

The Role of Parenting Styles, Emotional Regulation, and Cognitive Flexibility in Academic Adjustment Among Students with Learning Disabilities: A Narrative Review

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HOW TO CITE:

Desiree Frank, Amanpreet Kaur, Priyanka Srivastava (2026). The Role of Parenting Styles, Emotional Regulation, and Cognitive Flexibility in Academic Adjustment Among Students with Learning Disabilities: A Narrative Review. International Journal of Special Education, 41(11s), 512-535

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ABSTRACT:

Students with learning disabilities encounter many problems which do not solely pertain to academic achievement but also encompass emotional well-being, social adjustment and general educational adjustment. With the continued expansion of inclusive education practices worldwide, awareness of the need to understand the various psychological and environmental variables that influence students' academic adjustment with different learning needs has been growing. This narrative review explored the links between parenting styles, emotion regulation, cognitive flexibility, and academic adjustment in learning-disabled students. The study adopted the narrative review method to synthesise the theoretical and empirical literature in educational psychology, developmental psychology, and special education. Relevant literature was collected through academic database searches and analysed using narrative thematic analysis. The findings indicate that academic adjustment is a multi-dimensional phenomenon that results from the interplay of several family, emotional, cognitive and educational variables. An authoritative parenting style has repeatedly been found to be a protective factor, positively linked to academic engagement, resilience, and educational adjustment. In contrast, authoritarian and neglectful parenting styles have been linked to less favourable outcomes. Emotional regulation emerged as another key psychological resource that helps students manage academic stress, stay motivated, and adapt to educational challenges. Cognitive flexibility is another variable that plays a significant role in adaptation, learning, resilience, and overall educational success. Furthermore, the research suggests that parenting styles can exert direct and indirect influences on academic adaptation, the latter occurring through their effects on emotional regulation and

cognitive flexibility. In general, the reviewed literature underscores the importance of a holistic approach to the educational challenges faced by children with learning disabilities.

Keywords: learning difficulties, parenting styles, emotional regulation, cognitive flexibility, academic adjustment.

1. Introduction

Learning difficulties remain a significant issue in today's educational systems because they affect many pupils' attainment, emotional health and wellbeing, social and communication skills, and overall development. To successfully adapt education for students with diverse learning needs, there is an increasing focus on understanding the factors that enable this adaptation. Academic adjustment is not only a function of cognitive skills but also of a range of emotional, family, and psychological variables that influence students' ability to adjust to academic demands and educational challenges. Of these, parenting styles, emotional control and cognitive flexibility have emerged as significant factors in educational functioning and student well-being. None of these variables has received much attention in the field of education and developmental research, and none have been studied in isolation from one another in predicting students' academic adjustment with learning difficulties. Thus, in-depth examination of these factors is essential to designing effective educational, psychological, and family-based interventions that lead to positive educational outcomes in inclusive educational environments.

1.1 Learning Difficulties and Academic Adjustment in Inclusive Education

Conversely, learning difficulties are a major issue in modern educational and psychological research because of their far-reaching impact on students' learning, emotional and psychological functioning, and overall developmental outcomes. Common signs of learning difficulties include dyslexia, dysgraphia, language processing disorders, memory deficits, attention deficits,

comprehension deficits, and problems with problem-solving that can impact a student's capacity to keep up with academic demands and participate in a typical school setting (American Psychiatric Association, 2022). In addition to academic problems, learning difficulties are often associated with lower self-esteem, emotional problems, risky behaviours, challenges in peer relationships, and poorer psychosocial adjustment, making the problems complex and multifaceted (Cortiella & Horowitz, 2014; Scanlon et al., 2020).

The global trend towards inclusive education has shifted attitudes about the learning needs of students with learning difficulties. Inclusive education is a concept that calls for equal participation, access, acceptance, and meaningful learning opportunities for all students in mainstream education, irrespective of differences or disabilities (UNESCO, 2020). The current

special and inclusive education systems focus on the education of the whole person as well as learning. This means that schools are increasingly being called upon to create supportive learning environments that cater to students' needs and encourage their participation, belonging, and engagement in the learning process (Florian & Black-Hawkins, 2011).

Although there have been great strides toward inclusive education, many difficulties continue to face students with learning disabilities in educational settings. Studies show that these students often experience symptoms of academic stress, classroom anxiety, peer rejection, social isolation, decreased academic self-confidence, and behavioural issues that can impact their academic journey and developmental outcomes

(Nelson & Harwood, 2011; Visser et al., 2020). These challenges become even more pronounced during adolescence, when cognitive, emotional, biological, and social changes impact development, requiring greater adaptability and self-regulation (Steinberg, 2017).

Academic adjustment is one of the most crucial aspects of educational functioning for students with learning difficulties. Academic adjustment is defined as students' ability to meet the demands of school, expected academic behaviours, institutional needs, social interactions, and learning challenges in school environments (Baker & Stryk, 1984). It covers several aspects, such as academic motivation, behavioural adaptation, classroom involvement, emotional stability, coping skills, educational involvement, and interpersonal functioning. Positive school adjustment relates to positive schooling experiences, increased academic achievement, increased self-confidence and improved psychological well-being. In contrast, poor school adjustment is associated with school disengagement, educational underachievement, emotional problems, and decreased life satisfaction.

A considerable body of literature indicates that students with learning difficulties tend to experience greater academic adjustment difficulties than typically developing students. Frustration, school failure, low self-confidence, and poor self-perception of competence can result from reading, writing, attention, organisation, memory, and information-processing difficulties (Cortiella & Horowitz, 2014). In addition, multiple learning failures can make students more susceptible to stress, anxiety, and emotional distress, disrupting learning adaptation and engagement (Al-Yagon, 2016). Therefore, academic adjustment is increasingly recognised as a multifaceted process that extends beyond academic competencies and is influenced by cognitive, emotional, social, and environmental factors in the lives of students with learning difficulties.

The need for a holistic approach to looking at educational outcomes for learners with learning difficulties has been highlighted in recent research. Emotional competence, self-regulatory skills, supportive family environments, positive teacher-student associations, peer acceptance, and inclusive educational practices are also critical factors in successful academic adaptation, in addition to cognitive skills (Visser et al., 2020). To this end, research on education and psychology has grown and developed in recent times to enhance understanding of the individual and situational factors that enable students with diverse learning needs to become resilient, adapt, and succeed in academic settings.

1.2 Parenting Styles, Emotional Regulation, and Cognitive Flexibility

Parenting styles, emotional regulation, and cognitive flexibility are among the many factors that influence academic adjustment among students with learning difficulties, which have increasingly been the focus of educational and developmental research. These factors are closely interrelated, and all contribute to students' ability to meet the demands of the academic environment, manage emotional demands, adjust to changing learning environments, and achieve positive educational outcomes. It is critical for students with learning difficulties to understand these associations, as they may present additional cognitive, emotional, and/or social difficulties that could prevent successful educational adaptation.

Parenting styles are among the most significant environmental factors for children's cognitive, emotional, social and academic development. Parenting styles are relatively enduring attitudes, behaviours, and practices that parents use to interact with, guide, and socialise their children. The influential theory developed by Baumrind (1967, 1991) recognised three predominant parenting styles: authoritative, authoritarian and permissive, later expanded by Maccoby and Martin (1983) to include neglectful parenting. These parenting strategies vary in responsiveness, warmth, communication, behavioural

expectations and discipline, leading to different developmental outcomes for children and adolescents.

Numerous studies have shown that parenting styles have a significant impact on children's emotional competence, self-control, academic motivation and psychosocial development. In particular, authoritative parenting (high warmth, responsiveness and appropriate behavioural control) has been linked to positive developmental outcomes such as enhanced emotional competence, academic engagement, self-esteem, and educational achievement (Pinquart, 2017). Authoritarian parenting (defined by strict rules and demanding obedience) and neglectful parenting (low responsiveness and involvement) have, conversely, been linked to emotional problems, low school motivation and psychological distress in children and adolescents (Baumrind, 1991; Pinquart, 2017).

