

Psycholinguistic Factors Affecting Speech Delay in 3-Year-Old Children

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Abstract

This study examines the relationship between psycholinguistic factors and speech delay in three-year-old children. Speech delay is a developmental condition in which a child's language ability progresses more slowly than expected, influenced by cognitive, linguistic, and social environmental processes. The study employs a library research method, reviewing various relevant books, journals, and scientific articles. The findings reveal that speech delay is not only caused by physical factors but also by underdeveloped psycholinguistic abilities such as phonological perception, semantic understanding, syntactic structure, language memory, and pragmatic competence. The interaction among these factors affects the child's ability to comprehend and produce language effectively. The discussion also emphasizes the crucial role of families and communities in creating communicative, language-rich, and supportive environments. Through social support and continuous stimulation, children with speech delays can experience significant improvement in their communication and linguistic development.

Keywords: Child Language; Psycholinguistics; Social Environment; Speech Delay

Abstrak

Penelitian ini mengkaji hubungan antara faktor psikolinguistik dan keterlambatan bicara pada anak usia tiga tahun. Keterlambatan bicara merupakan kondisi perkembangan di mana kemampuan bahasa anak berkembang lebih lambat dari yang diharapkan, dipengaruhi oleh proses kognitif, linguistik, dan lingkungan sosial. Penelitian ini menggunakan metode penelitian perpustakaan, dengan meninjau berbagai buku, jurnal, dan artikel ilmiah yang relevan. Temuan menunjukkan bahwa keterlambatan bicara tidak hanya disebabkan oleh faktor fisik, tetapi juga oleh kemampuan psikolinguistik yang belum berkembang, seperti persepsi fonologis, pemahaman semantik, struktur sintaksis, memori bahasa, dan kompetensi pragmatik. Interaksi antara faktor-faktor ini memengaruhi kemampuan anak untuk memahami dan menghasilkan bahasa secara efektif. Pembahasan juga menekankan peran krusial keluarga dan komunitas dalam menciptakan lingkungan yang komunikatif, kaya bahasa, dan mendukung. Melalui dukungan sosial dan stimulasi berkelanjutan, anak-anak dengan keterlambatan bicara dapat mengalami perbaikan signifikan dalam perkembangan komunikasi dan linguistik mereka.

Kata Kunci: Bahasa Anak; Psikolinguistik; Lingkungan Sosial; Keterlambatan Bicara

INTRODUCTION

Speech delay in early childhood has become an increasingly worrying developmental problem, with a prevalence of 5–8% in preschool children in various countries and a direct impact on their cognitive, social, and emotional abilities.¹ Research in Beijing shows that more than 44% of children with speech disorders experience expressive and syntactic language delays, indicating that this problem is not only phonetic in nature, but also closely related to immature psycholinguistic and cognitive processes.² This condition is exacerbated by environmental factors such as excessive exposure to digital screens, lack of verbal interaction, and minimal social stimulation, which have been shown to hinder the language development of three-year-olds.³ Recent systematic reviews also show that without early detection and intervention, speech delay can trigger long-term barriers to children's intellectual and emotional abilities, thus emphasizing the importance of understanding psycholinguistic factors (such as phonological perception, language memory, and pragmatic abilities) as a scientific basis for analyzing the causes of speech delay and designing more comprehensive treatment strategies.⁴

Previous studies have shown that speech delay in children cannot be understood from a single dimension, but is the result of a complex interaction between biological, environmental, and social factors. A study by Palipung, Paramita, and Ni'matuzahroh (2024) confirms that speech delay and language delay in early childhood are often influenced by family factors, gender, and lack of environmental stimulation, and have an impact on long-term cognitive and emotional development.⁵ Similar findings were revealed by Muyassaroh et al. (2022), who found a significant relationship between hearing impairment and speech delay in children aged 13–60 months, reinforcing the importance of medical factors in language development.⁶ Meanwhile, Putri (2024), through a scoping review, highlighted that exposure to digital media, lack of verbal interaction with parents, and sociodemographic factors such as number of siblings and economic status also play an important role in slowing language development.⁷ In line with this, Sunderajan et al. (2019) reported that structural conditions of the speech organs, neurological disorders, and a home environment with minimal stimulation are also important determinants of language delay in children.⁸

