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## *Speech and Language Delay in Early Childhood: Causes, Clinical Characteristics, Assessment, and Early Intervention*

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### **Abstract**

Speech and language development represents one of the most important dimensions of early childhood development because it provides the foundation for communication, social interaction, learning, emotional expression, and later academic achievement. Although considerable individual variation exists in the age at which children acquire particular communicative skills, some children demonstrate a noticeable delay in the emergence or development of speech and language. Speech delay and language delay are sometimes used interchangeably in everyday discourse, although they refer to different aspects of communication. Speech delay primarily concerns the production and intelligibility of speech sounds, whereas language delay may involve difficulties in vocabulary acquisition, sentence formation, language comprehension, or the functional use of language. Early language delay, particularly when occurring in the absence of an identified developmental disorder, is frequently described as late language emergence or late talking. This article provides a theoretical and clinical review of speech and language delay during early childhood. It discusses normal speech and language development, conceptual distinctions, prevalence and developmental trajectories, major biological and environmental risk factors, clinical manifestations, assessment procedures, differential diagnosis, psychosocial and educational consequences, and evidence-based approaches to early intervention. Particular attention is given to the role of speech-language pathologists, families, hearing assessment, parent-implemented intervention, play, responsive communication, dialogic reading, and multidisciplinary collaboration. Current evidence suggests that although a substantial proportion of late-talking children eventually develop language abilities within the broadly expected range, early delay should not be dismissed because some children continue to demonstrate subtle or clinically significant difficulties in vocabulary, grammar, literacy, and academic performance. Consequently, systematic assessment, longitudinal monitoring, family participation, and individualized early intervention are essential components of effective clinical practice.

**Keywords:** Speech Delay; Language Delay; Late Talkers; Early Childhood; Speech-Language Pathology; Early Intervention.

### **1. Introduction**

Human language develops through a complex interaction among biological maturation, auditory perception, cognitive development, motor abilities, social interaction, and exposure to meaningful communication. From the earliest months of life, infants participate in communicative exchanges through crying, eye contact, facial expressions, vocalizations, gestures, and babbling. These preverbal behaviors gradually develop into recognizable words, combinations of words, increasingly complex grammatical structures, and socially appropriate conversational abilities. The first years of life are particularly important for speech and language acquisition because rapid neurological, cognitive, and social development occurs during this period. The National Institute on Deafness and Other Communication Disorders emphasizes that the first three years constitute an especially intensive period for acquiring speech and language skills and that exposure to language and interaction plays an important role during this developmental period (NIDCD, n.d.).

Despite the existence of general developmental patterns, children do not acquire language at exactly the same rate. Some begin producing words relatively early, whereas others take longer to reach similar milestones. Variation alone is therefore not sufficient to establish the existence of a clinical problem. Concern becomes more significant when a child's communicative abilities remain substantially below developmental expectations, when progress is limited over time, when comprehension is affected, or when language difficulties interfere with social participation and learning.

The expression speech delay is widely used by parents, teachers, and sometimes professionals to describe children who do not communicate verbally as expected for their age. From a clinical perspective, however, a distinction must be made between speech and language. Speech refers primarily to the physical and motor production of sounds that constitute spoken words. Language is a broader symbolic system involving vocabulary, grammar, meaning, comprehension, and the social use of communication. A child may therefore understand language and construct age-appropriate ideas but have difficulty pronouncing sounds, while another may pronounce individual sounds clearly but demonstrate limited vocabulary or difficulty understanding sentences.

The American Speech-Language-Hearing Association describes late language emergence as delayed language onset in young children who do not have another diagnosed disability or developmental delay affecting other major developmental domains. Children with late language emergence may demonstrate expressive difficulties alone or combined receptive and expressive difficulties (ASHA, n.d.-a). The common expression late talker is often used for toddlers whose spoken vocabulary develops more slowly than expected despite relatively typical development in several other areas.

The clinical importance of early speech and language delay extends beyond the number of words a young child produces. Language supports the child's ability to learn from adults, interact with peers, regulate emotions, solve problems, participate in classroom activities, understand stories, and acquire literacy. Longitudinal research indicates that many children identified as late talkers improve considerably with age; nevertheless, as a group they may continue to demonstrate weaker performance than peers with typical early language development on some measures of language and literacy (Rescorla, 2011). Therefore, identifying children who require intervention while avoiding unnecessary pathologization of normal developmental variation remains a central challenge in speech-language pathology.