Parenting styles can play a special role for students with learning difficulties, as these students may need more emotional support, encouragement, and guidance to succeed in the educational system. Positive parenting can promote resilience, confidence, and coping, which can support academic adjustment, whereas negative parenting can increase stress and emotional problems in the school setting. Conversely, parenting behaviours are now known to be an increasingly recognised factor that influences students' academic and social-emotional outcomes, especially those with special educational needs.

Beyond family influences, emotional regulation has been identified as a critical psychological factor that correlates with educational success and adjustment. Emotional regulation is the process of monitoring, assessing and adjusting emotional experiences and emotional displays in response to situational demands and social expectations (Gross, 2015). When students can effectively regulate their emotions, they can handle stress, frustration, anxiety, disappointment, and interpersonal conflict in

adaptive ways. In educational contexts, emotional regulation is associated with focus, engagement in lessons, behaviour management, motivation, resilience, and educational performance.

For students who have learning difficulties, emotional regulation is an essential factor in their school functioning that may lead to frequent school failures, social school problems and heightened school performance anxiety. Emotional dysregulation may be associated with heightened anxiety, behavioural problems, diminished self-confidence, social isolation and decreased school involvement in students with learning challenges (Haft et al., 2016). On the other hand, students with strong emotional regulation skills tend to be better prepared to handle school problems, remain motivated, and adjust well to school settings. Emotional regulation is thus seen as a protective factor that contributes to students' resilience and educational adjustment in the presence of academic and psychosocial stressors.

Cognitive flexibility is also a critical factor related to educational adaptation. Cognitive flexibility is a higher-order executive function which allows a person to alter his or her point of view, change patterns of thinking, adjust to new conditions and develop new solutions to new problems when faced with new challenges (Diamond, 2013). It is considered an essential aspect of adaptive functioning and is integral to learning, problem-solving, decision-making, and self-regulation. In the classroom, cognitive flexibility enables students to adapt to learning strategies, interpret and act on feedback, integrate new knowledge, and adjust to shifting expectations.

Cognitive flexibility is even more crucial for students with learning difficulties, who often have poor executive functioning, including attentional control, working memory, planning, and shifting mental sets (Diamond, 2013). Students may have trouble adapting to school demands and handling learning challenges effectively due to difficulties with flexible thinking. By contrast, higher cognitive flexibility is linked to enhanced problem-solving skills,

higher academic persistence, resilience and adaptive learning behaviours. Additional emerging evidence indicates that cognitive flexibility can facilitate emotional regulation by helping an individual reinterpret an upsetting situation, think differently, and engage in more adaptive coping strategies (Zelazo, 2020).

The current research clearly indicates that parenting styles, emotional regulation, and cognitive flexibility are not independent but rather interact in complex ways to influence students' learning experiences and developmental outcomes. Supportive parenting environments might influence the development of emotional regulation and cognitive flexibility by fostering emotional security, autonomy, constructive problem-solving experiences, and adaptive coping strategies. Emotional regulation and cognitive flexibility, in turn, can support students in their academic adjustment and help them regulate their emotions, respond to shifting academic requirements, and engage constructively with academic experiences. The interconnections among these associations must be understood to develop comprehensive educational and psychological interventions that enhance academic success and well-being for students with learning difficulties.

1.3 Recent reviews of parenting styles, emotional regulation, cognitive flexibility, and academic adjustment

There has been a growing emphasis in recent research on the need for a multidimensional understanding of students with learning difficulties' academic adjustment. Modern research has increasingly focused on the importance of the family environment, emotional competencies, and executive functioning processes as additional factors in the quality of school life and student development, beyond cognitive abilities and academic skills. In this light, three factors are particularly noted for their interrelatedness and significant impact on academic adjustment and psychosocial well-being: parenting styles, emotional regulation, and cognitive flexibility.

There is increasing evidence in the literature that students with learning difficulties may have greater difficulty with academic adjustment than typically developing students. Academic adjustment refers to the ability to successfully adapt to the demands of the curriculum, the expectations of the classroom, the learning context, and social relations within the school (Baker & Stryk, 1984). Studies show that academic self-efficacy is often low, educational stress is high, school engagement is low, and adapting to school demands is challenging (Cortiella & Horowitz, 2014; Scanlon et al., 2020). In addition, successive school failures may lead to emotional difficulties, reduced motivation, and negative self-perceptions, thereby further hampering educational adaptation (Al-Yagon, 2016). The findings indicate that, in addition to cognitive skills, emotional and environmental supports contribute to academic adjustment for students with learning difficulties.

Parenting has been the subject of extensive research on environmental influences on educational outcomes. Multiple studies have shown that parenting behaviours impact children's academic, emotional, self-regulation and social-emotional development. Authoritative parenting, defined as warm, responsive and setting appropriate expectations for behaviour, has consistently been linked to increased academic motivation, school engagement, educational attainment and psychological adjustment (Baumrind, 1991; Pinquart, 2017). Pinquart (2017) conducted a thorough meta-analysis and found that authoritative parenting was positively associated with academic achievement across a variety of cultural settings. In contrast, authoritarian and neglectful parenting were predominantly negatively associated with academic achievement. Likewise, Masud et al. (2015) reported that adolescents who received more supportive parenting had higher academic competencies and educational satisfaction than those who received less supportive parenting.

Parenting has an impact on academic achievement and on critical aspects of emotional development. Parents are the first to provide emotional socialisation through their own emotional response, emotional support and coping strategies (Morris et al., 2007). Authoritative parenting has emerged as associated with emotional competence, emotional resilience and emotionally adaptive functioning; authoritarian parenting and neglect have been associated with emotional difficulties, anxiety and emotionally dysfunctional coping patterns (Pinquart, 2017). Cui et al. (2014) found that supportive parenting behaviours were associated with lower emotional distress and greater emotional competence among adolescents. More recently, Hou et al. (2020) reported a positive association between parental warmth and responsiveness with emotional regulation skills and a negative association between harsh parenting and emotional and behavioural problems. Results indicate the importance of emotional resources in family environments for successful adaptation.

The regulation of emotions is now a major predictor of educational functioning and educational adjustment. Gross (2015) describes emotional regulation as the processes by which people monitor, assess, and adjust their emotional experience to respond effectively to environmental demands. Having effective emotional regulation skills tends to help students deal with academic-related stressors, regulate frustration, maintain focus and persevere in difficult learning situations. Denham et al. (2020) showed that emotional competence was positively associated with classroom participation, educational engagement, and social adaptation. Similarly, previous research has found that problems with emotional regulation are linked with anxiety, behavioural issues and educational maladjustment in adolescents (Denham et al., 2020; Haft et al., 2016).

Cognitive flexibility has also recently been discussed as a critical cognitive ability for educational adaptation, alongside emotional

competencies. Cognitive Flexibility is the ability to change perspectives, adjust strategies, adapt to new circumstances and find alternative solutions when faced with new challenges (Diamond, 2013). Cognitive Flexibility is a key aspect of executive functioning and is critical for problem-solving, adaptation, decision-making, and self-regulation. Research consistently has associated cognitive flexibility with academic success and school adjustment. Best et al. (2011) found that executive functioning abilities were significantly associated with academic achievement across childhood and adolescence, and Yeniad et al. (2013) reported that cognitive flexibility was positively associated with academic achievement. The more cognitively flexible a student is, the more likely they are to adjust to the changing demands of learning, use alternative learning strategies, and bounce back when things go wrong.

