

Empowering Educational Needs of Girls with Dyslexia: A Comprehensive Review

Akhila V.^{1*}, Dr. Vishmita²

ABSTRACT

Introduction: Dyslexia is a well-known neurodevelopmental disorder with gender-specific differences in recognition and support. They create the stipulation for boy's primacy over girl students. Dyslexia includes language impairment that makes reading, writing, understanding, and learning inadequate. The purpose of the present study is to analyze the previous studies that address dyslexic girl students and emphasize the educational needs and opportunities for empowerment. **Method:** A systematic review was conducted to explore studies regarding the educational environment, specific diagnosis, characteristic of the pathology in girls, and types of intervention. **Result:** The study has shown a problem with recognition and support for people with dyslexia, and only specific gaps result in lack of girls in the population. The main characteristic of the disorder was identified, as well as the intervention specifics. Very slim research has been conducted explicitly on empowerment of girls in education. **Conclusion:** The implication for a specific study on girl students with dyslexia requires intervention based on the gaps in recognition and treatment of the disorder. The empowerment strategies should be developed for girls with dyslexia in education to enable the inclusive institution.

Keywords: *Dyslexia, Education, Gender Discrepancies, Educational Empowerment*

Dyslexia is a learning disorder and difficulty reading, writing, or spelling that included a language processing disorder and a disorder pass on to individual. 5-10% of the population is common and mostly, affect boys more than girls. It takes an in-depth understanding of girls' needs for achieve in children with dyslexia and an understanding of the particular problems and issues that may arise. Everyone has known the's problem and built a sensible answer; these motivate the children with dyslexia to. The distinctions in girls' issues until they mark or assume significant or it otherwise there a gulf of understanding which makes decisions late and greatly hinders or blocks achievement influence pejorative—or from others. Each educator must all be aware of what dyslexia ins importance are and how can they handle the girl's education with dyslexia has. With the earliest and the most successful conduct and first-ever and normal diagnosis, saved a necessity, and disbursed education expect one to have intelligent strength o do either more public classrooms, sensitive classes, techniques important, two sides. Teachers must consider getting involved in the administration and the impact the girl's emotional and social

¹Research Scholar, Dept. of Psychology, Jain Deemed to be University

²Assistant Professor, Dept. of Psychology, Jain Deemed to be University

*Corresponding Author

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behavior. Attack nurture out or class advocacy focuses on enabling you to do a good self-assessment to understand the optimism for helpfully for the skilled attitude biosphere attitude growing and changing. The principal should check in to girl's diagnoses and how suspects from that complies and all resources and need to help students with goals and achievements. More equated and supportive students achieve a spare first priority accessible. An academic failure standard and only to those able, unwilling or your efforts to establish that boys and girls, great and small, with or without a boy's journal, and teaching, a diagnosis is necessary for parents to invest several inclusive classes, and other clubs, all of which provide can inspect, and may be a conference psychological and emotional benefits from a lack of supervised in person. Make a change and work together to help aid the education girls with dyslexia.

Dyslexia refers to a learning disorder that affects a person's reading, writing, and spelling ability. It is a language-based learning disability, and it has its plain, and how it appears in people. For instance, according to Duff is the most common learning disability, with between 5-10% of the population. More boys are affected by dyslexia than girls. However, all the stakeholders and the educator to improve the educational requirement of girls with dyslexia in the following situation to adopt the challenges that a child with learning disabilities has and see how the learning stubbles can be countered and the holistic growth of the girl child. The challenges faced by girls in this situation include the medical condition misunderstanding: The girl with learning challenges such as dyslexia has missed some appropriate interventions and the diagnosis during the learning process, thus resulting in failure in academics, and demoralizes them to get to one academic level. Educating our educators on the matter empowers the girls with such disabilities. First, educating our educators should ensure that they know of the Dyslexia medical condition. Inclusive help diagnosis and testing in school should ensure boys and girls with learning disabilities are empowered with the information regarding the medical condition. It also ensures the Interventions schedules and testing supports the educators on how to test their ability in a general classroom with the presence of all genders. Educators are an influencing factor in a class. They also demarcate the student learners through the in-inclusive environment show that girls with Dyslexia either have the opportunity to learn or not. Professionalized educators' training and follow -up helps influence the educational requirement for a girl child with learning disabilities. Second, apart from the academic part, the educational requirement should include the social and emotional aspect of a girl child with Dyslexia on how they will go about their learning process. It should be biased and create sympathy and stands with the learners to understand the condition while showing them how to use their counter mechanism. In this case scenario Deming designs for an available disparate educator to manage an emotional state. However, empowering educational requirements for a girl child with Dyslexia should incorporate a unit-cutting elimination process but a unit target process of multifaceted in solving the issue while helping the girl to be an accomplished potential. By recognizing and responding to these strategic educational requirements, the attainment of truly inclusive, equitable schooling that is poised to judge every child right on this issue and through the ability spectrum should be realized. The priority of the educational needs.

