



Emergent Literacy in Children With Developmental Language Disorder: Developmental Foundations, Reading-Risk Pathways, Assessment, and Early Intervention

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Abstract

Background: Developmental Language Disorder (DLD) is a common neurodevelopmental condition characterized by persistent difficulties in the acquisition and use of spoken language that cannot be explained by an identifiable biomedical condition. Although its most visible manifestations involve vocabulary, grammar, sentence comprehension, and discourse, the consequences of DLD extend beyond oral communication. Because early literacy develops from the interaction of oral language, phonological processing, print knowledge, narrative competence, and cognitive-linguistic skills, children with DLD are especially vulnerable to weaknesses in emergent literacy and later reading achievement. These difficulties may affect phonological awareness, letter-sound knowledge, rapid automatized naming, phonological memory, vocabulary depth, morphosyntactic understanding, and narrative organization, thereby increasing the risk of decoding problems, poor reading comprehension, spelling impairment, and specific learning disorders such as dyslexia.

This review aims to synthesize current knowledge concerning the developmental foundations of emergent literacy in children with DLD, clarify the pathways linking early oral-language impairment to later reading difficulties, and examine clinically relevant approaches to assessment, early identification, and intervention. Particular attention is given to the heterogeneity of DLD, the distinction and overlap between DLD and dyslexia, and the contribution of co-occurring conditions such as speech sound disorder, attention-deficit/hyperactivity disorder, and broader executive-function weaknesses. The review also emphasizes the importance of comprehensive assessment across receptive and expressive language, phonological awareness, print concepts, letter knowledge, rapid naming, memory, narrative skills, hearing status, and developmental history. In multilingual children, culturally and linguistically appropriate evaluation is essential to avoid confusing language difference with disorder.

Early intervention should integrate oral-language enrichment with explicit instruction in phonological awareness, vocabulary, morphosyntax, narrative structure, print awareness, and letter-sound correspondence. Shared book reading, parent-mediated strategies, classroom support, and multidisciplinary collaboration are central to promoting generalization and reducing long-term academic consequences. From a phoniatric and ENT perspective, early recognition of auditory, speech, and language-related risk factors is essential for timely referral and intervention. Overall, emergent literacy assessment provides a critical opportunity to identify children with DLD who are at heightened risk for later reading and learning difficulties before formal academic failure becomes established.

Keywords: developmental language disorder; emergent literacy; dyslexia; early intervention



Introduction

Developmental Language Disorder (DLD) is a neurodevelopmental condition characterized by persistent difficulties in acquiring and using language that significantly restrict everyday communication, social participation, or educational progress. The contemporary term *DLD* replaced earlier labels such as *specific language impairment* because language difficulties are rarely “specific” in an absolute sense and may coexist with attentional, motor, executive-function, or literacy weaknesses. A diagnosis does not require a discrepancy between verbal and nonverbal intelligence, and the presence of environmental or biological risk factors does not automatically exclude DLD. Rather, the defining clinical consideration is a language disorder with a poor functional prognosis that is not attributable to a known differentiating biomedical condition, such as acquired brain injury, a genetic syndrome, or sensorineural hearing loss [1].

DLD is among the most prevalent childhood neurodevelopmental disorders, yet it remains comparatively underrecognized in clinical, educational, and public-health settings. A population-based investigation of children entering school estimated that approximately 7.6% had a language disorder of unknown origin, equivalent to about two children in a typical classroom of 30 pupils. The disorder is clinically heterogeneous: some children exhibit predominantly expressive difficulties, whereas others experience combined receptive and expressive impairment involving vocabulary, morphosyntax, sentence comprehension, verbal memory, and discourse organization. Because these skills support classroom learning and interpersonal communication, persistent DLD may negatively affect academic attainment, peer relationships, emotional well-being, and later occupational participation [2].

