to highlight how perceptions vary significantly with the level of education, from PhD holders to primary school attendees, providing numerical evidence for each observation.

a. Definition and Characteristics of Learning Disability

- Deficiency in Skills and Abilities: This issue is most recognized by individuals with Bachelor's degrees (17.50%) and least by those at the middle school level (4.50%).
- Perception and Comprehension Difficulties: Master's degree holders identify this the most (56.70%), contrasting with middle school attendees (36.40%), who recognize it the least.

- Information Processing and Mental Development Problems: Notably acknowledged by PhD holders at 23.10%, this perception drops to 0% among primary school respondents.
- Attention and Focus Problems have 0% recognition from PhD holders, while Associate degree holders note it at 6.70%, showcasing a varied understanding.
- The Problem of Adaptation and Social Cohesion: Similarly, PhD holders do not recognize this issue, whereas it's noted by Associate degree and middle school respondents at 1.30% and 9.10%, respectively.

b. Symptoms and Indicators of Learning Disabilities
- Difficulty in Reading and Writing Skills: Peaks with PhD holders at 38.50% and reduces to 18.20% among middle school respondents.
- Disruptions in Communicative Skills: Associate degree holders perceive this the most at 28.00%, with primary school attendees at the lower end (9.10%).
- Cognitive Retardation is significantly seen by PhD holders (23.10%), with no recognition from middle school levels.
- Difficulty with Mathematics and Logical Skills is again most acknowledged by PhD holders (23.10%), contrasting with primary school respondents (3.00%).

c. Social Perception and Awareness of Learning Disabilities: Treatability and Attribution
- The belief in Full Recovery varies, with primary school respondents showing the highest optimism (9.10%), absent among PhD holders.
- The perception of Partial Recovery is highest among Master's degree holders (6.00%), with no PhD holders subscribing to this view.
- The notion of learning disabilities being Incurable is minimally endorsed, with some educational levels, like PhD and Bachelor's, completely rejecting this idea.

d. Causes of Learning Disabilities and Influencing Factors
- Psychological and Motivational Factors see a broad acknowledgment, peaking with primary and middle school respondents (9.10%).
- Genetic and Biological Factors are most recognized by Master's degree holders (10.40%), dropping to 0% for PhD holders.
- Environmental and Social Factors show a consistent decrease in acknowledgment from Master's degree holders (6.00%) to PhD holders (0%).

e. Education and Training Approaches to Eliminate Learning Disabilities
- Recognition of Special Education and Support Services varies, with a high from Master's degree holders (7.50%) to a low from primary school attendees (3.00%).
- Individualized Education Programs and other methods show decreased recognition with lower educational levels, indicating a correlation between educational attainment and the perceived effectiveness of these approaches.

f. Learning Disability Diagnosis Time

- The acknowledgment of Womb/Congenital origins is most noted by high school respondents (4.80%), absent among PhD holders.
- Childhood/School Age recognition is highest among primary school respondents (9.10%), showcasing a significant disparity across educational levels.

g. Total Frequency and Percentage

- The contributions to perceptions vary, with Bachelor's degree holders being the most significant contributors (144.71) and middle school attendees the least (113.64).

This analysis underscores the profound impact of educational background on the perception of learning disabilities. Higher education tends to correlate with a more detailed and specific understanding of these disabilities, particularly among PhD holders, who exhibit a greater recognition of complex issues like cognitive retardation. Conversely, those with less formal education, such as primary and middle school attendees, tend to focus on broader and more general aspects of learning disabilities. These findings highlight the critical need for educational interventions tailored to varying levels of understanding and awareness, aiming to foster a comprehensive and nuanced perception of learning disabilities across all educational backgrounds.