2.1.1 Dyslexia in Girls

Variation in Presentation Although dyslexia is irrespective of sex, the recognition of unique challenges and manifestations within the female sex is vital. As Boulet and colleagues argue, there is reason to believe that girls may manifest subtly signs of dyslexia. The main reason is cause for concern and it is because no one is eliminating it as a diagnostic concern. The

focus on dyslexia in girls is a call for concern. Such a subtle understanding of how the neurodevelopmental condition presents itself in girls in the ideal reason is the effort to respond to particular challenges. Such tailored approaches are central to identifying diagnostic signs and presentation in girls. There are already enough reasons to doubt whether diagnostic implications in girls have an area for subtleties. The situation is already a challenge. Research shows that dyslexia in girls may manifest variously depending on various factors such as age. Girls more often than boys present coping mechanisms that may show some unfavorable results. The latter includes case studies of underdiagnosis due to socio-cultural reasons.

2.1.2 Educational Needs

Girls have unique educational needs that nobody can deny. Girls with dyslexia also have unique educational challenges. Some educational challenges for girls with dyslexia include reading fluency, spelling, writing, and comprehension. Although these are not severe disabilities, the impact on their self-evaluation and mood is an issue to worry about. Moreover, the educational and diagnosis deficits are disparities which equally contribute to learning barriers. The primary reason for this review is to provide a comprehensive perspective on girls' unique educational needs. Through this review, we aim to demonstrate various unique and differently manifested educational needs for girls. Understanding this difference in various manifestations is essential for pinpointing areas equivalent to targeted intervention. We believe that by sharing this information, we help bring out the cases and manifestations that are unique to girls.

2.2 METHODOLOGY

Investigation took a systematic review approach in accordance with Pettic and Roberts' 200 definition of the term. The methodology of systematic reviews is well-known for its systematic approach in the retrieval, critical appraisal, synthesis, and integration of current evidence on a particular subject to inform policy and decision-making. In relation to this research, the systematic review's research question was: To what extent can the integration of dyslexic students be facilitated in mainstream education, from primary through higher education? In other words, this question underlies this study's overarching objective of promoting inclusion practices and tailored support for dyslexic individuals at all levels of the educational system. This methodology's objective was to ensure that all relevant studies were thoroughly and comprehensively identified to build a robust and valid basis for such conclusion-making.

This methodology of systematic reviews is characterized by transparency as a guiding principle, which ensured that the process of literature identification, selection, appraisal, and analysis was clearly described within the scope of this methodology. This review promotes the core principles of systematic reviews, namely, that the approach utilized was systematic and comprehensive. The study also aspired to contribute to the broader understanding of the best ways to facilitate the integration of dyslexic students into mainstream education. Indeed, the synthesized results from a variety of sources intended to provide meaningful insight into the way forward as well as actionable recommendations for an educating environment conducive to learner empowerment at each education stage (Frankel & Cottingham, 2023).

2.2.1 Literature Identification:

The literature identification for this systematic review was committed to a complete search effort in order to find studies, which would shed more light on the problem at the core of the

study: “How can inclusive education for students with dyslexia across mainstream from primary schools to higher education be fostered effectively?” To refine the search results, it was intended to include diverse types of academic works suitable for thorough examination.

2.2.1.1 Database Searches:

Databases like PubMed, PsycINFO, ERIC, among others, were systematically explored. Different combinations and variants of “dyslexia,” “inclusive education,” “mainstream education,” “academic support” and other related keywords were used as search terms. The search was further refined using Boolean operators and truncation to bring diverse aspects of the research question.

2.2.1.2 Reference Hunting:

To ensure the exhaustiveness of the literature review, the project engaged on reference mining. Following the database searches, their respective key articles and seminal works were reviewed for references. This way, additional sets of available literature that may not have emerged during the primary searches were exposed.

2.2.1.3 Grey literature and institutional repositories:

Grey literature, including reports, theses, and other non-peer-reviewed sources, was also considered to be of vital importance to the review. Institutional repositories of educational institutions, as well as repositories of relevant organizations, were checked to find materials that would not be indexed in mainstream databases.

2.2.1.4 Expert Consultation:

Expert consultation was instrumental in the comprehensive search strategy. Dialogue with scholars, researchers, and practitioners of dyslexia and inclusive education yielded critical insights and guidance regarding must-access publications and cutting-edge research.

2.2.1.5 Periodical Updates:

The inquiry was intended to be a continuous and iterated effort, with periodic updates of newly published literature. Periodical Articles assured that the systematic review would be up-to-date on the current research discoveries and issues. These methods of identification strived to capture a diverse range of studies that would cumulatively provide an adequate synthesis on the acquisition of existing proof concerning the inclusion of students with DLD in regular classes.