Cognitive flexibility may be especially salient for students with learning difficulties, who often have difficulties with executive functioning mechanisms such as attentional shifting, planning, working memory, and adaptive problem-solving (Diamond, 2013). Decreased cognitive flexibility has been linked to educational maladjustment, frustration and challenges adjusting to classroom expectations (Cragg & Chevalier, 2012). On the other hand, higher cognitive flexibility has been linked to resilience, adaptable learning behaviours and academic functioning (Doebel, 2020; Zelazo, 2020). Some new research also suggests that cognitive flexibility can facilitate emotional regulation by helping people to reframe negative experiences and learn to cope in more adaptive ways.

More and more research has begun to examine how parenting style, emotion regulation, and cognitive flexibility are interrelated and how this interplay influences academic adjustment. Supportive parenting environments can foster emotional regulation and cognitive flexibility through emotional security, opportunities for autonomy, constructive feedback, and adaptive

coping and problem-solving models (Bernier et al., 2010; Fay-Stammach et al., 2014). Emotional regulation and cognitive flexibility, consequently, might support educational adjustment and help students to manage educational stress and to adapt to changes in their academic environment.

1.4 Theoretical Foundations

Multiple complementary theories guide the current narrative review, all critical to understanding the association among parenting, emotional regulation, cognitive flexibility and academic adjustment in students with learning problems. These theories offer a multidimensional perspective on the complex interplay between environmental factors and individual psychological traits, and how they influence educational experiences and outcomes.

Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1979) is one of the most prominent theories that shaped this review. This theory suggests that human development is a constant process of interaction between the individual and various environmental systems such as the family, school, peer groups, community and the broader sociocultural system. Developmental outcomes cannot be explained by looking at individual characteristics alone; they must be understood in the contexts of the environment in which they are found, Bronfenbrenner said. Cognitive capacity and personal competencies are not the only factors influencing academic adjustment for students with learning difficulties; parental support, teacher interaction, peer acceptance, and inclusive educational practices also play a role. So, the ecological view offers a useful lens for understanding the role that family and school environments play in students' educational adjustment and psychosocial development.

The role of family influences is further explained using Baumrind's Parenting Styles Theory (1967, 1991), one of the most widely used theories for understanding parent-child interactions and developmental outcomes. Baumrind identified

three types of parenting: authoritative, authoritarian, and permissive and Maccoby and Martin (1983) added neglectful parenting. Parenting styles vary in terms of responsiveness, warmth, communication, and behaviour control. Authoritative parents have consistently been linked to positive outcomes, including enhanced emotional competence, academic motivation, self-regulation, and academic achievement. Authoritarian and neglectful parenting styles have, on the other hand, been associated with emotional problems, decreased self-esteem, diminished independence, and poor school adjustment. This model is especially relevant to the current review, as it sheds light on how family environments can either foster or impede the emotional and cognitive resources needed for successful academic adaptation.

Emotional processes are described and explained using Gross's (2015) Process Model of Emotion Regulation. This model describes emotional regulation as the processes by which people monitor, evaluate, and adjust their emotional experiences and expressions to meet situational needs. Gross suggested that people use different regulatory strategies, such as cognitive reappraisal, attentional deployment, and response modulation, to effectively regulate emotional experiences. Based on the model, it is hypothesised that adaptive emotional regulation leads to psychological resilience, social competence and effective coping. Emotional regulation is a key process, which is often challenging for students with learning difficulties, who are prone to academic frustration, performance anxiety and social problems, and is crucial for engagement and successful adaptation in school settings.

The present review is also guided by the theory of Executive Function, in particular Diamond's (2013) conceptualisation of cognitive flexibility. Executive functions are higher-order cognitive processes that allow individuals to control their behaviour, direct their attention, solve problems, and adapt to new or shifting environmental demands. Of these executive functions, cognitive

flexibility is particularly relevant, as it enables people to change their point of view, adjust plans, consider different ways of doing things, and adapt to new situations. Cognitive flexibility is critical in educational settings, as it supports adaptable learning, problem-solving, and the meeting of the evolving demands of teaching and learning. Executive functioning deficits are common in students with learning difficulties, and cognitive flexibility is a key construct to consider in understanding their academic adjustment and educational achievement.

In addition, current ideas about self-regulation focus on the interrelatedness of emotional, behavioural, and cognitive aspects of learning in education (Zimmerman, 2002). Self-regulation theories propose that successful academic adaptation relies on the ability to regulate emotions, direct attention, regulate behaviour and persist towards educational goals. Emotional regulation and cognitive flexibility are key elements of this broader self-regulation system that facilitate students' ability to manage the demands placed on them and remain engaged in learning. Thus, these constructs are strongly related to educational adjustment and academic success.

All of these theoretical aspects give a fairly complete picture of how the different aspects of parenting styles, emotional regulation, cognitive flexibility and academic adjustment interrelate. In addition to offering explanations for environmental influences (family, school contexts) and parenting styles and their developmental outcomes (Bronfenbrenner's Ecological Systems Theory; Baumrind's Parenting Styles Theory), the theories also provide explanations for the mechanisms underlying emotional adaptation (Gross' Process Model of Emotion Regulation) and the importance of cognitive flexibility for adaptive functioning (Executive Function Theory). These frameworks converge on the key theme of the present review: that academic adjustment for students with learning difficulties is a complex interplay of family environment, emotional

competencies and cognitive resources. The ability to comprehend these interplays is crucial in designing comprehensive interventions that enhance students' educational outcomes and mental health, irrespective of their learning needs.

1.5 Research Gap and Purpose of the Review

Parenting styles, emotional regulation, cognitive flexibility, and academic adjustment have been the focus of much research; however, there are several critical gaps in the literature. First, a considerable portion of the literature has examined these variables separately, rather than exploring their interactions and how they affect educational outcomes as a whole. Previously, interplays between parenting style and academic performance (Pinquart, 2017), emotional regulation and educational adjustment (Denham et al., 2020; Panayiotou et al., 2021), and cognitive flexibility and academic performance (Diamond, 2013; Zelazo, 2020) have been shown. However, few studies have examined these factors as a group in an integrated theoretical framework to account for academic adjustment among students with learning disabilities.

Second, there is a relative lack of research investigating the multifaceted interactions among family, emotional, and cognitive variables and outcomes for students with learning difficulties. Past studies have tended to examine academic performance, behavioural issues, or discrete learning disabilities, without attending to other facets of academic adjustment, such as educational engagement, academic resilience, academic adaptation, and academic psychosocial functioning (Al-Yagon, 2016; Scanlon et al., 2020). The roles of parenting styles, emotional self-regulation, and cognitive flexibility in successful educational adaptation for students with learning disabilities remain poorly understood.

Third, parenting styles have been consistently associated with emotional development and self-regulatory capacities (Morris et al., 2007; Pinquart, 2017), but the literature has paid relatively little attention to the link between

parenting styles and cognitive flexibility. While research on executive functioning has shown the role of family environments in cognitive development and adaptive functioning (Bernier et al., 2010; Fay-Stammach et al., 2014), the interplay between parenting practices and flexible thinking and cognitive adaptability needs further research. Students with learning difficulties often have difficulties with executive functioning and adaptive learning processes (Diamond, 2013), which are significant in this context.

Among the other significant limitations, there is a lack of clarity about the link between emotional regulation and cognitive flexibility. Both constructs have been independently identified as significant factors in academic achievement and psychological well-being, but research on their joint predictive power for academic adjustment is somewhat limited (Gross, 2015; Zelazo, 2020). Current evidence tends to focus on either emotional or cognitive processes, leaving the potential interaction between them in relation to educational adaptation and coping among students with learning difficulties largely unaddressed.