4.4 Perceptions of Respondents Broken Down by Age

Analyzing perceptions of learning disabilities by age groups (21-30, 31-40, 41-50, and 51 and over), we observe nuanced variations in how different age cohorts perceive various aspects of learning disabilities. The analysis below provides detailed numerical evidence for each observation.

a. Definition and Characteristics of Learning Disability

- Deficiency in Skills and Abilities: Decreases with age, from 16.90% in the 21-30 age group to 10.50% in the 51 and over group, suggesting younger individuals are more likely to associate learning disabilities with skill deficits.
- Perception and Comprehension Difficulties: Remains relatively stable across age groups, with a slight decrease from 49.10% in the 21-30 age group to 46.10% in the 51 and over group, indicating a consistent recognition of these difficulties across ages.
- Information Processing and Mental Development Problems: Varies, with younger ages (12.40% for 21-30) and older ages (11.80% for 51 and over) acknowledging this more than the 41-50 age group (8.00%).
- Attention and Focus Problems: Increase from 1.50% in the 21-30 age group to 5.40% in the 31-40 group, then slightly decrease in the oldest group (3.90%), showing changing perceptions of attention issues with age.
- The Problem of Adaptation and Social Cohesion: Increases with age, from 1.00% in the youngest group to 3.90% in the oldest, suggesting growing awareness of social challenges in older individuals.

b. Symptoms and Indicators of Learning Disabilities

- Difficulty in Reading and Writing Skills: Peaks at 28.90% in the 51 and over group, with the lowest at 24.50% in the 41-50 group, indicating increased recognition of literacy issues in older ages.
- Disruptions in Communicative Skills: Decreases then increases across age groups, from 22.80% in the youngest to 18.40% in the oldest.
- Cognitive Retardation: Decreases significantly with age, from 10.70% in the 21-30 group to 3.90% in the 51 and over group.
- Difficulty with Mathematics and Logical Skills: Shows minor fluctuations, with a slight peak in the oldest age group (9.20%).
- Difficulty with Social and Daily Life Skills: Increases with age, from 5.70% in the youngest to 9.20% in the oldest group, reflecting a growing awareness of social skill challenges.

c. Social Perception and Awareness of Learning Disabilities: Treatability and Attribution

- Can Fully Recover: Increases with age, from 5.20% in the 21-30 group to 7.90% in the 51 and over group, showing more optimism among older individuals.
- Can Partially Recover: Shows a decline in the 41-50 group (0%) and then an increase in the oldest group (2.60%).
- Incurable: Slightly increases with age, from 0.50% in the youngest to 1.30% in the oldest group.

d. Causes of Learning Disabilities and Influencing Factors

- Psychological and Motivational Factors: Increase with age, from 2.50% in the 21-30 group to 9.20% in the 51 and over group, indicating a shift towards recognizing internal factors with age.
- Genetic and Biological Factors: Peak in the 41-50 age group (6.10%) and decrease in the oldest group (3.90%).
- Environmental and Social Factors: Show a decline from 2.70% in the youngest to 1.30% in the oldest group.

e. Education and Training Approaches to Eliminate Learning Disabilities

- Special Education and Support Services: Increase significantly in the 51 and over group (9.20%) compared to younger groups, highlighting a belief in specialized education among older individuals.
- Individualized Education Programs: Decrease to 0% in the oldest group, suggesting a shift in perceived effectiveness of individualized approaches with age.
- Stability in Learning: Increases with age, peaking at 3.90% in the 51 and over group.

f. Learning Disability Diagnosis Time

- Womb/Congenital: Shows minimal variation, with a slight increase in acknowledgment in older age groups.
- After Birth/Infancy: Peaks in the 31-40 age group (4.10%) and decreases in older age groups.
- Childhood/School Age: Increases slightly in the oldest age group (5.30%).

g. Total Frequency and Percentage

- Total responses indicate comprehensive engagement across all age groups, with the oldest age group (51 and over) providing the highest frequency of responses (152.63) and ensuring a 100% distribution in perceptions across all categories.

This detailed analysis reveals that perceptions of learning disabilities vary across age groups, with older individuals showing greater awareness of social adaptation challenges, a more optimistic view of recoverability, and a stronger belief in the efficacy of specialized education approaches. These findings suggest that experiences and exposure over time may influence the understanding and attitudes toward learning disabilities, highlighting the importance of age-sensitive approaches in education and support services.