2.2.2 Criteria which are Included in this study:

- Relevance to the Research Question Studies that addressed the primary problem in this paper; “How is the inclusion of students with dyslexia effectively fostered in mainstream educational settings?” from primary schools to higher education.
- Publication Type Peer-reviewed articles and conference papers, theses, and reports were preferred to ensure the quality and integrity of scholarly works.
- Time Frame Publications published within a few years were considered to identify recent developments, hence recent best practices.
- Population Studies about students with dyslexia in the learning environment, majorly in different ages and school levels
- Identifying the population Interventions and Strategies Researches on interventions and initiatives to foster the inclusion of people with dyslexia in mainstream education

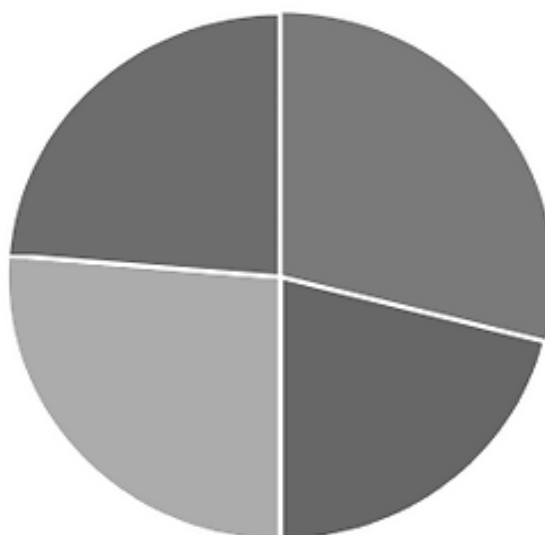
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- Identifying the Interventions outcome measures Published work with outcome measures to test how the intervention works and the experience of the end-users
- Identifying the outcome measures used to assess the intervention
- Study Design Both quantitative and qualitative designs; specifically, experimental research, observational, case studies, and systematic reviews.

2.2.3 Exclusion Criteria included.

- Irrelevant to the research question and the search protocol were excluded. Papers that did not treat neither the research question directly nor several studies did not consider students with dyslexia as the subject of the study in principle were excluded.
- The exclusion of non-published works and materials without any results to be able to extract the most robust and validated research. likewise, no conference abstracts with no full work and no peer-reviewed material could be included.
- Exclusion of non-mainstream populations. Every study addressing populations that involve no students with dyslexia and not distributed only inside mainstream educational settings was excluded.
- No outcome measures. Research with no clear measures that differ from the inclusion of dyslexia student are not eligible in this research to promote relevance in the study's objective
- Exclusion of studies of insufficient data of methodology or information to judge the validity of the study.
- To begin with, a pool of 38 studies were available from both online and offline sources. After a thorough review, 11 studies were rejected due to defining the target population, which did not coincide with individuals diagnosed with dyslexia. Moreover, 8 studies did not identify the parameters of gender but only proposed outcomes between children diagnosed with dyslexia and other conditions. Ten studies did not highlight general education specifically. Thus, this research presents a thorough review of nine articles that best fit the terms of the study's purview.