The developmental significance of DLD becomes particularly evident during the transition from spoken language to literacy. Emergent literacy encompasses the knowledge, abilities, and attitudes that develop before conventional reading and writing instruction, including oral-language proficiency, phonological awareness, alphabet knowledge, print concepts, narrative competence, and early writing behaviors. A useful theoretical distinction separates “inside-out” abilities, such as phonological awareness and letter–sound knowledge, which facilitate the decoding of print, from “outside-in” abilities, such as vocabulary, grammar, world knowledge, and narrative understanding, which support the construction of meaning. Successful literacy acquisition depends on the coordinated development of both domains rather than on mastery of an isolated prereading skill [3].

Children with DLD are vulnerable across both sides of this language-to-literacy system. Weak phonological representations, phonological awareness, or verbal short-term memory can interfere with establishing stable sound–symbol correspondences and may contribute to decoding and spelling difficulties. At the same time, restricted vocabulary, impaired morphosyntax, weak sentence comprehension, and poorly organized narratives can compromise reading comprehension even when basic word recognition becomes adequate. Longitudinal evidence further indicates that DLD and dyslexia are related but distinguishable developmental conditions: dyslexia is more strongly associated with phonological and decoding weaknesses, whereas DLD involves broader oral-language impairment. Children in whom both disorders coexist generally demonstrate more severe and extensive literacy difficulties than children with either condition alone [4].

Despite this established association, literacy outcomes among children with DLD are not uniform. Some children develop functional word-reading accuracy but continue to experience substantial difficulties understanding connected text, whereas others show combined impairment in decoding, fluency, spelling, and comprehension. The relative contribution of vocabulary, grammar, phonemic awareness, letter knowledge, rapid naming, phonological memory, and speech-production stability may vary with age, language, orthography, severity, and previous intervention. Recent longitudinal findings suggest that predictors identified in typically developing readers are also relevant to children with DLD, while emphasizing that features of phonological development—such as unstable speech representations—may carry additional predictive value. This variability limits the accuracy of predictions based on a single test and supports the use of multidimensional risk profiles [5].

An additional research gap concerns the predominance of studies conducted in English and other



European languages. Emergent literacy development is influenced by language-specific phonological, morphological, and orthographic characteristics; therefore, findings cannot always be transferred directly across linguistic populations. This issue is particularly important in Arabic, where diglossia, morphological complexity, and the characteristics of the writing system may influence the relationships among spoken language, phonological awareness, and print acquisition. Research involving Saudi Arabic-speaking children has identified significant weaknesses in language and emergent literacy among children with DLD, but the evidence base remains comparatively small. More culturally and linguistically appropriate longitudinal studies are needed to determine which combinations of early markers best predict reading outcomes in Arabic-speaking children [6].

Accordingly, this review aims to integrate current evidence regarding the developmental foundations of emergent literacy in children with DLD and to clarify the pathways through which early oral-language impairment increases the risk of later reading, spelling, and written-language difficulties. It examines the principal linguistic, phonological, cognitive, and print-related components of emergent literacy; distinguishes DLD from dyslexia and other specific learning disorders; and evaluates approaches to early identification, comprehensive assessment, and preventive intervention. Particular attention is directed toward clinically meaningful risk stratification, multilingual and cross-linguistic considerations, and multidisciplinary collaboration among phoniatrists, ENT specialists, audiologists, speech-language pathologists, psychologists, educators, and families.

Developmental Language Disorder: Contemporary Concept and Clinical Profile

Distinguishing DLD from transient early language delay is difficult during toddlerhood. Late talkers with isolated expressive delay may subsequently develop age-appropriate language, whereas the risk of persistence increases when delayed vocabulary is accompanied by poor comprehension, limited gestures, absent word combinations, weak syntax, or a family history of language or literacy disorders. Repeated monitoring is therefore more reliable than diagnosis based on a single vocabulary measure [7]. DLD is clinically heterogeneous and may affect phonology, vocabulary, semantics, morphology, syntax, pragmatics, or narrative discourse. Children with similar standardized test scores may differ considerably in their ability to follow instructions, maintain conversations, explain events, or participate in classroom activities. Assessment should therefore examine everyday communication and participation in addition to impairment-level language scores [8].