Furthermore, earlier research has predominantly been conducted in Western educational settings, primarily in North America and Europe (Pinquart, 2017; Wang & Sheikh-Khalil, 2014). It has not yet been determined whether these results are generalisable to a broader range of educational and cultural contexts, as parenting practices, emotional expression, educational expectations, and adaptive behaviours are shaped by sociocultural factors. It underscores the need for greater contextual and population integration of evidence to help form a more holistic understanding of the factors that influence academic adjustment for students with learning difficulties.

Taking into account the abovementioned gaps in the current research base, there is a need for the synthesis of the literature considering family, emotional, and cognitive approaches in one theoretical framework, since this might help to shed some light on the complex processes

involved in educational adaptation and to uncover some factors that can increase resilience and ensure successful academic adaptation.

The goal of the present narrative review is to synthesise and analyse the literature on the associations among parenting styles, emotional regulation, cognitive flexibility, and academic adaptation in children with learning difficulties. The specific objectives of the study include: (a) to consider the effects of parenting styles on the emotional and academic performance of individuals; (b) to investigate the role of emotional regulation in academic adaptation; (c) to analyze the contribution of cognitive flexibility to educational adaptation; and (d) to identify some pathways by which these variables influence academic adaptation of people with learning difficulties.

2. Methodology

This study adopted a narrative review to explore the associations among parenting styles, emotional regulation, cognitive flexibility, and academic adjustment among students with learning difficulties. The narrative review approach was selected because it enables a comprehensive review, synthesis, interpretation and integration of theories and empirical findings from various fields such as psychology, education, developmental science, and special education. As the subject matter is multidimensional, a narrative review was effective in exploring the multifaceted interactions between family, emotional, cognitive, and educational aspects that impact students with learning difficulties.

2.1 Review Design

Existing literature was synthesised and analysed using a narrative synthesis method to address the qualitative nature of the review. The literature review used a qualitative narrative synthesis method that addresses the qualitative nature of the literature. Narrative reviews allow for the analysis of general research questions and the uncovering of conceptual relations between different research fields (Baumeister & Leary,

1997). Narrative reviews allow the synthesis of theoretical perspectives, empirical evidence, and emerging themes from multidisciplinary research fields, whereas systematic reviews focus on narrower questions and use quantitative aggregation of findings.

The present review aimed to identify and synthesise the key findings on the effects of parenting styles on emotional and cognitive development, the importance of emotional regulation and cognitive flexibility in academic adaptation, and the joint effects of these factors on academic adaptation among students with learning difficulties.

2.2 Data Sources and Search Strategy

Comprehensive searches of major academic databases were conducted to identify relevant literature, including Scopus, Web of Science, ERIC, PsycINFO, PubMed, and Google Scholar. These databases were chosen for their comprehensive coverage of educational, psychological, developmental, and special education research.

The literature search focused on studies published from 2010 to 2026, particularly those published in the last 6 years (2020-2026). Wherever necessary, some seminal studies were included to provide the theoretical and conceptual background for the review.

The search process utilised combinations of the following keywords and search terms: “parenting styles” “authoritative parenting” “authoritarian parenting” “emotional regulation” “emotion regulation” “cognitive flexibility” “executive functioning” “academic adjustment” “school adjustment” “learning difficulties” “learning disabilities” “special educational needs” “inclusive education” “academic engagement” “educational adaptation” “psychosocial adjustment”

Boolean operators (AND, OR, NOT) were used to narrow search results and select relevant studies. Selected articles were also used to compile reference lists of other relevant articles to reflect on the aims of the review. This search

process was recursive, in which new papers found to be relevant to the review topic were added to the sample when they helped flesh out the conceptual dimensions of the topic.

2.3 Inclusion and Exclusion Criteria

The review included:

- i. Peer-reviewed journal articles
- ii. Empirical quantitative, qualitative and mixed methods studies
- iii. Narrative or systematic review articles
- iv. Theoretical and conceptual papers
- v. Research on parenting styles, emotional control, thinking flexibility, school adjustment, learning problems or special educational needs
- vi. English-language publications
- vii. Research papers published from 2010 to 2026, especially the literature of the past 5 years.

The review excluded:

- i. Non-English publications
- ii. Dissertations and Theses (not published)
- iii. Much of the conference abstracts without full text are available.
- iv. The sources are not all academic, and the pieces of opinion.
- v. Duplicate publications
- vi. Studies that are not directly related to the variables being reviewed.
- vii. solely clinical Articles (no education focus)

2.4 Procedure

A structured multi-stage process was used for the review. First, the database was searched using the keywords and word combinations identified. The retrieved studies were then examined for relevance to the review objectives based on their titles and abstracts. Full-text articles that met the inclusion criteria were next obtained and carefully read. After the articles were selected, the literature was grouped by the main concepts discussed throughout the review. The studies were

categorised according to their relevance to learning difficulties, parenting practices, emotional regulation, cognitive flexibility, and academic adjustment. Further articles were added through reference-list searches, advancing the conceptual and empirical knowledge of the topic.

The literature chosen was then systematically reviewed to identify commonalities, conceptual interplays, and trends in the field. Particular attention is given to studies that investigated the direct and indirect associations among parenting styles, emotional regulation, cognitive flexibility, and academic adjustment for learners with learning difficulties.

2.5 Data Analysis and Thematic Synthesis

Thematic narrative synthesis was used to analyse the selected literature. The relevant studies were thoroughly examined, correlated, and classified into thematic groups based on the common concepts and interplays identified in the literature. This way, the findings from various methodological traditions and research contexts could be incorporated.

The thematic analysis was based on the following key themes:

1. Learning difficulties and academic adjustment
2. Parenting styles and academic adjustment
3. Parenting styles and emotional regulation
4. Parenting styles and cognitive flexibility
5. Emotional regulation and academic adjustment
6. Cognitive flexibility and academic adjustment
7. Integrated interplays among parenting styles, emotional regulation, cognitive flexibility, and academic adjustment

To gain a holistic perspective of the factors that impact the academic adjustment of students with learning difficulties, patterns, consistencies and

differences across studies were explored. The synthesis also allowed for the identification of conceptual connections and possible pathways of influence between parenting styles, emotional regulation, and cognitive flexibility in academic adjustment.

2.6 Ethical Considerations

The present study relied wholly on existing literature, and no human beings were directly involved, formal ethical approval was not required. Conversely, all sources were consulted and cited in accordance with the guidelines on academic honesty, transparency, and responsible scholarship. The review used appropriate citation and referencing styles in line with APA (7th ed.) guidelines.

3. Results

Thematic synthesis of the selected literature identified interrelated factors that influence academic adjustment among students with learning difficulties. Parenting styles, emotional regulation, and cognitive flexibility emerged as significant factors across studies in students' educational experiences, psychosocial functioning, and adaptability. The literature reviewed consistently highlighted the multifaceted nature of academic adjustment, which is influenced as much by emotional skills and competencies as by cognitive abilities, family environments, and executive functioning processes. The findings were presented in seven major themes corresponding to the main interplays found in the literature.

3.1 Academic Adjustment Among Students with Learning Difficulties

The literature reviewed demonstrates that students with learning difficulties experience greater academic adjustment difficulties than typically developing students do. Academic adjustment is defined as students' success in adapting to the demands of their school, classroom, learning tasks, and school-related social environments (Baker & Stryk, 1984). Students with learning difficulties frequently struggle with successful educational adaptation

and engagement due to challenges in reading, writing, attention, memory, language processing, and executive functioning (American Psychiatric Association, 2022).

Several studies have shown that lower academic self-efficacy, less classroom involvement, lower motivation to learn, and a higher risk of school-related stress are all linked to learning difficulties (Cortiella & Horowitz, 2014; Scanlon et al., 2020). Students who have repeated learning losses may develop negative expectations about their abilities, which can lead to frustration, anxiety, and a loss of interest in learning activities. These challenges can intensify during adolescence, when academic, social, and educational expectations significantly escalate (Steinberg, 2017).