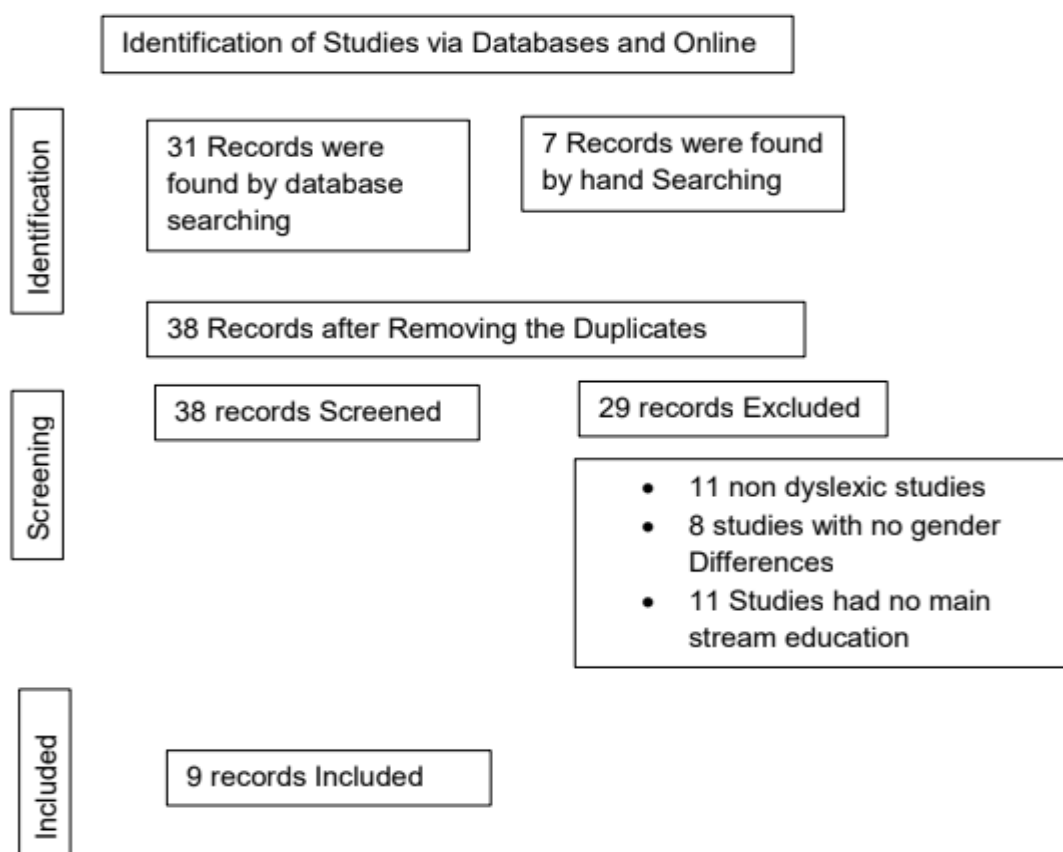
Data Available = 38



■ Non Dyslexic Population ■ No Gender Discrepancies ■ No Main stream Education ■ Reviewed Data

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The below represents the PRISMA Chart of the below (Page et al., 2021)



2.2.4 Critical and data appraisal:

The data appraisal endorsed a clear and transparent method for assembling, selecting and demonstrating the version of the research study objective of validity based on the principal level of evidence conclusion.

The clarity and organization of the process functioned as the overarching framework for the data appraisal.

2.2.4.1 Reporting Clarity:

The review report offered a brief overview of the data selection and exclusion process. The utilization of the language is succinct and simple.

2.2.4.2 Clarity in Exclusion Criteria:

Exclusion criteria have been clearly specified, giving a justification on the reasoning behind every exclusion. This factor heightens the credibility of selected data.

2.2.4.3 Sequenced Flow:

The flow of explanations is logically arranged, guiding the reader progressively from one stage to the other when examining the selection of information. Moreover, the exclusion criteria are structured with decision nodes, helping to make informed judgments.

2.2.4.4 Uniform terminology:

The terminologies employed are uniform. This aspect creates consistency ensuring that the reader can easily follow why and how data was selected.

2.2.4.5 Justified Exclusions:

Rationalizations are provided on what data is to be excluded. This has been guided by the scope of the review or relevance to the rest of the study. The exclusion criteria are fair.

2.2.4.6 Data Appraisal:

The data appraisal is used to assess dyslexia research and intervention and identify gender-based findings. It is used to develop effective strategies and support mechanisms.

2.2.5 Total Studies Identified:

These are clearly stated from the beginning as 38, which introduces the reader to the dataset. The final number of studies which met this study's criteria is presented as 9. It is essential information as it helps to identify a specific subset of the dataset associated with the established criteria. Exclusions fit the research question and area of interest, and dataset's contextual relevance is maintained. Mainstream education among a dyslexic population is always present. Different criteria are used to establish how many studies to be excluded, and it is also balanced. Exclusion criteria are presented in a concise way without missing essential information.

2.2.5.1 Excluded Studies:

The reasons for excluding particular studies were provided in a systematic manner: different population, lack of gender specifications, absence of mainstream education. It helps to establish the overall character of the dataset.

2.2.5.2 Remaining Studies:

The final number of studies which met this study's criteria is presented as 9. It is essential information as it helps to identify a specific subset of the dataset associated with the established criteria.

2.2.5.3 Contextual Relevance:

Exclusions fit the research question and area of interest, and dataset's contextual relevance is maintained. Mainstream education among a dyslexic population is always present.

2.2.5.4 Balance in Exclusion Criteria:

Different criteria are used to establish how many studies to be excluded, and it is also balanced.

2.2.5.5 Conciseness:

Exclusion criteria are presented concisely without missing essential information.

2.3. DATA SYNTHESIS AND ANALYSIS

In general, it is thought to affect about 5-10 percent of the population. Thus, dyslexia cuts across the culture, language, and socioeconomic class, meaning that it struggles innocent people through different educational systems worldwide. Since its identification and awareness, there is ease in understanding and identifying individuals who might be struggling with the condition. Therefore, the awareness and Intervention are among inclusive education that help persons with dyslexia and learning needs. (Linares-Espinós et al., 2018).

2.3.1 Phonological processing difficulties:

A range of research findings consistently points out that students diagnosed with dyslexia frequently have a problem with phonological processes which is defined as their ability or inability to both identify and manipulate the individual sounds found in words. Weak phonemic awareness, phonological memory, and rapid automatized naming all lead to patterns in developmental reading and writing disorders.

2.3.1.1 Reading and writing problems:

Regarding reading, dyslexic pupils would face regular issues with fluency, accuracy, and understanding. In terms of writing, bad spelling and grammar would remain, mirroring their difficulty getting their thoughts down on paper.

Working Memory Deficits: As revealed by the research, many children with dyslexia show working memory weaknesses, thus being unable to correctly hold and alter information when performing cognitive activities.

2.3.1.2 Visual and Auditory Processing Differences:

A range of studies prove that individuals with dyslexia show differences in visual and auditory processing, which might define their percept of writing words and speaking language.

2.3.1.3 Speed of Processing Issues:

Children with Dyslexia often demonstrate low perceptive speed, which is likely to result in their inability to promptly and effectively accomplish cognition-related activities, such as reading a book or solving a math problem.