This article examines speech and language delay from a developmental and clinical perspective and highlights the importance of early identification, comprehensive assessment, and evidence-based intervention.

## **2. Conceptualizing Speech and Language Delay**

A clear conceptual framework is necessary because communication disorders in childhood are heterogeneous. Speech production requires precise coordination among respiration, phonation, articulation, auditory feedback, oral motor mechanisms, and linguistic representations. Language, by comparison, includes several interrelated domains: phonology, morphology, syntax, semantics, and pragmatics.

A speech sound delay or disorder occurs when a child experiences difficulty producing or organizing speech sounds in a manner expected for developmental level and language background. Speech sound disorders may involve articulation difficulties, phonological patterns, motor planning difficulties, structural abnormalities, hearing-related problems, or combinations of these factors. ASHA defines speech sound disorders broadly as difficulties involving the perception, motor production, or phonological representation of speech sounds and speech segments (ASHA, n.d.-b).

A language delay involves slower development of one or more language domains. Expressive language difficulties may appear as limited vocabulary, reduced spontaneous speech, short utterances, limited grammatical complexity, or difficulty narrating experiences. Receptive language difficulties involve problems understanding words, instructions, questions, grammatical relationships, or connected discourse. Some children present mainly with expressive delay, whereas others experience difficulties in both comprehension and expression.

The distinction between developmental delay and developmental disorder is also important. Delay may suggest that skills are developing according to a generally expected sequence but at a slower pace. In contrast, a disorder may involve persistent and functionally significant difficulties that cannot simply be interpreted as temporary immaturity.

International efforts have attempted to establish more consistent terminology for children's language problems. The CATALISE consensus project recommended the term Developmental Language Disorder (DLD) for language difficulties that are likely to persist and have a significant impact on everyday social interaction or educational progress when they are not associated with a known biomedical condition. The consensus also emphasized that DLD is heterogeneous and should not be defined solely according to discrepancies between verbal and nonverbal intelligence (Bishop et al., 2017).

Late language emergence should therefore not automatically be considered DLD. Some late talkers experience rapid improvement, whereas others continue to present language difficulties. Clinical evaluation must consequently consider developmental trajectories rather than relying on a single observation at one point in time.

## **3. Typical Development of Speech and Language**

Understanding typical development is necessary for identifying potential delay. Communication begins before the production of recognizable words. During infancy, children learn to attend to human voices, recognize familiar sound patterns, participate in turn-taking interactions, and use vocalizations and gestures intentionally.

During approximately the first year, vocal development usually progresses from crying and nonspeech sounds to cooing, canonical babbling, varied babbling, gestures, and early word-like productions. Infants increasingly associate words with familiar people, objects, routines, and actions. By the end of the first year, many children understand familiar words and may produce one or more meaningful words.

Between the first and second years of life, vocabulary generally expands progressively. Children increasingly use words for requesting, commenting, protesting, greeting, attracting attention, and sharing experiences. They begin combining words as their lexical knowledge and grammatical abilities develop. NIDCD developmental guidance indicates that during the period from one

to two years children increasingly follow simple commands, recognize familiar pictures and objects, acquire new words, and begin combining words (NIDCD, n.d.).

During the third year, language becomes substantially more productive. Children commonly produce multiword combinations, ask questions, name objects, express wants and experiences, and become increasingly understandable to familiar listeners. Between three and five years, grammatical structures become more complex, vocabulary expands rapidly, narratives emerge, and conversational skills develop.

These milestones are guides rather than rigid deadlines. Cultural practices, language exposure, individual temperament, multilingual experience, interaction opportunities, and developmental variation influence children's communicative performance. For this reason, assessment should examine developmental patterns comprehensively instead of judging a child according to one isolated milestone.

The evaluation of multilingual children requires particular care. Exposure to two or more languages does not, by itself, constitute a language disorder. Language knowledge may be distributed across languages, meaning that the child may know particular concepts or vocabulary in one language but not another. Assessment should therefore consider all languages used by the child. Standardized measures based on monolingual populations should not be interpreted uncritically when the child is not adequately represented by the test's normative sample. ASHA recommends integrating caregiver interviews, observation, language sampling, and other culturally responsive procedures when assessing multilingual children (ASHA, n.d.-a).

#### **4. Causes and Risk Factors**

Speech and language delay does not have a single cause. Communication development reflects the interaction of genetic, neurological, sensory, cognitive, motor, psychological, environmental, and social factors. In many children classified as late talkers, no single identifiable cause is found.