Cognitive weaknesses may accompany the linguistic profile of DLD. Verbal working memory difficulties are particularly common and can limit the retention of unfamiliar sound sequences, comprehension of lengthy sentences, vocabulary learning, and discourse processing. Attention, inhibition, and cognitive flexibility may also be affected, but these weaknesses are variable and should not be considered universal diagnostic requirements [9].

The etiology of DLD is multifactorial and reflects interactions among genetic susceptibility, neurodevelopment, and environmental experience. Family history is an important risk indicator, while prematurity, low birth weight, limited socioeconomic resources, and reduced language input may increase vulnerability. Nevertheless, no single factor is sufficient to cause or accurately predict DLD, supporting a cumulative-risk model [10].

Several language-processing measures can support clinical identification. Sentence-repetition tasks are particularly informative because they integrate phonological memory, grammatical knowledge, lexical processing, and sentence comprehension. Evidence from Arabic-speaking children indicates that sentence repetition can distinguish children with DLD from typically developing peers, although diagnostic stimuli must reflect the grammatical properties of the child's language [11].

The functional consequences of DLD extend into formal education. School-aged children frequently experience difficulties in reading, spelling, written expression, mathematics, and broader curriculum learning because classroom instruction depends heavily on oral-language comprehension. Academic vulnerability may persist across primary and secondary education, particularly when receptive-language and literacy difficulties coexist [12].

DLD may also influence social and emotional development. Communication breakdowns can restrict peer interaction, reduce participation, and contribute to frustration, anxiety, or diminished quality of life.



These outcomes are not inevitable but become more likely when language difficulties are severe, poorly recognized, or accompanied by academic and social adversity, emphasizing the value of early multidisciplinary support [13].

Emergent literacy refers to the skills, knowledge, and attitudes that develop before formal reading and writing instruction. It begins during early childhood through exposure to spoken language, books, symbols, and print. These early experiences gradually prepare children to understand that spoken words can be represented by written forms and that print carries meaning [14].

Oral language provides the central foundation for literacy development. Vocabulary, grammar, and listening comprehension enable children to understand stories, instructions, and later written texts. Preschool oral-language abilities also interact with code-related skills, including phonological awareness and print knowledge, to support later reading accuracy and comprehension [15].

Phonological awareness allows children to recognize and manipulate the sound structure of spoken language. Development usually progresses from awareness of words, rhyme, and syllables toward blending and segmenting individual phonemes. These skills help children establish connections between speech sounds and letters, making phonological awareness a major precursor of decoding and spelling [16].

Letter knowledge includes recognition of letter forms, knowledge of letter names, and understanding of letter–sound relationships. It provides children with the symbolic system needed to translate print into spoken language. Efficient acquisition of letter knowledge supports early decoding, unfamiliar-word reading, and accurate word identification [17].

Print awareness involves understanding that print communicates meaning and follows conventional rules. Children gradually learn how books are handled, where reading begins, the direction in which print proceeds, and the distinction between letters, words, pictures, and punctuation. Frequent shared reading and explicit attention to print strengthen these concepts before school entry [18].

Narrative competence connects oral language with later reading comprehension. To understand or produce a coherent story, children must integrate vocabulary, grammar, sequencing, causal relationships, memory, and knowledge of story structure. Vocabulary and grammatical ability contribute strongly to narrative quality, particularly as stories become linguistically and conceptually more demanding [19].

Phonological memory supports the temporary storage of unfamiliar sound sequences and contributes to vocabulary learning and early word recognition. Weak phonological memory may make it difficult to retain new word forms, follow lengthy verbal information, and establish stable representations of spoken words. Its effect on reading is closely connected to broader language comprehension and phonological processing abilities [20].

These components develop interactively rather than independently. Vocabulary growth can improve phonological representations, while print exposure strengthens awareness of letters, words, and sound–symbol relationships. Consequently, emergent literacy should be assessed as a multidimensional developmental system that combines oral-language, phonological, narrative, memory, and print-related abilities [14].