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- 1 Muyassaroh Muyassaroh et al., "Identifying Risk Factors of Speech and Language Delay on Children," *Jurnal Kesehatan Masyarakat* 17, no. 3 (March 17, 2022): 431–35, <https://doi.org/10.15294/kemas.v17i3.27676>.
 - 2 J H Wang et al., "Analysis of Language and Influencing Factors of Children with Speech Disorder in Beijing," *Zhonghua Er Ke Za Zhi*= Chinese Journal of Pediatrics 62, no. 5 (2024): 438–43, <https://doi.org/https://doi.org/10.3760/cma.j.cn112140-20240105-00015>.
 - 3 Sri Ayu Laali et al., "Bimbingan Belajar Terhadap Anak Speech Delay," *Kesejahteraan Bersama : Jurnal Pengabdian Dan Keberlanjutan Masyarakat* 2, no. 2 (March 21, 2025): 01–14, <https://doi.org/10.62383/bersama.v2i2.1306>.
 - 4 Rizky Yuniarti Palipung, Sintia Paramita, and Ni'matuzahroh, "Influence Factors, Impact and Interventions for Speech Delay and Language Delay in Early Childhood : Systematic Review," *International Journal of Scientific Research and Management (IJSRM)* 12, no. 07 (July 22, 2024): 64–78, <https://doi.org/10.18535/ijsrm/v12i07.gp03>.
 - 5 Palipung, Sintia Paramita, and Ni'matuzahroh.
 - 6 Muyassaroh et al., "Identifying Risk Factors of Speech and Language Delay on Children."
 - 7 Ayu Kartika Putri, Sri Achadi Nugraheni, and Sri Winarni, "A Scoping Review of Risk Factor Analysis Influencing Speech and Language Delay in Toddler's Development," *Journal of Holistic Nursing Science* 11, no. 1 (May 5, 2024): 37–43, <https://doi.org/10.31603/nursing.v11i1.11185>.
 - 8 Trisha Sunderajan and SujataV Kanhere, "Speech and Language Delay in Children: Prevalence and Risk Factors," *Journal of Family Medicine and Primary Care* 8, no. 5 (2019): 1642, https://doi.org/10.4103/jfmpc.jfmpc_162_19.

In addition to these factors, several recent studies have broadened the perspective by examining more specific health and behavioral variables. Boerma et al. (2023) showed that sleep disorders, premature birth, and prenatal exposure are important predictors of language development disorders that can lead to speech delay.⁹ Another study by Wang et al. (2024) found that children with more than one hour of screen time per day and minimal reading activities with their parents have a higher risk of expressive and syntactic language delays.¹⁰ This is in line with the findings of a tertiary hospital study that showed the significant role of demographic factors such as parental age, male gender, and the use of electronic devices in the emergence of speech delay in children.¹¹ Furthermore, recent research also confirms the importance of sociodemographic dimensions such as parental education level and social support in accelerating children's speaking abilities.¹² However, although these studies have extensively reviewed biological, medical, and environmental factors, there is still an important research gap because few studies have explicitly examined how psycholinguistic factors (such as phonological perception, language memory, syntax, and pragmatic abilities) interact to cause speech delays in three-year-old children. Therefore, this aspect is the main focus of this study.

This study aims to analyze the relationship between psycholinguistic factors and speech delay in three-year-old children. The main focus is on how phonological perception, semantic comprehension, syntactic structure, language memory, and pragmatic competence affect children's speech development. In addition, this study examines the role of the family and social environment in providing language stimulation that supports the improvement of communication in children with speech delay. Through a literature review of various empirical and theoretical studies, this study is expected to strengthen scientific understanding of the relationship between cognitive and linguistic aspects in early childhood language development and provide a theoretical basis for effective educational intervention strategies for families and educators in dealing with speech delay.