##### **4.1 Hearing Difficulties**

Adequate access to auditory information is fundamental for spoken language development. Children learn speech sounds partly by hearing and discriminating differences among sounds in their environment. Congenital hearing loss, recurrent middle-ear problems, or acquired hearing impairment may therefore interfere with the development of speech perception and spoken language.

A child with mild or fluctuating hearing difficulties may still respond to environmental sounds, which can lead families to assume hearing is normal. Consequently, behavioral response to sound alone cannot always exclude hearing impairment. Hearing assessment is an important component of the evaluation of children presenting with speech or language delay (NIDCD, n.d.; ASHA, n.d.-a).

##### **4.2 Genetic and Familial Factors**

Language development has a significant heritable component. A family history of speech, language, reading, or learning difficulties may increase developmental risk. Genetic influences do not imply that the child's future is predetermined; instead, they interact with many other biological and environmental factors.

Research into developmental language difficulties has identified genetic contributions involving multiple pathways rather than a single universal cause. Certain rare speech disorders may have stronger associations with specific genetic mechanisms. For example, research on childhood apraxia of speech has identified several genes associated with speech motor planning difficulties and broader neurodevelopmental conditions (ASHA, n.d.-c).

##### **4.3 Neurodevelopmental Conditions**

Speech or language delay may occur as an isolated developmental difficulty or as part of a broader neurodevelopmental condition. Language difficulties can occur in children with autism spectrum disorder, intellectual developmental disability, developmental language disorder, attention-related difficulties, motor disorders, or genetic syndromes.

The presence of delayed speech alone does not establish any particular diagnosis. Assessment must examine social communication, play, comprehension, adaptive behavior, motor development, cognitive functioning, and developmental history before clinical conclusions are reached.

##### **4.4 Prematurity and Perinatal Factors**

Children born prematurely or following certain neonatal complications may demonstrate an increased risk of delayed communication. Prematurity may be associated with differences in neurological maturation, sensory processing, attention, or other developmental functions that contribute to language learning. Nevertheless, outcomes among preterm children are highly variable.

##### **4.5 Cognitive Development**

Language development depends partly on cognitive processes such as attention, memory, symbolic representation, categorization, processing speed, and learning. Children with global developmental delay may consequently demonstrate delayed speech and language development together with delays in other developmental domains.

At the same time, language disorders can occur in children whose nonverbal abilities are relatively strong. Contemporary approaches therefore discourage defining language disorder simply through a discrepancy between verbal and nonverbal intelligence.

#### **4.6 Oral-Motor and Speech-Motor Factors**

Some children understand language relatively well but have considerable difficulty planning or executing speech movements. Childhood apraxia of speech is a neurological speech sound disorder in which the precision and consistency of speech movements are affected because of difficulties in planning or programming speech movements (ASHA, n.d.-c). Other children may have dysarthria, structural differences affecting the oral mechanism, or speech sound disorders involving phonological representations.

Such cases demonstrate why reduced verbal output should not automatically be interpreted as inadequate vocabulary knowledge.

#### **4.7 Environmental and Interactional Factors**

Language develops through social interaction. Children benefit from responsive conversations, shared attention, play, storytelling, songs, book reading, and meaningful participation in daily routines. The amount and quality of communicative interaction can influence language development.

However, environmental explanations must be applied carefully. Parents should not be blamed for developmental language difficulties. A child's communication profile results from interactions among multiple biological and contextual factors. In addition, children with emerging language difficulties may themselves communicate less frequently, which can alter adult-child interaction patterns.

Socioeconomic conditions can indirectly influence language opportunities through access to educational resources, parental time, stress, childcare quality, healthcare, and literacy materials. A meta-analysis of predictors among late talkers found that receptive language, expressive vocabulary size, and socioeconomic status contributed to prediction of later expressive-language outcomes, although prediction remains imperfect for individual children (Fisher, 2017).

#### **5. Clinical Manifestations and Warning Signs**

Children with delayed communication do not all display the same characteristics. The clinical presentation depends on age, affected language domains, severity, underlying causes, environmental demands, and associated developmental abilities.

Possible manifestations include limited babbling during infancy, reduced imitation of sounds, limited use of gestures, slow acquisition of words, small expressive vocabulary, little spontaneous speech, difficulty combining words, reduced sentence length, grammatical errors beyond developmental expectations, difficulty understanding instructions, frequent reliance on gestures rather than speech, poor intelligibility, and frustration during communication.