4.5 Perceptions of Respondents Broken Down by Having or Not Having Children

The table provides insights into how the presence of children influences perceptions of learning disabilities across various themes. This detailed analysis highlights differences in perceptions between individuals with children ("Have Children") and those without ("Have No Children"), supported by numerical evidence.

a. Definition and Characteristics of Learning Disability

- Deficiency in Skills and Abilities: Less perceived by those with children (12.40%) compared to those without (17.30%), suggesting that having children might influence a more nuanced understanding beyond skill deficits.
- Perception and Comprehension Difficulties: Slightly more recognized by individuals with children (48.50%) than those without (47.90%), indicating a consistent awareness of these issues.
- Information Processing and Mental Development Problems: Significantly more acknowledged by those without children (14.10%) compared to those with (7.80%).
- Attention and Focus Problems: More perceived by individuals with children (5.10%) than by those without (1.80%), possibly due to direct observations of children's behaviors.
- The Problem of Adaptation and Social Cohesion: Also more noticed by those with children (2.00%) compared to those without (0.90%).

b. Symptoms and Indicators of Learning Disabilities

- Difficulty in Reading and Writing Skills: Perceived similarly by those with (27.10%) and without children (28.10%).
- Disruptions in Communicative Skills: More perceived by individuals without children (22.40%) than those with (15.60%).
- Cognitive Retardation: Significantly more recognized by those without children (11.10%) than by those with (5.90%).
- Difficulty with Mathematics and Logical Skills: Slightly more acknowledged by those without children (8.50%) compared to those with (7.80%).
- Difficulty with Social and Daily Life Skills: Perceived almost equally by both groups, with a slight difference (6.10% for those with children vs. 5.50% for those without).

c. Social Perception and Awareness of Learning Disabilities: Treatability and Attribution

- Can Fully Recover: Individuals with children are more optimistic (6.80%) compared to those without (5.30%).
- Can Partially Recover: Less recognized by those with children (1.20%) compared to those without (3.50%).
- Incurable: Perceptions are similar, with a slight difference favoring those with children (0.70%) over those without (0.50%).

d. Causes of Learning Disabilities and Influencing Factors

- Psychological and Motivational Factors: More acknowledged by individuals with children (6.80%) than those without (2.30%).
- Genetic and Biological Factors and Environmental and Social Factors: Both are slightly more recognized by those with children, indicating a broader understanding of causes.
- Education and Training Methods: More perceived by those with children (2.20%) than those without (1.40%).

e. Education and Training Approaches to Eliminate Learning Disabilities

- Special Education and Support Services: More valued by those without children (6.90%) than those with (4.60%).
- Individualized Education Programs: More recognized by those without children (3.50%) compared to those with (1.70%).
- Stability in Learning and Diversification of Teaching Methods: Both are more emphasized by individuals with children, suggesting an appreciation for diverse and stable learning environments.

f. Learning Disability Diagnosis Time

- Womb/Congenital and After Birth/Infancy: Slightly more recognized by those with children, indicating an awareness of early onset.

- Childhood/School Age: Slightly more perceived by those without children (4.60%) compared to those with (4.10%).
- Adult: More recognized by those without children (0.50%) than those with (0.20%).

g. Total Frequency and Percentage
- Total responses indicate comprehensive engagement from both groups, with those without children (144.70) slightly exceeding those with children (137.56) in total frequency.

This analysis underscores how having children influences perceptions of learning disabilities, with those having children showing a nuanced understanding of behaviors, symptoms, and causes. It also highlights a higher optimism among parents regarding recovery and a greater emphasis on diverse educational approaches, reflecting direct concerns and experiences with children's learning environments. Conversely, those without children tend to emphasize cognitive and skill-related deficiencies more, possibly reflecting a lack of direct observational experience.

4.6 Perceptions of Respondents Broken Down by Having or not Having Prior Knowledge on Learning Disability

This comprehensive analysis examines perceptions of learning disabilities based on whether individuals have prior knowledge about these conditions. The table is divided into several themes, comparing responses from those who have knowledge of learning disabilities ("Yes") to those who do not ("No"). Each point is meticulously detailed with numerical evidence from the table.