The literature also indicates that academic adjustment for students with learning difficulties extends beyond academic achievement. Several studies highlight the need for emotional health, behavioural adjustment, social competence, and effective coping with academic challenges to adapt to school (Al-Yagon, 2016) successfully. Children who encounter challenges in these areas tend to say that they do not enjoy school, have poor peer relations, and feel unwelcome in school settings. These results confirm the idea that academic adjustment is a complex phenomenon that is influenced by cognitive and psychosocial factors.

Some research has shown that a positive environment in inclusive education can support adjustment to school. Family engagement, differentiated instructional practices, peer acceptance, and access to educational accommodations are identified factors that support educational engagement and adaptation for students with learning difficulties (Florian & Black-Hawkins, 2011; Visser et al., 2020). Research demonstrates that students who feel that their learning environment is supportive and responsive to their needs are more likely to persist in their academic studies and have educational confidence.

An overarching finding concerns the interaction between academic adjustment and psychological well-being. Academic anxiety, stress, and emotional distress are often higher for students with learning difficulties and can have an additional negative impact on students' success in meeting academic demands (Nelson & Harwood, 2011). On the other hand, when students have enhanced coping resources, supportive social interplays, and adaptive emotional resources, they are more resilient. They are more engaged in school despite learning-related difficulties.

The overall picture is that for students with learning disabilities, the risk of academic maladjustment is significantly higher than for students without learning disabilities; conversely, this does not mean it is inevitable. The findings always showed that there is an interaction between cognitive, emotional, social, and environmental factors influencing educational adaptation. Emotional and cognitive adaptive coping skills, supportive educational practices, and positive interpersonal interactions seem to be key factors in successful academic adjustment among students with learning difficulties. The findings of this study contribute to understanding the roles of parenting styles, emotional regulation, and cognitive flexibility in supporting educational outcomes in the next stage.

3.2 Parenting styles and academic adjustment

Thematic synthesis showed that parenting styles are among the most significant environmental factors linked to students' academic adjustment among those with learning difficulties. In all of the literature reviewed, parenting practices were invariably associated with students' school adaptation, coping skills, self-confidence, educational engagement and academic motivation. The findings corroborate the idea that family contexts have a critical influence on educational experiences and paths.

A positive interplay between authoritative parenting and academic adjustment is characterised in the literature. Authoritative parenting is linked to positive educational

outcomes and features high levels of warmth, responsiveness, support and appropriate behavioural expectations (Baumrind, 1991; Pinquart, 2017). Pupils from families with authoritative parenting have higher educational engagement and motivation, greater self-efficacy, and more effective coping strategies for academic challenges. Studies indicate that supporting parental involvement will build students' confidence and autonomy, helping them manage their educational demands more effectively.

Several studies also suggest that parent participation is a significant protective factor for students with learning difficulties. Parents who are engaged with their children's learning, emotionally supportive, and who are aware of and in regular contact with their children's education have a positive impact on their academic adjustment (Jeynes, 2016). Such support is especially vital for students with learning difficulties, who often experience multiple failures in school and need extra instruction to stay motivated and on track. Supportive parenting practices might, therefore, help to buffer some of the negative impacts of learning difficulties.

There is, in contrast, a strong link between authoritarian and neglectful parenting and less desirable education outcomes. Authoritarian parenting (high control, low emotional availability, high behavioural expectations) has been associated with higher levels of anxiety, less autonomy, and less academic engagement among students (Pinquart, 2017). Likewise, inattentive parenting (characterised as low levels of involvement and responsiveness) has been correlated with decreased educational motivation, lower school attachment, and lower school adaptation. The literature indicates that such parenting practices can restrict opportunities to build confidence and learn to cope and be independent in the school environment, which can influence educational outcomes.

Furthermore, recent studies have shown that parental emotional support plays a significant

role in fostering academic resilience. Research indicates that having supportive, understanding, and encouraging parents is associated with students being more persistent in the face of academic challenges and educational stressors (Jeynes, 2016; Pinquart, 2016). A supportive family environment seems to promote positive attitudes toward education, higher expectations for education, and greater commitment to education. The findings are significant for learners with learning disabilities, where regular affirmation and encouragement are more helpful when facing academic difficulties.

The other salient study finding concerns the impact of parenting styles on students' perceptions of competence and achievement. They suggest that educational self-efficacy and educational confidence are enhanced by positive parental feedback, realistic expectations, and autonomy-supportive practices (Wang & Sheikhalil, 2014). A student with the self-efficacy to overcome academic barriers is more likely to be an active participant in learning activities and respond adaptively to study difficulties. On the other hand, parents who are extremely critical or unsupportive can lead to doubt, fear of failure, and disengagement from schooling.

The literature reviewed overall consistently demonstrates that parenting styles are significant factors in academic adjustment. Authoritative parenting is the parenting style most consistently shown to foster children's engagement in education, resilience, self-confidence, and adaptive functioning. Authoritarian and neglectful parenting, on the other hand, tend to be linked to academic and social problems. The findings highlight the role of a supportive family environment in facilitating successful educational adaptation among students with learning difficulties and provide a basis for studying how parenting can influence other emotion-cognitive processes that, in turn, influence educational adaptation more broadly.

3.3 The Influence of Parenting Styles on Emotional Regulation.

The thematic synthesis identified a high level of consistency and strong interplay between parenting style and emotional regulation across children and adolescents. In a comprehensive review of the literature, parenting practices have emerged as a significant factor in determining how well individuals can identify, interpret, regulate and express their feelings. Emotional regulation is a process that develops primarily in social and family settings, and parents have a significant impact on their children's emotional experiences, coping, and reactions to difficult situations (Morris et al., 2007).

A consistent theme in the literature is that authoritative parenting is associated with more adaptive emotional regulation outcomes. Authoritative parenting is characterised by warmth, responsiveness, emotional support and proper behaviour guidance and offers a safe space for children to learn emotional awareness and coping skills (Baumrind, 1991). Research demonstrates that children who grow up in supportive families display higher levels of emotional competence, self-control, resilience, and psychological well-being than those who grow up in less supportive families (Pinquart, 2017). Parent warmth and responsiveness facilitate the acquisition of adaptive emotional regulation patterns that contribute to successful adjustment across life domains, suggesting these findings.

The reviewed studies also suggest that emotional socialisation processes are part of parents' role in emotional regulation. Emotional expression and coping behaviour are significant models for children to learn from their parents, helping them understand and process their emotional experiences and respond to stressors appropriately (Morris et al., 2007). Parents' supportive practices, such as open communication, emotional validation, and constructive problem-solving, seem to foster emotional awareness and adaptive regulation. Well-regulated emotions are conducive to

effective regulation of frustration, anxiety, disappointment and interpersonal conflict in children who receive consistent emotional support.

Authoritarian parenting, on the other hand, has often been linked to less positive emotional development. Parents who are overly controlling, punishment-oriented, critical, and less responsive to their children's emotions may not allow for healthy emotional expression and can exacerbate emotional problems (Pinquart, 2017). It has been suggested in the literature that children who grow up in highly controlling families are more prone to anxiety, emotional repression, lack of self-confidence and problems coping with stress. Likewise, poor parenting has been associated with poorer emotional adjustment as parents are not involved enough, are emotionally unavailable, and provide ineffective guidance on emotional experiences (Maccoby & Martin, 1983).