Some children may communicate effectively through eye contact, gestures, facial expressions, and shared attention despite limited spoken vocabulary. Others may exhibit difficulties across both verbal and nonverbal communication. The latter profile may indicate a need for broader developmental assessment.

Receptive language deserves particular attention. Children whose understanding of language is relatively strong but whose verbal expression is delayed may have a different developmental trajectory from children who experience difficulties in both comprehension and expression. Research has repeatedly identified receptive language as an important predictor of subsequent language outcomes among late talkers (Fisher, 2017).

Early grammatical development can also provide useful information. A longitudinal study of late-talking children found that difficulties in syntactic comprehension at approximately the end of the second year helped distinguish children who later demonstrated persistent language difficulties from some children whose language improved more rapidly (Sansavini et al., 2019). Clinical warning signs should never be interpreted independently of the child's entire developmental profile. Concern is generally stronger when multiple features occur together, when language comprehension is affected, when development stops progressing, when previously acquired skills are lost, or when speech and language difficulties interfere significantly with everyday participation.

#### **6. Assessment and Diagnosis**

Assessment is one of the most important stages in managing speech and language delay. Its purpose is not simply to determine whether a child has fewer words than peers. Rather, assessment aims to describe communication strengths and weaknesses, determine whether the observed pattern represents developmental variation or a clinically significant difficulty, identify possible contributing conditions, and guide intervention.

##### **6.1 Developmental and Case History**

Assessment begins with detailed information from parents or caregivers. Relevant information includes pregnancy and birth history, developmental milestones, medical history, hearing history, recurrent ear infections, feeding and oral-motor development, early vocal behavior, first words, language exposure, family history of communication difficulties, educational experiences, and parental concerns.

Information about the child's communicative behavior in natural settings is particularly valuable. Some young children speak substantially less in unfamiliar clinical environments than at home.

##### **6.2 Hearing Evaluation**

Hearing screening or audiological evaluation should form part of the assessment process when speech or language delay is suspected. ASHA specifically includes hearing screening among important components of screening for late language emergence and recommends referral for comprehensive audiological assessment when concerns arise (ASHA, n.d.-a).

### 6.3 Expressive Language Assessment

Expressive assessment examines the child's use of words, vocabulary diversity, word combinations, grammatical morphology, sentence complexity, narrative ability, and functional communication. For children with very limited verbal speech, clinicians also examine gestures, vocalizations, pointing, imitation, eye gaze, and communicative intent.

Language samples collected during play or interaction can reveal abilities that may not appear during standardized testing.

### 6.4 Receptive Language Assessment

Receptive assessment evaluates comprehension of vocabulary, questions, commands, grammatical structures, concepts, and connected discourse. Because comprehension can be difficult to observe directly, assessment frequently combines structured tasks, parent reports, and naturalistic observations.

### 6.5 Speech Sound Assessment

When the child's verbal output is sufficient, the clinician examines sound production, phonological patterns, syllable structures, consistency, intelligibility, prosody, and oral-motor functioning. The purpose is to determine whether reduced communication reflects primarily language difficulties, speech sound difficulties, motor speech problems, or a combination.

### 6.6 Play and Social Communication

Play provides important information about symbolic development and social communication. The clinician may observe joint attention, turn-taking, pretend play, imitation, communicative gestures, initiation of interaction, response to communication, and the child's ability to share interests.

### 6.7 Standardized and Nonstandardized Measures

Standardized assessments can provide useful comparisons with normative groups when they are appropriate for the child's linguistic and cultural background. However, standardized scores should never constitute the sole basis of diagnosis. Language sampling, dynamic assessment, caregiver interviews, observation, and functional communication measures are especially important for children from culturally and linguistically diverse backgrounds (ASHA, n.d.-a).

## 7. Differential Diagnosis

Differential diagnosis seeks to determine whether delayed communication is an isolated developmental pattern or part of another condition. This process is essential because intervention depends on the underlying communication profile.

A child with predominantly expressive language delay may understand instructions, participate socially, use gestures appropriately, and communicate intentions effectively despite limited spoken vocabulary. Another child may demonstrate difficulties in both receptive and expressive language. A third may have adequate vocabulary but poor speech intelligibility because of a speech sound disorder.

Hearing impairment should be considered whenever communication development is delayed. Developmental language disorder is considered when persistent language difficulties significantly affect functioning and are not better explained by a known biomedical condition. Speech sound disorders should be considered when the primary difficulty involves production or organization of speech sounds.