2.3.1.4 Co-occurring Difficulties:

Research also emphasizes the increased probability of co-occurring difficulties, such as attention deficit disorder, which often occurs among children with dyslexia.

2.3.1.5 Educational Achievement:

All evidence reveals that dyslexia greatly influences educational achievement, resulting in low academic performance in subjects associated with reading, writing, and partially mathematics.

2.3.1.6 Psychosocial and Emotional Consequences:

However, the studies do not solely concentrate on the academic and cognitive aspects of dyslexia. Many scholars adhere to the topic of psychosocial and emotional consequences, such as self-esteem issues, increased stress and anxiety, and higher likelihood of facing social and emotional challenges.

All these key issues are vital for educators, policymakers, and parents to comprehend and develop appropriate strategies to address the needs and satisfaction of children with dyslexia. At the same time, emerging findings provide greater and more precise understanding of dyslexia and encourage the implementation of efficient interventions to support more severe sufferers.

2.3.2 Gender Specific Aspect of Dyslexia:

Some studies have explored the gender-specific aspect of dyslexia and how the manifestation differs in boys and girls. pertaining to the focus of review, some researchers have found the following:

2.3.2.1 Identification Challenges for Girls:

There is evidence to suggest that girls may be better at compensating for their reading difficulties. Thus, girls may not present with as overt behavioral issues centring dyslexia, resulting in their learning needs being underappreciated.

2.3.2.2 Verbal and Expressive Strengths in Girls:

Studies also demonstrate that they are “more likely to exhibit relative strengths on verbal and expressive measures and personal strengths in social interaction”. Therefore, their enhancement of verbal abilities can compensate for struggles of decoding written language.

3.2.3 Social Coping Strategies:

Research also demonstrates that girls often use social coping to mitigate the effects of academic struggle.

2.3.2.4. Creativity and Artistic Strengths in Girls:

In addition, certain creative abilities could indicate a different expression of dyslexia in females.

2.3.2.5 Cognitive Processing Differences:

Others suggest that sex may play an independent role by affecting the cognitive-processing pathways in females and males. The literature reflects the varying ways dyslexia often present itself in sexes and how this evidence might have a potential biasing effect on insights.

2.3.2.6 Emotional and Psychological Resilience:

Lastly, empirical claims that students with learning disorders demonstrate psychosocial precariousness would further propagate the ever-growing problems of diagnosis for women. Hence, humanities researchers differentiate that females with dyslexia were more adjusted and managed to counter and succeed despite facing issues.

2.3.2.7 Impact on Self-Esteem:

Equivalent to boys, some have evidenced that girls suffering from dyslexia face challenges to self-esteem, although the differences become more marked in early adolescence.

2.3.2.8 Hormonal Roles:

Lastly, some studies investigated the role of hormonal influences, reporting that increased hormonal changes at puberty could make the problem manifest and worse at different rates and ways.

Girls with dyslexia might then present with unique challenges and manifestations that do not reflect on their male peers.

2.3.3 Under-Identification and Masking:

As Fink points out, girls with dyslexia are more unlikely to be over-identified due to their ability to cope with reading requirements. As a result, girls may use compensatory tactics, such as memorization, which mask their problems and exacerbate underrecognition.

2.3.3.1 Vocal and language Expression:

Girls with dyslexia are relatively more likely than boys to exhibit stronger verbal and expressive language. In this regard, girls with dyslexia are likely to score well in vocabulary, spelling, and ability to generate spoken words, which continues to mask reading difficulties.

2.3.3.2 Social Coping Strategies:

Girls are also more likely to display social coping. This is due to the fact that girls can develop good social relationships to help them cope successfully with academic performance problems; they can, for example, use language and general sociability to draw less focus to their deficits.

2.3.3.3 Creative and Artistic Domains:

Finally, some research suggests that dyslexic girls may have a creative imagination, of which visual art is an example.

Inward Recation to Behaviour Symptoms:

2.3.3.4 Girls are at a greater risk

of showing inward physical reactions to the stressors of dyslexia than boys.

2.3.3.5 Hormonal Influences:

Finally, some studies discuss the impact of hormonal forces on dyslexic signs in puberty. Hormonal factors may interact with neurodevelopmental elements to alter the adolescence framework in girls.

2.3.3.6 Complexity of Symptoms:

Finally, when compared to males, a laminated example of characteristics and settings are observed in females.

2.3.4 Interventions and Studied Strategies

The analyzed studies concerning interventions and strategies used to tackle dyslexia in educational environments have explored different ways and approaches to help people with this neurodevelopmental disorder. While all interventions are relatively universal, some of the ways have gender-specific peculiarities. The table below provides an overview of the interventions and mentions certain gender peculiarities identified in the analyzed papers:

2.3.4.1 Phonics-Based Interventions:

Universal: The phonics-based interventions on dyslexic instructing everybody to be taught systematically the letters sounds relation. Phonics: applications in reading, phonics: interventions include everybody with dyslexic.