Recent research has supported the link between supportive parenting and positive emotional functioning. Past studies have found that a warm atmosphere and a supportive family environment are associated with decreased emotional distress and increased emotional competence in adolescents (Morris et al., 2007; Pinquart, 2017). Similarly, parental responsiveness and supportive family interactions emerged as positive influences on the development of emotional regulation skills (Gross, 2015; Morris et al., 2007), while harsh parenting was linked to greater emotional and behavioural problems. Supportive family environments also emerged as protective factors, mitigating emotional distress and fostering resilience in adolescents during and after the COVID-19 pandemic (Tang et al., 2021).

These findings could be especially salient for students with learning difficulties. These students may experience multiple academic challenges, social problems, and feelings of failure, thereby increasing their risk for emotional distress (Haft et al., 2016). The literature indicates that protective parenting factors may mitigate the adverse effects of these stressors by fostering

emotional security and adaptive coping responses or resilience. On the other hand, critical or non-supportive parenting styles can exacerbate emotional problems and make it harder for students to manage their emotions in challenging situations, such as in the classroom or at school.

Another significant finding observed across the literature is the possible mediating role of emotional regulation in developmental outcomes. A few studies indicate that emotion regulation may be a mechanism through which parenting styles impact overall outcomes, including academic adjustment, social competence, and psychological well-being (Gross, 2015; Pinquart, 2017). Students who successfully regulate their emotions tend to be better able to manage stress, sustain their motivation to learn, build positive relationships, and participate in learning activities constructively. Thus, the impact of parenting on educational and psychosocial outcomes could be partially mediated by its effects on emotional regulation.

The literature reviewed most consistently demonstrates that parenting styles are significant determinants of emotional regulation. Authoritative parenting becomes the best parenting style for producing emotional competence, resilience and adaptive coping, while authoritarian and neglectful parenting are more common with emotional struggles and maladaptive coping strategies. The findings highlight the value of positive family environments in fostering emotional resources that support good adjustment among students experiencing learning difficulties.

3.4 Parenting Styles and Cognitive Flexibility Development

Parenting styles emerged as a significant environmental factor influencing the development of cognitive flexibility in children and adolescents, as identified through the thematic synthesis analysis. Cognitive flexibility is a component of executive functioning that involves changing perspectives, shifting thinking patterns, altering behavioural responses, and

even considering other options when faced with changing circumstances or challenges (Diamond, 2013). The literature indicates that family environments strongly influence the development of these adaptive cognitive processes because they provide opportunities for children to reflect on their own thoughts, solve problems, and regulate themselves.

One consistent finding across the reviewed studies is that authoritative parenting positively influences the development of cognitive flexibility and related executive functioning skills. Authoritative parenting is warm, responsive and involves supporting children's autonomy to explore ideas, make decisions, and engage in constructive problem-solving, while providing proper guidance and support (Baumrind, 1991). These parenting styles create opportunities for children to learn new ways of thinking, adopt another perspective, and flexibly adapt their thoughts. There is evidence that children who grow up in supportive family environments exhibit greater executive functioning, cognitive control, and problem-solving abilities than those raised in less supportive family environments (Bernier et al., 2010; Fay-Stammbach et al., 2014).

Parental encouragement of autonomy has also been identified as a significant factor impacting cognitive flexibility, particularly in the literature. When parents encourage children to think for themselves, explore, and make their own decisions, they give children a chance to consider options, examine other points of view, and adjust to new circumstances. It is these experiences that seem to enhance the cognitive mechanisms of flexible thinking and adaptive problem-solving. Supportive parenting environments could, therefore, be conducive to building cognitive resources that support successful adaptation in academic, social, and emotional areas.

Conversely, authoritarian parenting styles often have been linked to poorer cognitive flexibility outcomes. Highly controlling parenting styles can restrict opportunities for autonomy in decision-making and problem-solving and focus on obedience to rules, conformity to expectations,

and rigid expectations for behaviour (Valcan et al., 2018). Over-controlling parents have been reported to be detrimental to the child's exploration and may limit adaptive thinking (Lapsley, 1999; Lapsley & Clancey, 2002; Lapsley, Clancey & Greer, 2003; Lapsley, Clancey, & Greer, in press). Likewise, poor parenting practices can create deficits in cognitive functioning through inadequate cognitive training, stimulation and support for the development of the executive functioning skills.

Supportive family environments have been increasingly recognised as significant for promoting executive functioning in recent research. Research suggests that there is a positive interplay between parental warmth, responsiveness, and cognitive control, attentional regulation, and adaptive thinking abilities (Zelazo, 2020). In addition, those whose parents support their positive problem-solving and autonomous thinking show greater flexibility in facing academic and social problems. The findings indicate that family environments could play a large role in the development of cognitive resources that facilitate adaptive functioning.

For students with learning difficulties, many of whom have executive functioning difficulties (planning, attentional control, working memory, and cognitive shifting; Diamond, 2013), the role of parenting styles may be especially notable. Students' challenges in these areas can influence their adjustment to the changing demands of education and their ability to handle academic situations. The literature reviewed indicates that supportive parenting practices can increase cognitive adaptability by fostering persistence, independence, and problem-solving abilities. Conversely, an overly critical/crestations parenting climate can worsen issues with adjustment to thought and educational performance.

A related, significant topic that is also becoming more evident from the literature is the interplay between cognitive flexibility and other developmental outcomes. Recent research suggests that cognitive flexibility is associated

with support not just for academic success, but for emotional competence, resilience and adaptive coping (Doebel, 2020; Zelazo, 2020)

Cognitively flexible students are more able to adapt to changing circumstances, think of other ways to resolve problems, and bounce back from failures. Students with learning difficulties often face situations that require adaptation and persistence, and these abilities can be of great value.

The literature reviewed indicated that parenting styles play a significant role in the development of cognitive flexibility and executive functioning. Authoritative parenting consistently demonstrates the most helpful parenting style for fostering adaptive thinking, autonomy, and cognitive competence. In contrast, authoritarian and neglectful parenting styles are more often linked with less cognitive adaptability. The findings indicate the significant role that family environments play in influencing the cognitive resources that underlie successful educational adjustment and developmental functioning among students with learning differences.

3.5 Emotional Regulation and Educational Adaptation

Emotional regulation emerged as a significant theme in the thematic synthesis for students with learning difficulties in the context of educational adaptation and academic adjustment. Emotional regulation emerged as a protective factor across the literature, facilitating students' ability to manage academic stressors, overcome obstacles, remain motivated, and participate successfully in educational settings. The capacity to regulate emotions would seem to be a key to successful functioning in schools, given that academic success is critical for responding to setbacks and criticism, as well as for meeting performance expectations.

A consistent finding across studies is that students who can regulate their emotions show greater academic engagement, classroom participation, and persistence in the educational process. Emotional regulation skills are those that

allow people to manage emotions such as frustration, anxiety, disappointment, and stress, which are often experienced during learning tasks (Gross, 2015). Students who can manage these emotional experiences tend to have stronger abilities to stay focused, stay motivated and adapt to academic demands. Therefore, emotional regulation is not only linked to psychological well-being but also to positive educational outcomes.

Additionally, the literature suggests strong links between emotional regulation and academic resilience. Students who can respond emotionally effectively are more likely to persist when facing challenging tasks, bounce back from learning failures, and have confidence in their skills. According to Gross and Thompson (2007), adaptive emotional regulation strategies, such as cognitive reappraisal, make it easier to cope and be resilient in difficult circumstances. Likewise, Denham et al. (2020) found that emotional competence was positively correlated with classroom engagement, cooperative behaviour and educational adjustment. The findings indicate that emotional regulation is a significant mechanism by which students cope with the demands of educational environments.

For students with learning difficulties, emotion regulation seems important, as they may be more likely to feel frustrated with academic work, anxious about performing, and to struggle socially. Academic failure can lead to negative perceptions of competence, emotional distress, and reduced self-confidence, thereby impacting educational adaptation (Haft et al., 2016). The literature reviewed all indicates that pupils with emotional regulation issues are at a higher risk of behavioural problems, school disengagement and academic maladjustment. Conversely, individuals with more positive emotional coping mechanisms tend to be more effective at coping with learning issues and staying engaged in learning activities.