Childhood apraxia of speech requires specialist assessment because its characteristics involve speech motor planning and programming rather than simply delayed vocabulary development. Autism spectrum disorder, global developmental delay, intellectual developmental disability, and other neurodevelopmental conditions may also involve delayed language, but diagnosis requires evidence beyond speech delay alone.

No isolated word count, pronunciation error, or developmental milestone is sufficient to diagnose a complex developmental condition. Comprehensive assessment and longitudinal observation are therefore preferable to premature labeling.

## 8. Developmental, Psychological, and Educational Consequences

Language is closely related to many aspects of children's development. Persistent difficulties may influence social participation because conversation provides an important mechanism through which children initiate friendships, negotiate play, resolve disagreements, and express emotional experiences.

A child who cannot communicate effectively may experience frustration when others fail to understand requests or intentions. In some cases, communication frustration may contribute to crying, withdrawal, avoidance, or challenging behavior. Such behavior should not automatically be interpreted as deliberate noncompliance because communication limitations may reduce the child's ability to express needs effectively.

Academic consequences may become more evident as children enter school. Oral language contributes to vocabulary learning, listening comprehension, phonological awareness, reading comprehension, written expression, and classroom participation. Children with persistent developmental language difficulties therefore require monitoring even when early vocabulary improves. Longitudinal evidence shows an important distinction between apparent recovery and complete absence of risk. Many children identified as late talkers eventually obtain standardized language scores within broadly expected limits, but group-level studies have found that they may continue to obtain lower scores than peers with typical early language histories on some linguistic measures. Rescorla's longitudinal work, for example, suggests that subtle differences can persist into later childhood or adolescence even among individuals whose early language delay appears to resolve (Rescorla, 2011).

This does not imply that every late-talking child will develop academic difficulties. Rather, it supports continued developmental monitoring and early support when clinically indicated.

## 9. Early Intervention

Early intervention aims to improve functional communication, support language learning, reduce barriers to social participation, and provide families with effective communication strategies. Intervention should be individualized according to the child's age, communication profile, family priorities, linguistic background, and associated developmental needs.

ASHA describes intervention for late language emergence as ranging from indirect monitoring and caregiver-based language stimulation to direct speech-language therapy. Children with mild isolated expressive delay and otherwise reassuring developmental characteristics may initially receive structured monitoring and caregiver guidance. Children with persistent, substantial, receptive-expressive, or more complex communication difficulties may require direct intervention and interdisciplinary services (ASHA, n.d.-a).

### 9.1 Responsive Interaction

Responsive interaction is central to many early language interventions. Adults observe the child's focus of attention and respond contingently to the child's gestures, vocalizations, words, or play behaviors. Instead of requiring repeated verbal imitation, adults create natural opportunities for communication and provide appropriate linguistic models.

For example, when a child points to a ball, the adult may respond with a short developmentally appropriate verbal model related to the child's interest. When the child uses one word, the adult may expand the utterance into a slightly more complex form. Such strategies connect language directly to the child's intention and immediate context.

### 9.2 Expansion and Recasting

Expansion involves transforming a child's short or incomplete utterance into a more complete version while preserving the intended meaning. Recasting provides a corrected or slightly more advanced model without requiring the child to repeat it. These strategies expose the child to grammatical and semantic structures during meaningful interaction.

### 9.3 Focused Stimulation

Focused stimulation involves repeatedly modeling selected words or grammatical forms during natural activities without pressuring the child to imitate them. The clinician or caregiver creates play situations in which the target appears frequently and meaningfully.

### 9.4 Play-Based Intervention

Play is especially suitable for young children because it creates meaningful opportunities for requesting, commenting, turn-taking, symbolic representation, joint attention, imitation, and vocabulary learning. Effective play-based intervention follows the child's developmental level and interests while systematically creating communication opportunities.

### 9.5 Dialogic Reading

Shared book reading can become an interactive language-learning activity when adults encourage the child to participate rather than simply listening passively. Dialogic reading may involve commenting on pictures, relating events to familiar experiences, allowing the child to complete predictable sequences, and expanding the child's contributions.

Research on parent-implemented intervention has demonstrated that strategies involving dialogic reading and focused stimulation can improve aspects of expressive language for some late-talking children.

### 9.6 Direct Speech-Language Therapy

Direct intervention by a speech-language pathologist may target vocabulary, comprehension, grammar, speech sound production, functional communication, social communication, or motor speech skills according to the child's profile.