Limited vocabulary breadth and depth can restrict understanding of stories, classroom explanations, and later written texts. Children with DLD often learn new words more slowly and form less detailed semantic representations. These weaknesses particularly affect reading comprehension because accurate decoding alone does not ensure understanding of unfamiliar words and complex sentences [5].

Phonological-awareness difficulties are also frequent. Affected children may struggle to recognize rhyme, segment syllables, blend sounds, or isolate phonemes. These limitations interfere with learning letter–sound correspondences and increase the risk of later decoding and spelling difficulties, especially when accompanied by speech sound or phonological-memory deficits [22].

Phonological memory may further limit emergent literacy development by reducing the child’s ability to retain unfamiliar sound sequences. Poor nonword repetition can reflect difficulty encoding and temporarily storing phonological information needed for vocabulary learning and early decoding. Children with combined language and phonological weaknesses generally have greater literacy risk than



those with isolated language impairment [23].

Narrative production is often shorter, less organized, and less cohesive in children with DLD. They may omit important story elements, use fewer causal connections, and produce grammatically simpler sentences. These difficulties reflect weaknesses in vocabulary, morphosyntax, memory, and discourse organization and may later contribute to poor reading comprehension and written expression [19].

Print and alphabet knowledge are not uniformly impaired in DLD because they are strongly influenced by preschool instruction and home literacy exposure. Some children acquire letter names and print concepts adequately despite significant oral-language deficits. Nevertheless, apparently intact alphabet knowledge should not obscure weaknesses in phonological processing or language comprehension that may emerge when formal reading demands increase [21].

Rapid automatized naming may be weak in a subgroup of children with DLD, particularly those who later develop dyslexia. Slow retrieval of familiar symbols can reduce word-reading fluency, while phonological-awareness deficits primarily affect decoding accuracy. The coexistence of language, phonological, and naming weaknesses therefore indicates a broader and more severe reading-risk profile [24].

Children with DLD are at increased risk for later reading difficulties because literacy depends on both accurate word recognition and adequate oral-language comprehension. Weaknesses in phonology may restrict decoding, whereas deficits in vocabulary, grammar, and discourse impair understanding of written text. The resulting reading profile therefore differs according to the linguistic abilities most affected in each child [25].

DLD and dyslexia are related but distinct disorders. Dyslexia is primarily associated with phonological processing and word-decoding difficulties, while DLD involves broader oral-language impairment. Children with DLD may read words accurately yet struggle to understand sentences and passages, whereas children with dyslexia may comprehend spoken language well but decode print inefficiently [25].

Comorbidity produces the greatest literacy burden. Children with both DLD and dyslexia frequently show impaired decoding together with weak vocabulary, grammar, and listening comprehension. Consequently, they are vulnerable to poor reading accuracy, fluency, spelling, and comprehension, and generally require intervention targeting both phonological decoding and broader language comprehension [25].

Phonological-awareness deficits represent an important pathway from DLD to reading impairment. Difficulty segmenting, blending, or manipulating phonemes interferes with the acquisition of letter–sound relationships and unfamiliar-word decoding. Risk is particularly elevated when phonological weaknesses coexist with poor nonword repetition, unstable speech representations, or a history of speech sound disorder [5].

Vocabulary and morphosyntactic weaknesses create a separate pathway to reading-comprehension failure. Limited word knowledge reduces access to text meaning, while grammatical difficulties interfere with understanding complex sentences, reference relations, and cohesive devices. These problems become increasingly evident as school texts shift from familiar spoken language toward abstract academic language [26].

Narrative and discourse difficulties may further restrict literacy development. Children who struggle to organize events, infer causal relationships, or identify central story information often have difficulty constructing coherent mental representations of written passages. These weaknesses may later affect summarization, written composition, and comprehension of both narrative and expository texts [19].

Longitudinal evidence indicates that preschool DLD can predict later specific learning disorder, particularly when language impairment is severe or accompanied by phonological-processing difficulties. However, not every child with DLD develops a formal learning disorder. Risk prediction is improved by combining language measures with phonological awareness, family history, memory, and early literacy performance [27].