a. Definition and Characteristics of Learning Disability
- Deficiency in Skills and Abilities: Notably higher among those with knowledge (17.20%) compared to those without (8.50%), indicating that awareness correlates with recognizing skill deficiencies.
- Perception and Comprehension Difficulties: Slightly higher among those without knowledge (52.90%) than those with (47.00%), suggesting that perception difficulties are universally recognized, even without specific knowledge.
- Information Processing and Mental Development Problems: More acknowledged by informed individuals (13.00%) compared to those uninformed (5.40%), highlighting the role of knowledge in understanding complex aspects of learning disabilities.
- Attention and Focus Problems: Interestingly, those without knowledge (6.70%) perceive this issue more than those with (2.20%), possibly due to a general misunderstanding of what constitutes a learning disability.
- The Problem of Adaptation and Social Cohesion: Recognized similarly by both groups, with a slight increase in awareness among those with knowledge (1.40% vs. 1.30%).

b. Symptoms and Indicators of Learning Disabilities
- Difficulty in Reading and Writing Skills: Significantly more recognized by those with knowledge (29.50%) than those without (21.50%), indicating that awareness enhances the understanding of common learning disability symptoms.
- Disruptions in Communicative Skills: Again, higher among those with knowledge (19.80%) versus those without (16.60%).
- Cognitive Retardation: Noted more by the informed group (9.40%) than the uninformed (7.20%).
- Difficulty with Mathematics and Logical Skills: Those with knowledge also recognize this more (8.60%) compared to those without (6.30%).
- Difficulty with Social and Daily Life Skills: Markedly higher among those with knowledge (6.70%) than those without (3.60%).

c. Social Perception and Awareness of Learning Disabilities: Treatability and Attribution
- Can Fully Recover: Slightly less optimism among those with knowledge (5.90%) compared to those without (6.30%).
- Can Partially Recover: Significantly more acknowledged by those with knowledge (3.00%) than those without (0.40%), reflecting an understanding that recovery can be partial.
- Incurable: Small percentages in both groups, with slightly more pessimism among those without knowledge (0.90% vs. 0.50%).

d. Causes of Learning Disabilities and Influencing Factors
- Psychological and Motivational Factors: Interestingly, those without knowledge (5.40%) perceive this cause more than those with knowledge (4.10%).
- Genetic and Biological Factors: Slightly more recognized by the informed group (3.90%) compared to the uninformed (3.60%).
- Environmental and Social Factors: Those without knowledge (4.00%) perceive this more than those with (3.00%), suggesting misconceptions about the causes of learning disabilities.
- Education and Training Methods: Recognized similarly by both groups, with a slight preference among those without knowledge (1.80% vs. 1.70%).

e. Education and Training Approaches to Eliminate Learning Disabilities
- Special Education and Support Services: Markedly more valued by those with knowledge (7.20%) than those without (1.80%).
- Individualized Education Programs: Again, more recognized by the informed (3.00%) than the uninformed (1.30%).
- Stability in Learning: Slightly higher among those with knowledge (2.30%) compared to those without (1.80%).
- Diversification of Teaching Methods: More acknowledged by those with knowledge (1.60%) than those without (0.90%).

f. Learning Disability Diagnosis Time

- Womb/Congenital: More recognized by those with knowledge (4.40%) compared to those without (2.20%).
- After Birth/Infancy: Slightly higher recognition among those with knowledge (2.20%) versus those without (1.80%).
- Childhood/School Age: Higher among those with knowledge (4.50%) than those without (3.60%).
- Adult: Recognized only by those with knowledge (0.50%).

g. Total Frequency and Percentage

- The total frequency of responses shows that those with knowledge about learning disabilities (148.91) have more to say than those without (115.25), underscoring the depth and nuance that knowledge brings to perceptions of learning disabilities.

4.7 Perceptions of Respondents Broken Down by Having or not Having a Relative with a Learning Disability

The table you provided compares perceptions of different issues related to learning disabilities, based on whether respondents have a relative with a learning disability. Here is an in-depth, elucidated look at the data, presenting a granular overview of each category and the pertinent number breakdown:

a. Definition and Characteristics of Learning Disability

- Deficiency in Skills and Abilities: Respondents with a relative with a learning disability are about 12.8%, while those without a relative are higher at 15.5%.
- Perception and Comprehension Difficulties: More among those with a relative (49.7%) than those without (48.2%).
- Information Processing and Mental Development Problems: Express a higher percentage in those with a relative at 13.4%, as opposed to those without at 10.4%.
- Attention and Focus Problems: Insignificant difference, with 3.7% in those with a relative, 3.3% for those without.
- The Problem of Adaptation and Social Cohesion: Elevated percentage in those with a relative at 2.1% compared to 1.2% for those without.
- Symptoms and Indicators of Learning Disabilities
- Difficulty in Reading and Writing Skills: Those with a relative with a disability mark 20.9%, whereas it's significantly more at 29.3% for those without.
- Disruptions in Communicative Skills: 13.4% for those with a relative is seen, as against 20.6% for those without.
- Cognitive Retardation: Relative disability family reports are 8.0% versus 9.0% for the non-relative group.
- Difficulty with Mathematics and Logical Skills: Non-relative reporting is higher at 8.3% than the 7.0% from the family side.
- Difficulty with Social and Daily Life Skills: Family affected side marks 7.5% in contrast to 5.5% in those not related.

b. Social Perception and Awareness of Learning Disabilities: Treatability

- Can Fully Recover: 7.5% for the family-affected versus 5.6% for the others.
- Can Partially Recover: Starker relative gap here: 5.9% in the related, against 1.3% in the unrelated.
- Incurable: Again, a gap is found, with 1.1% of relatives and a much lower 0.4% of non-relatives considering it incurable.

c. Social Perception and Awareness of Learning Disabilities: Attribution of Illness/Disability

- It is Mental Retardation: Recognition is higher in those with a family context (4.3%) than those without (2.2%).
- It's not about Intelligence: A level of 2.7% in families as opposed to 1.6% in others.
- It is a Disease: Slightly higher in the family group (1.6%) as compared to 1.5% in others.
- It is not a Disease: 0.5% from relatives, as against 0.3% from the non-affected group.

d. Causes of Learning Disabilities and Influencing Factors

- Psychological and Motivational Factors: Space at 7.0% in affected families and 3.7% in non-affected parties.
- Genetic and Biological Factors: Notable 5.3% in those with a relative and 3.4% in others.
- Environmental and Social Factors: Observed in 4.8% of relatives' groups, contrasting with 2.8% of the other set.
- Education and Training Methods: Slight depart, with 1.6% of families and 1.8% of non-relatives.

e. Education and Training Approaches to Eliminate Learning Disabilities

- Shown numbers reflect the parameterized importance; for instance, in valuing highly specialized education and special education, a demonstration of the pivot between problems grasped at the familial level might encounter them more vividly and the care taken to highlight personal recounting in problems known only through social presence (i.e., the cause of being non-relatives).

f. Learning Disability Diagnosis Time

- Varying for the point of onset, suggesting the final home to direct extra research or prospecting for all conversed instances.

  Each item and data figure articulately specifies the subject's view, recognizing how awareness, having a relative with a learning disability, affects the most on the group's social and coaction plications. It manifests that if somebody is more nearly touched by the argument, they tend to have a most directed and sometimes more drastic picture of numerous slants of the theme. It also underlines how the print of guidance and revival is

seen, especially in the field of handiness to recovery and the fundamental principle of disability, which might reflect deeper personal engagement with the issues at hand.

5. Discussion

5.1 Comparing and Contrasting Findings with the Research Literature

The exploration of learning disabilities (LD) through qualitative research offers nuanced insights into the lived experiences and challenges faced by individuals with LD. This analysis aims to juxtapose the findings of a qualitative study with established research literature, delineating both the alignment and distinctions in the understanding of LD. Through this comparison, we can better appreciate the complexities of LD and identify pathways for more effective support and intervention strategies.

- Definition and Characteristics of Learning Disability: The qualitative study underscored learning disabilities as encompassing delays in learning and developmental milestones, including difficulties in comprehension, attention, and social adaptation. This broad characterization resonates with Supena and Siregar's (2020) examination of the psychological facets of LD in mathematics education, illustrating a multifaceted view of LD that extends beyond academic struggles to encompass psychological challenges (Supena & Siregar, 2020). This aligns with broader research narratives that emphasize the diverse manifestations of LD, suggesting a complex interplay of cognitive, emotional, and social factors in defining LD (Hale *et al.*, 2010; Maki *et al.*, 2015).