Treatment may be clinician-directed, child-centered, or hybrid. Clinician-directed approaches provide greater control over practice opportunities, whereas child-centered approaches embed intervention in naturally occurring play and communication. Hybrid approaches combine structured targets with naturalistic interaction.

A systematic review of interventions for late talkers identified direct, indirect, and hybrid approaches across the literature. Improvements in expressive vocabulary were reported in most included studies, although intervention methods and outcomes varied substantially among studies (Kwok et al., 2022). This variation reinforces the need to select intervention procedures according to individual clinical characteristics rather than assuming that one method is universally superior.

## 10. The Role of Parents and Family-Centered Intervention

Parents and caregivers play a central role in early communication development because they interact with children repeatedly across daily routines. Family-centered intervention does not transform parents into substitute therapists. Instead, it provides them with strategies that can be incorporated naturally into play, meals, dressing, bathing, shopping, and shared reading.

Parent-mediated approaches may teach caregivers to recognize communication attempts, follow the child's focus of attention, reduce excessive questioning, model appropriate language, expand children's utterances, provide opportunities for turn-taking, and allow sufficient processing and response time.

A meta-analysis by Roberts and Kaiser (2011) found that parent-implemented language interventions can positively influence receptive and expressive language outcomes in young children with language difficulties. Subsequent research has continued to support structured caregiver involvement as an important component of early intervention.

Kruthoff-Broekman et al. (2019), for example, examined a parent-implemented program for late talkers and found greater short-term growth in expressive vocabulary in the intervention group, although group differences were not maintained on all measures at the later follow-up. The study also indicated that changes in parental communicative behavior were associated with aspects of children's language growth.

These findings illustrate an important principle: early intervention does not guarantee identical outcomes for all children. Language development remains influenced by developmental characteristics, severity, comprehension, learning ability, family context, and other factors. Effective intervention therefore requires continuous monitoring and adjustment.

### **11. Technology and Contemporary Speech-Language Intervention**

Technological developments are increasingly influencing speech-language pathology. Telepractice, digital assessment tools, interactive applications, video-based parent coaching, automated speech analysis, and artificial intelligence systems are being explored in clinical and research contexts.

Technology can increase access to services, particularly for families living far from specialized clinics. Video-based consultation allows clinicians to observe parent-child interaction within the home environment and coach caregivers during familiar routines. Digital tools can also support the systematic recording of vocabulary, speech samples, and treatment progress.

Nevertheless, technology should support rather than replace professional clinical reasoning. Young children's communication is embedded in social relationships, cultural practices, emotional states, play, and dynamic interaction. These elements cannot be adequately understood through automated word counts or speech-recognition outputs alone.

Artificial intelligence may contribute to earlier screening through analysis of speech samples, vocal patterns, or developmental data. However, such systems require careful validation across languages, dialects, cultures, and populations. A model trained primarily on one language or demographic group may produce inaccurate interpretations when applied to another.

Technology should therefore be integrated within ethical, evidence-based, family-centered clinical practice rather than viewed as an independent substitute for comprehensive speech-language assessment.

### **12. Prognosis and Developmental Outcomes**

One of the most difficult questions for families is whether a child who talks late will eventually catch up. Research indicates substantial variability. Many late talkers demonstrate considerable improvement during the preschool period, whereas a subgroup continues to experience clinically significant language difficulties.

Prediction at the individual level remains difficult. Fisher's (2017) systematic review and meta-analysis, involving 20 samples and more than 2,000 children, identified expressive vocabulary size, receptive language, and socioeconomic status as significant predictors of later expressive-language outcomes. Receptive language was particularly important.

Longitudinal findings also suggest that children with difficulties in both language comprehension and production may be at greater risk of persistent problems than children with isolated expressive delay. Sansavini and colleagues found that early syntactic comprehension was useful in differentiating some late talkers who subsequently remained at risk for developmental language difficulties (Sansavini et al., 2019).

Gesture use, symbolic play, rate of vocabulary growth, grammatical development, family history, and broader developmental characteristics may also contribute clinically to prognosis. Nevertheless, no single factor provides perfect prediction.

Consequently, a child should not be classified permanently according to language performance at one early age. Developmental surveillance is essential. Progress over several months often provides more informative clinical evidence than a single test result.

### **13. Implications for Speech-Language Pathology Practice**

Clinical practice with young children presenting with delayed communication should follow several fundamental principles.

First, assessment must be multidimensional. The number of spoken words is informative but insufficient. Clinicians should examine receptive language, expressive language, speech sound production, gestures, play, joint attention, social communication, hearing, and general development.