Co-occurring speech sound disorder can intensify reading risk when speech difficulties reflect unstable phonological representations rather than isolated articulation errors. Persistent phonological disorder



may interfere with phoneme awareness, spelling, and decoding. Clinicians should therefore distinguish motor or articulation-based errors from broader phonological-language impairment when estimating literacy prognosis [28].

Attention-deficit/hyperactivity disorder may also complicate the language-to-literacy pathway. Inattention, impulsivity, and weak executive control can reduce engagement with instruction and affect verbal working memory, reading fluency, and comprehension monitoring. When ADHD and DLD coexist, assessment should determine whether academic errors arise from language-processing limitations, attentional breakdown, or both [29].

Clinical Assessment of Emergent Literacy in Children With DLD

Hearing assessment is essential before attributing language difficulties to DLD. Even mild or fluctuating hearing loss may affect vocabulary, morphosyntax, speech perception, and classroom listening. Otoscopy, tympanometry, and age-appropriate audiometry should therefore be included when hearing status is uncertain, particularly in children with recurrent otitis media or inconsistent responses to spoken language [30].

Oral-language assessment should examine vocabulary, grammar, sentence comprehension, word retrieval, and narrative discourse. Both receptive and expressive abilities are required because receptive deficits may be less visible but strongly associated with persistent language and reading-comprehension difficulties. Standardized tests should be supplemented by language samples and observations of everyday communication [7].

Phonological-awareness assessment should progress from larger to smaller sound units. Tasks may include rhyme recognition, syllable segmentation, onset-rime awareness, phoneme blending, phoneme isolation, and phoneme deletion. Poor performance, particularly in phoneme-level tasks, indicates increased risk for decoding and spelling difficulties [16].

Letter knowledge and print concepts should also be examined before formal schooling. Assessment includes recognition of letter names and sounds, understanding that print carries meaning, book orientation, reading direction, and differentiation among letters, words, and pictures. These measures help determine whether the child has developed the basic alphabetic and print foundations required for reading instruction [17,18].

Phonological memory is commonly assessed using nonword repetition and digit-span tasks. Nonword repetition is especially useful because it reduces dependence on existing vocabulary and evaluates the ability to encode and reproduce unfamiliar sound sequences. However, results may also be influenced by speech production, language exposure, and phonological characteristics of the child's language [23]. Rapid automatized naming evaluates the speed of retrieving familiar verbal labels for objects, colors, digits, or letters. Slow naming may signal risk for reduced reading fluency, particularly when it coexists with weak phonological awareness. RAN should therefore contribute to a broader risk profile rather than being used alone to diagnose dyslexia or DLD [24].

Narrative assessment provides information about vocabulary, grammar, sequencing, causal organization, cohesion, and inferential understanding. Story retelling and story-generation tasks may reveal discourse weaknesses that are not evident in isolated sentence tests. Narrative performance is especially relevant to later reading comprehension and written composition [19].

Assessment of multilingual children should include information about exposure, proficiency, and use of all languages. Poor performance in the language of instruction alone does not establish DLD, because limited exposure may produce similar findings. Evidence of difficulty across languages, together with parental report, language sampling, and culturally appropriate measures, improves diagnostic accuracy [31].

Dynamic assessment can help distinguish language difference from disorder by examining how effectively a child learns after structured teaching. Test-teach-retest procedures evaluate modifiability, strategy use, and response to cues rather than relying only on previously acquired knowledge. This approach is particularly useful for multilingual children, although it should complement rather than replace comprehensive assessment [32].

Differential diagnosis should consider dyslexia, speech sound disorder, ADHD, autism spectrum



disorder, intellectual disability, and auditory-processing complaints. These conditions may overlap with DLD but differ in their primary clinical features. Diagnostic decisions should therefore be based on the overall developmental profile, functional impairment, and convergence of evidence across several assessment methods [1,29].