Several studies also underscore the connection between emotional regulation and broader social and/or psychosocial functioning. Good

emotional regulation has been linked to enhanced peer interactions, greater social competence, higher self-esteem, and reduced anxiety and emotional distress (Panayiotou et al., 2021). These may be indirectly linked to educational adaptation through positive school experiences and the minimisation of school barriers. The literature thus suggests that emotional regulation has both direct and indirect links to academic adjustment.

More recent studies have also highlighted the stress protective role of emotional regulation when stress and uncertainty are particularly high. The literature has repeatedly shown that children with enhanced emotional regulation skills are better equipped to manage academic stress and educational difficulties (Gross, 2015; Denham et al., 2020). They confirm the notion that emotional regulation is a significant resilience factor contributing to the continuity and adaptation of education in the face of change.

A second major theme is that the educational environment affects the development and use of emotional regulation skills. Teacher-student interplays, emotionally responsive teaching and positive peer interactions have been found to foster emotional competence and adaptive coping in students (Garwood et al., 2019; Visser et al., 2020). These settings offer students opportunities to be emotionally sensitive, learn adaptive coping strategies, and build resilience when facing academic difficulties.

Overall, the literature reviewed makes it clear that emotional regulation is a central concept in educational adaptation. If students can manage their emotions effectively, they will be more likely to interact positively with learning, stay motivated to learn, be resilient in the face of challenges, and successfully adapt to learning demands. Emotional regulation is a protective factor, especially relevant to the academic adjustment and psychological functioning of students with learning difficulties.

3.6 Cognitive Flexibility as a Resource for Academic Adjustment

Results indicated that cognitive flexibility is a significant cognitive resource that supports student learning, particularly for students with learning difficulties in academic adjustment and/or educational adaptation. In the literature examined, cognitive flexibility was identified as a significant aspect of EF, contributing to students' ability to adapt to new demands in school, modify learning strategies, and respond to learning challenges. The flexibility of cognition seems to be a key area that can aid the successful implementation of education in modern settings that are constantly evolving, problem-solving, and decision-making.

In general, the literature indicates that students who are more cognitively flexible are better able to adapt to academic challenges. Cognitive flexibility allows people to change their point of view, think outside the box, and modify their behaviour to suit the situation (Diamond, 2013). These skills tend to make students more able to adjust ineffective learning strategies, react positively to feedback, and work through complex learning tasks. Thus, cognitive flexibility is significant for enhanced learning and educational functioning.

The findings of the reviewed studies consistently showed that academic achievement, educational involvement and school adjustment are positively correlated with cognitive flexibility. According to Best et al. (2011), executive functioning, especially cognitive flexibility, had significant effects on academic success across all developmental stages. Likewise, Yeniad et al. (2013) reported that students with higher cognitive flexibility scores achieved higher academic achievement, especially on tasks that required adaptive thinking and problem-solving. The findings indicated that flexible thinking facilitates students' successful coping with diverse learning demands.

Cognitive flexibility seems especially relevant for students with learning difficulties, as many have difficulties with executive functioning processes

(EFs) such as attentional shifting, planning, working memory, and adaptive problem-solving (Diamond, 2013). Struggles in these areas can interfere with students' adaptation to new instructional strategies, coping with school stress, and bouncing back from failures. Decreased cognitive flexibility tends to be correlated with increased frustration, decreased academic confidence, and struggles to meet classroom expectations (Cragg & Chevalier, 2012). In turn, a lack of cognitive flexibility could be a factor in students with learning difficulties' educational maladjustment and lower academic engagement.

Another theme gaining prominence in the literature was the association between cognitive flexibility and resilience. Cognitive adaptability is a characteristic that tends to buffer students from challenges and uncertainty when they face difficulty (Doebel, 2020). Flexible thinkers are more likely to consider alternative ways to solve problems and modify goals when faced with a setback, which facilitates a less negative response to setbacks and better educational functioning. It is this flexibility that might be especially useful for kids with learning disabilities who often have to deal with circumstances that demand persistence and flexibility.

The literature also indicates a close link between cognitive flexibility and emotional functioning. Several studies indicate that people with higher levels of cognitive flexibility are better able to "reframe" stressful situations, change their interpretations of challenging events, and develop alternative coping responses (Zelazo, 2020). These skills can lead to improved emotional management and less susceptibility to school stress. By contrast, cognitive rigidity could also make students more likely to feel frustrated and anxious, and to engage in maladaptive coping when they face problems. These results suggest that cognitive flexibility not only contributes to cognitive adaptation in education but also to emotional adaptation.

Recent research also highlights the importance of cognitive flexibility in fostering adaptive learning behaviours. Flexible thinking students are more

likely to accept new learning opportunities, change environments in learning, and use a variety of problem-solving strategies (Doebel, 2020; Zelazo, 2020). They serve as hallmarks of sustained academic engagement and persistence, focusing on situations that demand sustained learning and adaptation. The literature thus indicates that cognitive flexibility is a critical foundation for lifelong learning and academic success.

The literature consistently demonstrates that cognitive flexibility is a useful resource for overall academic adjustment. Generally, students with enhanced cognitive flexibility are better able to cope with educational demands, adapt to life's vicissitudes, remain resilient, and engage with learning experiences. Cognitive flexibility seems to be a protective factor for students with learning difficulties, allowing them to adapt to educational contexts, withstand the psychological challenges of learning, and perform successfully in the classroom. The findings also indicate that cognitive flexibility intervention may positively influence academic and developmental outcomes of students with a variety of learning needs.

3.7 Integrated Associations among Parenting Styles, Emotional Regulation, Cognitive Flexibility, and Academic Adjustment

Based on the thematic synthesis, parent behaviours and practices, emotional regulation, cognitive flexibility, and academic adjustment emerged as closely related and to be part of a larger developmental system. The literature reviewed consistently indicated that family environment, emotional competence, and cognitive resources create dynamic associations that influence students' academic adjustment who have learning difficulties. Such conclusions do not contradict the modern views on development and education that focus on the interaction between environmental and individual factors on developmental and educational outcomes (Bronfenbrenner, 1979; Zimmerman, 2002).

One of the salient features highlighted in the literature is the importance of parenting styles in

the development of emotional and cognitive skills. Authoritative parenting seems to promote emotional security, self-confidence, adaptive coping and independent problem-solving strategies (Baumrind, 1991; Pinquart, 2017). Emotional regulation and cognitive flexibility are critical factors identified as predictors of educational adaptation, acquired from these developmental experiences. Thus, parenting styles could have direct and indirect effects on academic adjustment via their effects on emotional and cognitive functioning.

The literature reviewed also indicates that emotional regulation plays a critical role as a mediator between family environments and educational outcomes. Well-developed emotional regulation skills are associated with good coping with challenges of academic demands, managing frustration, remaining motivated, and effective participation in learning activities (Gross, 2015; Denham et al., 2020). The emotional competencies seem to be fostered in the supportive environment of the parent, through emotional validation, guidance and learning opportunities for adaptive coping skills. Emotional regulation, in turn, facilitates participation in the lesson, resilience, and successful adjustment to school. The findings suggest that emotional regulation could be a critical pathway whereby parenting styles impact educational functioning.