Second, assessment should be culturally and linguistically responsive. A multilingual child should not be diagnosed with a disorder simply because performance in one language differs from monolingual expectations.

Third, intervention should focus on functional communication rather than isolated performance during therapy sessions. The most meaningful outcome is the child's ability to communicate more effectively across everyday environments.

Fourth, parents should be regarded as collaborative partners. Their knowledge of the child's behavior across contexts provides essential clinical information, while their participation increases opportunities for language learning beyond formal therapy sessions.

Fifth, monitoring should continue after apparent improvement when risk factors or earlier substantial delays have been documented. Some children may develop adequate everyday conversation but later encounter difficulty with complex grammar, narratives, reading comprehension, or academic language.

Finally, multidisciplinary collaboration is essential whenever speech and language delay co-occurs with hearing, neurological, cognitive, behavioral, motor, or broader developmental concerns.

### **14. Discussion**

Speech and language delay in early childhood represents a complex clinical phenomenon rather than a single disorder with a uniform cause and outcome. One of the most important developments in contemporary speech-language pathology has been the movement away from simplistic interpretations of late talking. Limited expressive vocabulary may represent temporary developmental variation in one child, an early manifestation of developmental language disorder in another, a consequence of hearing impairment in a third, or part of a broader developmental condition in a fourth.

The challenge is therefore not simply to determine whether a child talks less than peers but to understand the structure of the child's entire communication system. Receptive language appears especially important because difficulties in understanding

language may indicate broader linguistic vulnerability. Vocabulary growth, grammatical development, gesture use, symbolic play, speech intelligibility, family history, and developmental progress over time also contribute to clinical interpretation. Contemporary evidence also supports moving away from a rigid contrast between therapy and no therapy. Intervention exists along a continuum. Some children may benefit from caregiver education and structured developmental monitoring, whereas others require intensive direct services. Intervention intensity should reflect the child's individual clinical profile and functional needs.

The evidence supporting parent involvement is particularly relevant because early language development occurs predominantly in naturally occurring social interaction. A young child may spend a limited amount of time each week with a speech-language pathologist but many hours interacting with family members. Teaching caregivers responsive communication strategies can therefore increase the number of meaningful language-learning opportunities available throughout everyday life.

At the same time, early intervention should not create unnecessary anxiety or pressure. Repeatedly demanding that a young child pronounce words correctly or imitate adult speech can reduce communicative spontaneity. Naturalistic approaches emphasize communication success, shared attention, positive interaction, and developmentally appropriate language models.

The increasing availability of digital technologies presents both opportunities and challenges. Technology can extend professional support and facilitate monitoring, but human communication cannot be reduced to automated measurements. Clinical interpretation must remain grounded in developmental science, professional expertise, cultural responsiveness, and family priorities.

## 15. Conclusion

Speech and language development is a fundamental component of early childhood and plays an essential role in social interaction, emotional expression, learning, literacy, and academic participation. Although children demonstrate substantial individual variation in the timing of language acquisition, persistent or significant delays require careful evaluation.

Speech delay and language delay should not be treated as identical concepts. Some children primarily experience difficulty producing speech sounds, whereas others show limitations in vocabulary, grammar, comprehension, or several language domains simultaneously. Late language emergence may resolve substantially in some children, but it may also represent an early indicator of more persistent language and literacy difficulties.

The most effective clinical approach combines developmental history, hearing assessment, direct observation, speech-language assessment, caregiver information, culturally appropriate procedures, and longitudinal monitoring. Particular attention should be given to language comprehension because receptive difficulties are consistently associated with increased risk of persistent problems.

Early intervention should be individualized, functional, naturalistic, and family-centered. Responsive interaction, expansion, focused stimulation, shared book reading, play-based activities, and direct speech-language therapy can support communication development when selected according to children's individual needs.

Ultimately, early identification should not be understood as premature labeling. Its purpose is to ensure that children who require support receive appropriate opportunities during a highly important developmental period. Collaboration among speech-language pathologists, families, educators, audiologists, pediatric professionals, psychologists, and other specialists provides the strongest foundation for understanding each child's communication profile and promoting effective participation in family, educational, and social life.