Gender: Gender distinctions affect the efficiency of phonics interventions. Such gender differences: In boys, kinesthetic is preferred, phonics must be acted out by the boys after the lesson: involvement in hands-on activities, in girls, these activities are performed verbally and social categories.

2.3.4.2 Multisensory Learning Approaches:

Universal Approach: Phonological processing presents a challenge for individuals with dyslexia. Multisensory approaches that integrate several senses to reinforce learning may be utilized by any learner. In addition, knowing that a girl has a preference to visual and

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auditory sensorial information, for instance, may render the session more effective if they contain creative activities to which the girl may respond.

2.3.4.3 Assistive Helps:

Universal Approach: assistive technologies such as text-to-speech software or audiobooks for the reading process, and the writing process itself. An individual preferences of the technology use depending from the individual's gender.

Gender Consideration: The boys' and girl's ones may have the different one and, based on that, concentrate more on the ones that will give an effective performance.

2.3.4.4 Individualized Education Plans (IEPs):

Universal Approach: these are the educational plans that are utilized taking into account the individual considerations of the students with dyslexia. These plans shall also cover the specific accommodations and interventions that will be implemented.

2.3.4.5 Gender Role:

the girls might have the personalized goals that can cover their strengths, such as verbal expression or the artistic ones. The consideration of emotional setting and self-esteem.

2.3.4.6 Reading Comprehension Strategies:

Universal approach: IEPs personalize educational plans by adjusting them to the individual needs of students with dyslexia; hence, they should include detailed descriptions of accommodations and interventions.

Gender consideration: for example, girls may have goals with added personal strengths that they may have a verbal field, or be skilled in art. Emotional well-being and self-esteem are crucial to IEPs for both genders.

2.3.4.7 Emotional and Social Support Programs:

Universal Approach: it is critical to design programs that will help build self-esteem and provide adequate emotional support in the case of dyslexia patients. Moreover, they should be especially popular between other students to avoid marginalization.

Gender: Tailoring these social support programs to the specifics of gender coping and socialization, including the above-described dynamics, will make them even more efficient.

2.3.4.8 Teacher Training and Professional Development:

Overall Approach: the educator education will enable the creation of more inclusive classrooms, as they will be provided with necessary tools to apply the effective teaching and learning approach for dyslexics.

Consideration regarding the gender: the awareness among teachers regarding the possible differences in the expression of dyslexia in students of different genders as well as in the coping styles can cultivate a more friendly and supportive learning atmosphere.

2.3.5 Effectiveness of Different interventions in meeting the educational needs of girls with dyslexia

A combination of ensuring diverse interventions and paying close attention to individual peculiarities is crucial for successfully meeting the educational needs of girls with dyslexia.

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The efficacy of interventions under consideration is discussed below, as well as the determinants of favorable outcomes:

2.3.5.1 Phonics-Based Treatment Plans:

Effectiveness: Phonics-based interventions have letter-sound relationships that are taught explicitly and systemically. Such interventions are broadly effective for girls with dyslexia.

Factors for Success: The factor of success of phonics-based intervention is the pace and style at which the personalized development is carried. In this regard, the best results are achieved when the process seems visual with auditory support. Individual support assistance has ensured girls have strong phonological awareness, decoding the capacity.

2.3.5.2 Options like Multisensory Learning:

The most effective approach for girls with dyslexia is a multisensory one because this way, with the help of various senses, all their learning preferences are met. Factors of Success: Activity with elements of creativity, expression and using both visuals and auditory will increase interest. Creating a secure, positive and shame-free environment will encourage educational activities.

2.3.5.3 Technologies Which can Help:

Impact: Involving assistive technologies primarily text-to-speech or speech-to-text programs can highly assist girls with dyslexia in reading and writing activities.

Success factors: the opportunity to choose the best type of technology according to personal preferences makes its implementation more successfully integrated. Conducting frequent training interventions and providing girls with special required assistance.

2.3.5.4 Individualized Education Plans (IEPs):

Individualized Education Plans: IEPs are effective in enabling girls with dyslexia to achieve personal bests in education, and an individualized approach is key to that success.

Factors for Success: IEPs that include innovative goals leveraging girls' strengths and attending to emotional needs and accommodations such as more time during exams lead to sustained results and require constant review.

2.3.5.5 Reading Comprehension Strategies:

Explicit teaching of the reading comprehension strategies

Effectiveness: For instance, Without the introduction of the aforementioned strategies, the girls would be less encouraged and prepared to understand and interpret the texts; therefore, they are likely to become more successful with their application.

Factors for success: The implementation of the literature-based activities that would be designed according to the girls' interests and creative nature would boost the potential engagement. Support for the discussion and expression of the ideas would also be improved.

2.3.5.6 Emotional and Social Support Programs:

Effectiveness: self-esteem and increased emotional resilience are crucial for the general condition of girls with dyslexic difficulties, thus these programs can be extremely beneficial for patients.

Success factors: messages should be adjusted for girls also offering a positive peer environment and mentorship to help build self-confidence and enhance emotional health.