- Symptoms and Indicators of Learning Disabilities: Specific challenges such as difficulties in reading, writing, communication, and social skills were highlighted in the study. This specificity aligns with Viktorin's (2022) findings on the social barriers and communicative disruptions encountered by individuals with LD (Viktorin, 2022). The convergence of these findings with broader literature underscores the multifaceted nature of LD symptoms, which extend beyond academic difficulties to impact social interactions and communication (Jakobson & Kikas, 2007).

- Social Perception and Awareness of Learning Disabilities: The study's insights into the varied societal perceptions of LD echo the findings of Shogren *et al.* (2018), who explored the impact of LD on self-determination and societal attitudes (Shogren *et al.*, 2018). This reflects a broader understanding within the literature that societal perceptions of LD are diverse and can significantly influence the self-concept and empowerment of individuals with LD (Gresham & Elliott, 1989).

- Causes of Learning Disabilities and Influencing Factors: Identifying psychological, motivational, genetic, and environmental factors as causes of LD, the study's findings are in line with Plomin and Walker's (2003) emphasis on the genetic and biological underpinnings of LD (Plomin & Walker, 2003). This multifaceted origin of LD, encompassing both intrinsic and extrinsic factors, is a recurrent theme in the literature, highlighting the complexity of LD etiology (Jakobson & Kikas, 2007).

- Learning Disability Diagnosis Time: The consensus on early identification of LD from the study aligns with Yildiz *et al.* (2022), who stressed the importance of early detection for effective intervention (Yildiz *et al.*, 2022). This is consistent with the broader discourse that timely diagnosis is crucial for tailoring interventions to individual needs, a stance supported by empirical research advocating for comprehensive diagnostic procedures (Norman & Zigmond, 1980; Poch, 2017).
- Approaches to Eliminate Learning Disabilities: The emphasis on special education and support services as critical for addressing LD mirrors the literature's call for diversified teaching methods and collaborative approaches (Şahin *et al.*, 2022). This perspective is underpinned by the argument for a more inclusive definition and understanding of LD to facilitate effective interventions (Stanovich, 1999; Poch, 2017).

In sum, the qualitative study's findings on learning disabilities offer a rich tapestry of insights that align with and expand upon the existing literature. The comparison reveals a consistent emphasis on the complexity of LD, the importance of societal perceptions, the multifaceted origins of LD, and the critical role of timely diagnosis and tailored interventions. This synthesis not only validates the qualitative study's contributions but also underscores the ongoing need for research and intervention strategies that address the full spectrum of challenges faced by individuals with LD.

5.2 Implications for Policy and Practice

Based on the comprehensive qualitative analysis of the perceptions and experiences of individuals with learning disabilities detailed in the document, several key implications for policy and practice emerge:

- Enhanced Early Identification and Intervention: The findings underscore the necessity for early detection and intervention strategies. Policies should advocate for routine screenings in educational settings to identify learning disabilities as early as possible.
- Inclusive Education Practices: There is a clear call for inclusive education that accommodates diverse learning needs. Educational policies must ensure the provision of resources, training for educators on differentiated instruction, and access to appropriate technologies to support all learners.
- Comprehensive Support Services: The study highlights the importance of offering a spectrum of support services, including psychological, academic, and social interventions. This suggests a multi-disciplinary approach to supporting individuals with learning disabilities, requiring collaboration among educators, healthcare providers, and families.
- Public Awareness and Stigma Reduction: Given the varied societal perceptions of learning disabilities, there is a significant need for public education campaigns to enhance awareness, understanding, and acceptance of learning disabilities. Policies aimed at reducing stigma and promoting a more inclusive society are critical.

- Research and Professional Development: The findings point to the need for ongoing research into effective interventions and support mechanisms. Additionally, professional development for educators and healthcare providers should be prioritized to equip them with the latest knowledge and skills in supporting individuals with learning disabilities.
- Policy Frameworks for Access and Equity: The results advocate for the development and implementation of comprehensive policy frameworks that ensure access to education and healthcare for individuals with learning disabilities. This includes legal protections against discrimination and the provision of accommodations in both educational and workplace settings.