## References

- American Speech-Language-Hearing Association. (n.d.-a). Late language emergence. ASHA Practice Portal. <https://www.asha.org/practice-portal/clinical-topics/late-language-emergence/>
- American Speech-Language-Hearing Association. (n.d.-b). Speech sound disorders: Articulation and phonology. ASHA Practice Portal. <https://www.asha.org/practice-portal/clinical-topics/articulation-and-phonology/>
- American Speech-Language-Hearing Association. (n.d.-c). Childhood apraxia of speech. ASHA Practice Portal. <https://www.asha.org/practice-portal/clinical-topics/childhood-apraxia-of-speech/>
- Armstrong, R., Scott, J. G., Whitehouse, A. J. O., Copland, D. A., McMahon, K. L., & Arnott, W. (2017). Late talkers and later language outcomes: Predicting the different language trajectories. *International Journal of Speech-Language Pathology*, 19(3), 237-250. <https://doi.org/10.1080/17549507.2017.1296191>
- Bishop, D. V. M., Snowling, M. J., Thompson, P. A., Greenhalgh, T., & CATALISE Consortium. (2016). CATALISE: A multinational and multidisciplinary Delphi consensus study. Identifying language impairments in children. *PLOS ONE*, 11(7), e0158753. <https://doi.org/10.1371/journal.pone.0158753>
- Bishop, D. V. M., Snowling, M. J., Thompson, P. A., Greenhalgh, T., & CATALISE-2 Consortium. (2017). Phase 2 of CATALISE: A multinational and multidisciplinary Delphi consensus study of problems with language development: Terminology. *Journal of Child Psychology and Psychiatry*, 58(10), 1068-1080. <https://doi.org/10.1111/jcpp.12721>
- Bishop, D. V. M. (2017). Why is it so hard to reach agreement on terminology? The case of developmental language disorder (DLD). *International Journal of Language & Communication Disorders*, 52(6), 671-680. <https://doi.org/10.1111/1460-6984.12335>

- Cable, A. L., & Domsch, C. (2011). Systematic review of the literature on the treatment of children with late language emergence. *International Journal of Language & Communication Disorders*, 46(2), 138-154. <https://doi.org/10.3109/13682822.2010.487883>
- Fisher, E. L. (2017). A systematic review and meta-analysis of predictors of expressive-language outcomes among late talkers. *Journal of Speech, Language, and Hearing Research*, 60(10), 2935-2948. [https://doi.org/10.1044/2017\\_JSLHR-L-16-0310](https://doi.org/10.1044/2017_JSLHR-L-16-0310)
- Kruythoff-Broekman, A., Wiefferink, C., Rieffe, C., & Uilenburg, N. (2019). Parent-implemented early language intervention programme for late talkers: Parental communicative behaviour change and child language outcomes at 3 and 4 years of age. *International Journal of Language & Communication Disorders*, 54(3), 451-464. <https://doi.org/10.1111/1460-6984.12451>
- National Institute on Deafness and Other Communication Disorders. (n.d.). Speech and language developmental milestones. National Institutes of Health. <https://www.nidcd.nih.gov/health/speech-and-language>
- Rescorla, L. (2011). Late talkers: Do good predictors of outcome exist? *Developmental Disabilities Research Reviews*, 17(2), 141-150. <https://doi.org/10.1002/ddrr.1108>
- Roberts, M. Y., & Kaiser, A. P. (2011). The effectiveness of parent-implemented language interventions: A meta-analysis. *American Journal of Speech-Language Pathology*, 20(3), 180-199. [https://doi.org/10.1044/1058-0360\(2011/10-0055\)](https://doi.org/10.1044/1058-0360(2011/10-0055))
- Sansavini, A., Favilla, M. E., Guasti, M. T., Marini, A., Millepiedi, S., Di Martino, M. V., Vecchi, S., Battajon, N., Bertolo, L., Capirci, O., Carretti, B., Colatei, M. P., Frioni, C., Marotta, L., Massa, S., Michelazzo, L., Pecini, C., Piazzalunga, S., Pieretti, M., & Lorusso, M. L. (2019). Which linguistic measures distinguish transient from persistent language problems in late talkers from 2 to 4 years? A study on Italian-speaking children. *Research in Developmental Disabilities*, 89, 59-68.
- Tosh, R., Arnott, W., & Scarinci, N. (2017). Parent-implemented home therapy programmes for speech and language: A systematic review. *International Journal of Language & Communication Disorders*, 52(3), 253-269.
- Zevenbergen, A. A., & Whitehurst, G. J. (2003). Dialogic reading: A shared picture book reading intervention for preschoolers. In A. van Kleeck, S. A. Stahl, & E. B. Bauer (Eds.), *On reading books to children: Parents and teachers* (pp. 177-200). Lawrence Erlbaum Associates.