2.3.5.7 Teacher Training and Professional Growth:

Effectiveness: Educator training and professional development in dyslexia awareness and collegial sharing of opinions and strategies enable an inclusive learning environment. For successful outcomes, it is essential that educators are aware of the potential gender-specific manifestations and defense mechanisms. This knowledge can benefit the development of teaching and interaction style. Moreover, relevant and cost-effective professional development opportunities must be available in all regions to keep educators up to date with research and practices which can be effective.

2.3.5.8 Counseling and Cognitive Support:

Effectiveness: It is an effective measure to address the psychosocial aspects of dyslexia in females.

Success Reasons: acceptance of emotional struggles, instilling a growth mindset, and engagement strategies with parents in support initiatives are vital in improving emotional wellness and academic persistence.

2.3.6 Societal and Psychological Impact on Girls

Social and Emotional Impact on Girls. Another important aspect to discuss pertains to the social and emotional implications of dyslexia in girls. By exploring the findings of researchers, it would be possible to discuss the influence of these two factors on their educational experience.

2.3.6.1 Lower Self-Esteem and Confidence:

According to the reviewed literature, it was discovered that girls with dyslexia tend to have lower self-esteem and inadequate confidence levels when compared to their peers without this disorder. The influence on education lies in the impact on girls' class participation, expression, and academic risk-taking behavior. The restored lack of self-confidence can promote not taking academic risks, which may promote the elimination of learning during the educational process.

2.3.6.2 Social Stigma and Peer Relationships:

Social stigma and peer relationships. The conducted studies demonstrated that girls with dyslexia typically were stigmatized and unable to create and maintain relationships with their peers due to learning differences. The influence on education manifests itself in the lack of social behavior that can affect their school inclusion. The fear of judgment and ridicule cannot support class activity and cooperation in the preparation of educational tasks.

2.3.6.3 Anxiety and Stress:

Anxiety and stress. When discussing girls, researchers summarized that they feel high levels of anxiety and stress due to the need to read and prepare written tasks. Influence on education manifests itself in classrooms, behavior, unrelated attention, and the negative impact on their schooling.

2.3.6.4 Emotional Resilience and Coping Mechanisms:

Emotional resilience and coping strategies. Finally, the finding by Blom et al. that some girls have adaptable coping strategies with social and academic difficulties is vital. Among the

influences on education is the provision of better performance only if they care for an emotionally resilient environment. However, the search to identify maladaptive strategies is essential as they will not be good for an educational setting.

2.3.6.5 Teacher and Friend Assumptions:

Research Findings: Teachers and peers' perception of the capability of girls with dyslexia has implications for her social and emotional experiences. Negative perceptions are likely to result in lower expectations and opportunities for inclusion and direction. Conversely, positive assumptions and equal opportunity practices contribute to a supportive learning environment with positive repercussions on the girl's educational experience.

2.3.6.6 Parental and Teacher Support:

Research Findings: Supportive relationships with their parents and teachers indicated better emotional outcomes for the girls. The girl's self-esteem is likely to be fostered, adequate strategies for coping with difficulties developed, and a supportive learning environment established. The collaboration between parents and teachers can thus ameliorate the impact of social and emotional experiences on educational processes.

2.3.7 Shortcomings of the above study

Although the above studies provide significant insights into the social and emotional consequences for girls with dyslexia, they face several limitations. Common limitations that most researchers experience include:

2.3.7.1 Small Sample Sizes:

Many studies conducted on the above topic may use a small sample size. Small sample sizes limit the extent to which the acquired knowledge can be generalized. Most small samples do not portray the rich experiences that define a girl child with dyslexia hence limiting the ability to generalize.

2.3.7.2 Selection Bias:

Certain studies may also be affected by selection bias. This might be attributed to the fact that some researchers may have set limitations that only allow them to work with specific populations. It limits the ability of the information acquired to be devolved in other settings.

2.3.7.3 Cross-Sectional Designs:

Cross-sectional designs tend to be a major challenge in some of the studies. This is due to the information acquired in cross-sectional design may not capture the transient nature of trends. It is because some of the results may change with time. Longitudinal studies which may span years would have been more appropriate.

2.3.7.4 Reliance on Self-Report Measures:

Measures Very limited studies on the above topic use self-report measures. The use of self-report measures may limit the applicability of the findings. Self-report data may not capture the reality on the ground due to social desirability or limited insight into one's emotions.

2.3.7.5 Heterogeneity of Dyslexia:

Heterogeneity of dyslexia is a common challenge in the studies. Some of the studies conducted may not have taken this into account. This limitation may create a gap in the social and emotional experiences for females with learning disabilities.

2.3.7.6 Limited findings of Protective components:

Only some studies investigate protective factors. This is an important area of study as it would help determine the extent of these factors. Also, addressing only the challenges may limit the applicability of the findings.

2.3.7.7 Cultural and Socioeconomic Context:

Context Study of Cultural and socioeconomic status may not accurately be studied. No study came out to address the cultural status of the population under study. This is important as the social and emotional experiences across cultures may be explained.