Early Identification and Risk Stratification

Early identification is essential because literacy difficulties often become evident only after formal reading instruction begins. Children with DLD may already show risk through delayed vocabulary, weak sentence comprehension, limited word combinations, poor phonological awareness, or reduced narrative skills. Screening during the preschool years allows support to begin before repeated academic failure occurs [7].

Late talking alone does not reliably predict persistent disorder. Risk is higher when expressive delay is accompanied by poor receptive language, weak gesture use, limited grammatical development, or a family history of DLD or dyslexia. Repeated assessment across time is therefore more informative than a single early language score [7].

Receptive-language weakness is a particularly important warning sign. Children who struggle to understand words, sentences, or multistep instructions are more likely to experience persistent language and later reading-comprehension difficulties. Early assessment should therefore examine comprehension as carefully as expressive vocabulary [33].

Phonological-awareness deficits also help identify children at risk for decoding and spelling problems. Difficulty with rhyme, syllable segmentation, phoneme blending, or phoneme deletion suggests weakness in the sound-processing system needed for alphabetic learning. Risk increases when these deficits coexist with poor letter knowledge or unstable speech production [16].

Family history should be included in risk stratification because DLD and dyslexia show substantial familial aggregation. A child with early language delay and a first-degree relative with language, reading, or spelling difficulties requires closer monitoring, even when preschool symptoms appear mild [34].

Combined risk markers provide better prediction than isolated measures. A profile that includes weak receptive language, limited grammar, poor phonological awareness, low letter knowledge, and slow rapid naming indicates broader vulnerability than weakness in only one domain. Multidimensional screening therefore supports more accurate intervention planning [5].

Response to intervention is also clinically informative. Children who improve rapidly with brief, targeted support may have transient or environmentally mediated delay, whereas limited progress despite adequate teaching suggests a more persistent disorder. However, intervention response should complement rather than replace formal diagnostic assessment [32].

Early Intervention and Prevention

Early intervention should address the child's individual combination of oral-language and emergent-literacy weaknesses. Treatment goals may include vocabulary, morphosyntax, sentence comprehension, phonological awareness, narrative organization, and letter-sound knowledge. Evidence supports intervention for expressive vocabulary, phonology, and grammar, although outcomes vary according to the targeted skill, intervention intensity, and severity of DLD [35].

Phonological-awareness instruction should progress systematically from rhyme and syllable awareness to phoneme blending, segmentation, and manipulation. Activities should be linked explicitly to letters because isolated sound-based practice may not transfer adequately to reading. Children with combined DLD and phonological difficulties may require more repetition, visual support, and cumulative practice than typically developing peers [36].

Vocabulary intervention is most effective when new words are taught through repeated exposure, child-friendly definitions, semantic relationships, phonological cues, and meaningful contexts. Target words should be selected according to their usefulness in classroom communication and text comprehension. Revisiting vocabulary during conversation, storytelling, and shared reading supports retention and generalization beyond therapy sessions [35].

Explicit morphosyntactic intervention is appropriate when grammatical weaknesses interfere with



comprehension or expression. Clinicians may directly explain target forms, contrast correct and incorrect examples, and provide structured production practice. These techniques can be combined with implicit strategies, including modeling, recasting, and enriched language input, to promote use in natural communication [35].

Narrative-based intervention integrates vocabulary, grammar, sequencing, causal language, inferencing, and discourse organization. Visual story frameworks, repeated retelling, clinician modeling, and guided story generation can improve narrative production and comprehension. Narrative treatment is particularly relevant for school readiness because it supports later reading comprehension and written composition [37].

Shared book reading provides a natural context for combining oral-language and print-related instruction. Adults can ask open questions, expand the child's responses, explain unfamiliar vocabulary, discuss characters and causes, and draw attention to letters and print. Parent-focused book-sharing interventions improve caregiver interaction strategies and can produce gains in children's receptive and expressive language [38].

Parents should be trained to use responsive interaction, expansions, recasts, focused stimulation, and language-rich routines during everyday activities. Parent-mediated intervention increases learning opportunities and supports generalization across settings, but caregivers require clear goals, demonstration, feedback, and realistic home-practice plans. Therapy should support families rather than transfer clinical responsibility to them [39].