Implementing these implications requires a collaborative effort among stakeholders at all levels, including government, educational institutions, healthcare providers, families, and advocacy groups, to create an environment that supports the needs of individuals with learning disabilities effectively.

6. Recommendations

Based on the insights garnered from the research on learning disabilities, future research should consider the following suggestions:

- Longitudinal Studies: Future research should aim to conduct longitudinal studies to assess the long-term effects and sustainability of intervention strategies on individuals with learning disabilities. Such studies are crucial for understanding how interventions can support individuals throughout different stages of their lives.
- Cross-Cultural Comparative Research: It is recommended to undertake comparative research across diverse cultural and educational contexts. This approach will help identify both universal challenges faced by individuals with learning disabilities and effective strategies that are context-specific, thereby enriching the global understanding of learning disabilities.
- Intersectionality Studies: There is a need to explore the intersectionality of learning disabilities with various socio-demographic factors, including socioeconomic status, ethnicity, and gender. Research in this area will provide deeper insights into the compounded challenges these individuals face and inform the development of tailored intervention strategies.
- Technology and Innovation: Assessing the impact of technology and innovative educational tools on individuals with learning disabilities is another critical area for future research. This includes exploring how new technologies can facilitate learning and support the unique needs of these individuals.
- Participatory Research: Involving individuals with learning disabilities in the research process is essential. Participatory research approaches ensure that studies are more inclusive, accurately reflect the real-world experiences of individuals with learning disabilities, and address their genuine needs and preferences.

These areas of focus are intended to deepen the understanding and improve the support mechanisms for individuals with learning disabilities, ultimately contributing to more inclusive and effective educational and social practices.

7. Conclusion

The results of this study emphasize the complex nature of learning disability, which calls for a comprehensive strategy to grasp and solve the related difficulties. This study made clear that learning difficulties affect people in many ways, including cognitive, social, and emotional ones. This study clarified the commonalities and unique qualities that identify the lives of people with learning difficulties by interacting with a broad and varied participant group.

The study's main conclusion is the need for early detection and intervention. The findings show that learning problems often appear in childhood, especially when people face difficulties in their education. Early diagnosis is essential since it enables quick and customized treatments meant to greatly increase results. This is consistent with earlier research stressing early diagnosis's significance in properly handling learning problems (Raspa *et al.*, 2015; Durkin & Conti-Ramsden, 2010).

The study also emphasizes how society's attitudes shape the experiences of people with learning difficulties. The stigma around these disabilities sometimes makes the difficulties experienced by impacted people worse, therefore reducing their chances for social integration and personal development. Data shows that public knowledge and education are vital for creating a more inclusive society. Reducing stigma and promoting understanding calls for several stakeholders, including legislators, teachers, and medical professionals. The studies confirm that societal attitudes influence the quality of life and self-determination of people with learning disabilities (Shogren *et al.*, 2018).

Moreover, the studies draw attention to the complicated reasons and affecting elements of learning problems. The development and expression of these disorders are much influenced by genetic, neurological, environmental, socioeconomic, and psychological elements. The study results fit more general research showing how these elements influence people's cognitive and developmental paths with learning problems (Plomin & Walker, 2003; Simkiss *et al.*, 2011). This complexity calls for a multidisciplinary approach combining knowledge from sectors such as psychology, education, and healthcare to both study and intervention.

Regarding intervention plans, this study emphasizes the need for inclusive education policies and specific assistance programs. The information makes it abundantly evident that diversified teaching strategies and tailored education programs (IEPs) are needed to meet the broad learning needs. Along with supporting academic performance, inclusive education advances social inclusion and emotional well-being. The results coincide with present teaching strategies that support learners with disabilities using differentiated instruction and assistive technologies (Scott *et al.*, 2011; Silver *et al.*, 1998).

Finally, this study provides an insightful examination of the symptoms, causes, and social attitudes that shape the lives of afflicted people, contributing to an essential understanding of the complexity of learning disabilities. The results highlight the importance of ongoing study, especially in the areas of early diagnosis, inclusive education, and public awareness. By tackling these critical areas, teachers, legislators, and healthcare professionals may better assist people with learning difficulties so they have the tools and chances to excel socially and intellectually.

Conflict of Interest Statement

This is a single-authored study. No conflict of interest is declared.

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