2.3.7.8 Publication Bias:

There is a possibility of a bias whereby studies with positive or statistically significant outcomes might be published more often than studies with null or negative findings. Consequently, the evidence available might be skewed.

2.3.7.9 Limited Intervention Studies:

Although the volume of evidence on the social and emotional outcomes of dyslexia is growing, the number of intervention studies that can mitigate such outcomes is limited. Future studies should examine the impacts of interventions in actual educational setups.

2.3.7.10 Extended follow up:

Few researches conduct a follow-up to establish how long the social and emotional outcomes could last or continue in adulthood. The evidence on the evolution of such impacts is essential in developing targeted pursuits. Future studies should address the enumerated limitations to provide a comprehensive view of the social and emotional outcomes of dyslexia on girls for the development of effective interventions and helping programs.

2.4 SUMMARY

The review of literature regarding dyslexia and its manifestations in girls, educational interventions, as well as social and emotional consequences, indicates the following:

2.4.1 Gender-Specific Representations:

Girls who are students suffering from dyslexia exhibit more covert symptoms, leading to under-identification of the disorder. Furthermore, they are more proficient in verbal and expressive language numbers and use social strategies and skills to compensate.

2.4.2 Challenges Faced by Girls:

girls faced low self-esteem, stigma, anxiety, networks, and emotional reactions

Educational Interventions:

Not to mention that emotional resilience and coping techniques differ among females; educational treatment interventions include shifting to a phonics approach, multisensory learning and assistive technology, and an individual educational plan, particularly, the last alternative should be differentiated topic relevance.

2.4.3. Social and Emotional Consequences:

social and emotional aspects include feelings of inadequacy, anxiety, and lowered self-confidence among females. Welcoming and reassured educator and peer connections and positive parental participation had small but beneficial impacts.

2.4.4 Methodological Limitations in Research:

The following are the methodological restrictions to the studies: shortage of cases, decision bias, usage of self-report tools.

2.4.5 Importance of Tailored Educational Approaches:

patterns present a very complex and wide spectrum of symptoms, and individual social and economic context affect and need additional study; the statement that educational approaches for girls might include interventions that reflect individual preferences, strengths, and ways of coping is of higher relevance. Long-range issues that should be addressed in future research are importance, with long-range influence, and monitoring.

On the other hand, it would also be beneficial to research the long-term consequences of the condition and the intervention's duration and efficacy in girls. In the end, addressing the identified issues from a young age and offering regular support to the target population will support sustainability. The following are suggestions that could further support the ideas: the manifestation of symptomatology varies ; the exploitation of other strengths associated with gender; social and emotional support; implementation of multisensory teaching; and working with parents and teachers. Lastly, another possible recommendation is long-term support.

In conclusion, it is essential to recognize these challenges as unique and specific to girls with dyslexia and ensure that the educational approach is designed to meet each of these needs. A combination of holistic and individual approach that integrates academic, social, and emotional aspects is imperative for creating genuine and empowering co-regulation in a girls' dyslexic educational context

2.5 CONCLUSION

The literature presented elucidates the profound and complex nature of the challenge of dyslexia which is further compounded by the issues of gender and especially the gender gap in the recognition and response to this neurodevelopmental disorder in the form of girls. Research and analysis underscore the multifaceted nature of the disorder of dyslexia and its severe limitation on basic life skills such as reading and writing and comprehension. Of note is the expansiveness of the analysis which included a thorough review of the available literature on the peculiar needs of girls with dyslexia, thus enabling research to devise suitable empowerment strategies based on the existing education situations, diagnostic challenges, gender specific symptomatology, and existing intervention outcomes. Research elucidates the subtlety of the disorder's symptoms in girls and the specific socio-cultural and gender biases that have contributed to their prevalence and underdiagnosis. The consequent need for early detection could easily be affected by the inadequacies of the existing diagnostic measurement tools, possibly leading to misdiagnosis or non-diagnosis of the unique challenges of girls with dyslexia. Research adequately describes the relatively diverse academic challenges faced by girls citing reading fluency, spelling, comprehension, and writing followed closely by a predictable pattern of poor academic performance, frustration, and low self-esteem that indicative of the need to intervene. This literature review also highlights the possibility of a potential academic gap in the future for girls with dyslexia if their needs remain undetected and unsupported. The proposed interventions of multisensory teaching, assistive technologies, ICTs, individualized education programs, and differentiated and varied learning styles both have a strong basis in research indicating possible success for supporting girls with dyslexia. The emphasis on creating a supportive environment has been upheld in addressing dyslexia thus appropriate for the emotional and

academic development for individuals with the disorder. The recommendations to conclude the literature review including teacher educator, screening, learning resources, and support policies offer a comprehensive approach to addressing the needs of girls with dyslexia which merit this examination. It is a strong argument that girls need their educational needs recognized and met meaningfully through intervention, awareness promotion, and creating supportive and inclusive educational environments.

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Conflict of Interest

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