Preschool and classroom intervention should coordinate language therapy with early literacy teaching. Teachers can simplify complex instructions, preteach vocabulary, use visual supports, provide additional processing time, and reinforce phonological and narrative targets. Collaboration among families, speech-language pathologists, phoniatricians, audiologists, psychologists, and educators is essential for maintaining consistent objectives and monitoring progress [35].

Intervention intensity should be individualized rather than determined solely by diagnosis. Children with severe receptive-language, working-memory, or attentional difficulties may benefit from shorter activities, frequent repetition, distributed practice, and multimodal cues. Progress should be measured using both trained tasks and functional outcomes, including classroom comprehension, spontaneous communication, and participation [35].

Clinical Implications for Phoniatrics and ENT Practice

Phoniatric and ENT evaluation is important because hearing impairment can mimic or aggravate language and emergent-literacy difficulties. Every child with significant language delay should undergo age-appropriate hearing assessment, even when caregivers report apparently normal hearing. Clinical examination should include otoscopy, tympanometry when indicated, and behavioral or electrophysiological audiometry according to developmental level [36].

Otitis media with effusion may produce fluctuating conductive hearing loss during sensitive periods of speech and language development. However, its long-term effect on language is variable, and evidence suggests that average associations are often small. Clinicians should therefore avoid attributing persistent multidomain language impairment solely to previous otitis media without comprehensive language and developmental assessment [37].

The phoniatric examination should distinguish DLD from speech sound disorder, childhood apraxia of speech, dysarthria, resonance disorders, and voice abnormalities. Speech intelligibility, oral-motor function, phonological organization, fluency, and receptive and expressive language should be evaluated separately because impairment in one domain may conceal difficulties in another [28].

Children referred for articulation or pronunciation problems should also be screened for broader language and literacy risk. Persistent phonological errors, poor nonword repetition, weak vocabulary, and limited sentence formulation may indicate co-occurring DLD. Such children require assessment beyond isolated speech-sound production because combined speech and language impairment increases later reading risk [23].

Auditory complaints should be interpreted cautiously. Difficulty following spoken instructions may arise from hearing loss, language-comprehension impairment, attention deficits, or adverse listening



conditions. Diagnosis should therefore integrate audiological findings with language assessment, behavioral observations, and information from home and school rather than relying on one auditory-processing measure [29,36].

Phoniatricians are well positioned to initiate early referral before formal literacy failure develops. Preschool children with persistent language delay, weak phonological awareness, limited narrative skills, or a family history of dyslexia should be referred for speech-language and emergent-literacy assessment. Early referral permits preventive intervention during the period when language and print foundations are most modifiable [7].

Management should be multidisciplinary. The phoniatrician or ENT specialist addresses hearing, upper-airway, structural, neurological, and voice-related factors; the audiologist defines auditory access; the speech-language pathologist evaluates language and literacy precursors; and psychologists and educators assess cognition, attention, behavior, and academic functioning. Shared documentation and coordinated goals reduce fragmented care [38].

Conclusion

Children with Developmental Language Disorder are at substantial risk for weaknesses in emergent literacy and later difficulties in decoding, spelling, reading comprehension, and written expression. This risk reflects the interaction of oral-language impairment with deficits in phonological awareness, verbal memory, narrative organization, print knowledge, and rapid lexical access. Because outcomes are heterogeneous, assessment should be multidimensional, developmentally repeated, and sensitive to hearing status, multilingual exposure, co-occurring neurodevelopmental conditions, and functional educational demands. Early intervention that integrates language enrichment with explicit phonological, narrative, vocabulary, morphosyntactic, and print-related instruction offers the best opportunity to reduce later academic consequences. Coordinated follow-up among phoniatricians, ENT specialists, audiologists, speech-language pathologists, psychologists, educators, and families is therefore essential to identify risk before formal reading failure becomes established and to support long-term communication, literacy, and participation.

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