Likewise, cognitive flexibility was found to be a critical mechanism between parenting practices and academic adaptation. Favourable family environments that promote autonomy, independent thinking, and constructive problem-solving afford opportunities for flexible cognitive processes (Bernier et al., 2010; Fay-Stammach et al., 2014). Education demands are typically changing over time, and students with greater cognitive flexibility tend to be more adept at adjusting learning strategies and finding alternative solutions to problems they face (Diamond, 2013). The skills seem especially relevant to students with learning disabilities, who are likely to need perseverance, adaptability

to new situations, and problem-solving. Thus, another potential mediator between parenting styles and educational achievement is cognitive flexibility.

A second discovery concerns the correlations between emotional regulation and cognitive flexibility. Recent research indicates that these constructs are interrelated and both contribute to adaptive functioning. Cognitive flexibility appears to be related to students' abilities to reinterpret difficult situations, think flexibly, and develop adaptive coping responses, which facilitate emotion regulation (Zelazo, 2020). Similarly, good emotional regulation could improve cognitive functioning by minimising the negative impact of anxiety, frustration, and other emotional states on thinking and problem-solving (Gross, 2015). This interaction indicates an association between emotional and cognitive resources for educational adaptation and resilience.

The incorporation of these factors seems to be more critical for students with learning difficulties. These students often have lower academic performance, social problems, and higher levels of academic stress, which require more emotional and cognitive coping. The literature reviewed indicates that nurturing parent-child relationships can promote emotional self-control and cognitive flexibility, thereby supporting students' ability to cope with academic difficulties and stay in school. On the other hand, non-supportive family environments can negatively impact emotional and cognitive functioning and school adjustment.

Overall, the thematic synthesis demonstrates that parenting styles, emotional regulation, and cognitive flexibility all play a role in academic adjustment among students with learning difficulties, integrating these three in a multidimensional approach. Parenting styles seem to shape the basic environmental context for emotional and cognitive competence, and emotional regulation and cognitive flexibility are seen as critical individual resources that support educational adaptation. All of this is a part of

resilience, engagement in education, and successful functioning in school. The findings thus underscore the need for strategies that combine elements of educational, psychological, and family-based supports to achieve positive outcomes for students with learning difficulties.

4. Discussion

This narrative review focuses on the relationships among parenting styles, emotional regulation, cognitive flexibility, and academic adjustment among learners with learning difficulties. The findings reveal that academic adaptation is connected not only to academic skills but also to environmental, emotional, and cognitive aspects. In the literature reviewed, parenting styles emerged as critical contextual factors, and emotional regulation and cognitive flexibility were recognised as critical psychological factors that facilitate adaptation in education. The conclusions drawn from this study align with the goals of the review and support the general picture of other factors influencing academic adjustment for students with learning disabilities.

4.1 Parenting styles and academic adjustment.

The review revealed that parenting styles had a significant impact on academic adjustment, a key finding. In line with Baumrind's Parenting Styles Theory (1991), authoritative parenting was associated with higher levels of academic engagement, educational motivation, self-confidence, and adaptive functioning. Pupils from families with positive environments showed greater ability to manage schoolwork and to be more positively involved in learning activities. By contrast, authoritarian and neglectful parenting styles were more common with emotional problems, lower self-confidence in school and adjusting poorly to school. These results indicate that the family context is a critical factor in helping achieve educational success, especially for students with learning issues.

4.2 Education, Emotional Intelligence, and Mental Health

The findings further underscore the critical role of emotional regulation and cognitive flexibility in supporting academic adjustment. Emotional regulation helps students manage their responses to academic stress, frustration, and anxiety, enabling them to stay motivated and engaged in learning. In line with Gross's Process Model of Emotion Regulation (2015), students who can regulate their emotions seem better able to manage the challenges posed by the school curriculum.

As with cognitive flexibility, another significant contributor to educational adaptation was the ability to adapt. Flexible thinking is usually associated with the ability to change learning strategies, adapt to changing educational demands, and respond constructively to challenges. The findings align with current views on executive functioning: that flexible thinking is critical for adaptive problem solving and effective learning (Diamond, 2013). Emotional regulation and cognitive flexibility seem to be valuable psychological resources that, when taken together, contribute to resilience and academic adjustment in learners with learning difficulties.

4.3 An Integrated Perspective on Academic Adjustment

A critical strength of the review is its comprehensive approach to parental influences on emotional, cognitive, and academic development. The findings indicate that these variables are not independent; rather, they are related in their impact on educational outcomes. Emotional and cognitive competencies appear to be shaped by parenting styles; emotional regulation and cognitive flexibility support students' adaptive responses to academic tasks.

The findings are congruent with Bronfenbrenner's Ecological Systems Theory (1979), which highlights the developmental effects of the interaction between the person and his/her environments. Academic adjustment of students with learning difficulties may then be

seen as a process, mediated by family influences and students' psychological resources. This integrated approach underscores the need to consider multiple levels of influence in understanding educational adaptation and student well-being.

4.4 Implications for Theory, Practice and Inclusive Education

There are several implications of the review. Theoretically, the review adds to the literature by combining family, emotional, and cognitive factors into a single conceptualisation of academic adjustment. This has been a broadened perspective that moves away from traditional ideas that emphasise only academic outcomes or cognitive impairments, and offers a more multidimensional view of educational adaptation.

Practically speaking, the findings indicate the need for additional support beyond academic remediation to educate students with learning difficulties. Strengthening emotional regulation, executive functioning, and adaptive coping may positively impact students' educational outcomes and experiences. Also, parental involvement and supportive parenting practices must be acknowledged as part of the education support system.

The findings are also relevant to the field of inclusive education. An integrated approach that covers students' academic, emotional, and psychosocial needs should be implemented in schools and educational institutions. School teachers, school counsellors, and special educators could have significant roles in developing supportive learning environments that promote resilience and emotional and cognitive adaptability for students with learning difficulties.

4.5 Limitations of the Review

Several limitations should be noted when interpreting the findings of this review. First of all, the study uses a narrative review method, which involves synthesising and interpreting the literature rather than quantitative analysis. For this reason, the findings should be considered

more as a conceptual synthesis of existing evidence than as an analysis of effect sizes.

Secondly, only English-language publications were considered for review, and some relevant studies in other languages may have been omitted. Third, many of the reviewed papers were drawn from a Western context, which can make the findings difficult to generalise beyond that context.

Lastly, numerous studies have investigated these factors individually, including parenting styles, emotional regulation, cognitive flexibility, and academic adjustment. However, few have examined all of these factors together in students with learning difficulties. When interpreting the findings of the present review, these limitations should be taken into account.

5. Conclusion

This narrative review examined the associations among parenting styles, emotional regulation, cognitive flexibility, and academic adjustment among students with learning difficulties. The findings have revealed that academic adjustment is a complex process determined by the interplay among family-related, emotional, and cognitive factors. Among the reviewed studies, authoritative parenting has been identified as an essential protective factor associated with good educational outcomes. In contrast, authoritarian and neglectful parenting styles are more often associated with emotional and educational problems. Furthermore, emotional regulation

and cognitive flexibility were discussed as key psychological factors that help build up resilience and adaptive strategies for education.

The comprehensive results show that parenting styles impact academic adjustment both directly and indirectly, influencing factors such as emotional regulation and cognitive flexibility. Students who develop adequate emotional regulation and increase cognitive flexibility seem to be able to cope with academic difficulties and adapt to educational requirements more easily. The research findings demonstrate the significance of a holistic approach that considers the interplay among family context, emotional abilities, and cognitive functions in academic adjustment.

Considering these findings, educational intervention programs need to go beyond merely helping learners academically and include methods that help learners develop skills in emotional regulation, cognitive flexibility, and parent participation. Schools, educators, counsellors, and parents need to work in harmony in order to create an environment that nurtures the academic and psychosocial growth of learners. Future research can investigate these links using longitudinal, cross-cultural, and mixed-method research designs, especially those involving learners with learning disabilities. This kind of research might lead to the development of more holistic methods that help promote academic success and resilience.

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