Method

This study uses a library research method, which focuses on collecting and analyzing information from various written sources related to psycholinguistic factors influencing speech delay in children.¹³ The data sources consist of documents, scientific articles, journals, and relevant books that discuss language development, psycholinguistics, and early childhood communication. Through this method, the researcher aims to obtain a comprehensive understanding of how psycholinguistic elements contribute to delayed speech. Library research allows for an in-depth examination of theories, concepts, and previous findings, making it suitable for studies that seek to build theoretical insights rather than field-based observations. All data were selected carefully to ensure relevance and credibility to the research topic.

9 Tessel Boerma et al., "What Risk Factors for Developmental Language Disorder Can Tell Us About the Neurobiological Mechanisms of Language Development," *Neuroscience & Biobehavioral Reviews* 154 (November 2023): 105398, <https://doi.org/10.1016/j.neubiorev.2023.105398>.

10 Wang et al., "Analysis of Language and Influencing Factors of Children with Speech Disorder in Beijing."

11 Fouzia Hoque, Shaheen Akhter, and Muzharul Mannan, "Risk Factors Identification of Speech and Language Delay in Children in A Tertiary Level Hospital: A Pilot Study," *World Journal of Advanced Research and Reviews* 11, no. 1 (July 30, 2021): 103–12, <https://doi.org/10.30574/wjarr.2021.11.1.0323>.

12 Suhaila A. Ali et al., "Sociodemographic, Health, and Environmental Determinants of Speech Delay in Children: A Case–Control Study," *Medicine* 104, no. 34 (August 22, 2025): e43817, <https://doi.org/10.1097/MD.00000000000043817>.

13 Mestika Zed, *Metode Penelitian Kepustakaan* (Yayasan Pustaka Obor Indonesia, 2008).

The data collection technique in this study involved searching, reviewing, and selecting literature that directly relates to speech delay and psycholinguistic development in early childhood. Various academic databases, digital libraries, and printed materials were used as sources. The collected data were then analyzed using an interpretative analysis technique, which focuses on understanding meanings, relationships, and patterns found in the literature.¹⁴ This analysis approach allows the researcher to interpret theoretical perspectives and draw logical connections between psycholinguistic factors and children's speech development. The process emphasizes understanding rather than measurement, making it well-suited for exploring complex cognitive and linguistic phenomena.

RESULTS AND DISCUSSION

The Relationship Between Psycholinguistics and Speech Delay in Children

Speech delay is a condition in which a child does not reach expected speech milestones according to their age and developmental stage.¹⁵ A child with speech delay often struggles to pronounce words or understand others' speech. This condition differs from a language disorder because in speech delay, the basic capacity for language exists but develops more slowly. Typically, a two-year-old can combine two words into simple phrases, whereas a child with speech delay might still use single words or unclear speech. This situation often worries parents because limited communication can affect a child's emotional and social development, making it harder for them to express needs, form relationships, and interact comfortably with others in daily life.

Speech delay in children is closely related to psycholinguistic aspects (the relationship between thought and language). Psycholinguistics explores how mental processes are involved in understanding and producing language. When these psycholinguistic processes are not yet fully developed, a child's ability to speak may be hindered. For instance, a child who struggles to process sounds or grasp word meanings may take longer to produce speech.¹⁶ In this sense, speech delay is not merely a physical problem involving speech organs but also a cognitive and psychological one. Recognizing this helps parents and educators understand that language development involves both the mind and the brain, guiding more effective approaches to support a child's speech growth.

Psycholinguistics is broadly defined as the branch of science that studies the relationship between psychology and linguistics, focusing on how language is processed in the human mind.¹⁷ It examines how people comprehend, produce, and acquire language, both spoken and written. In children, psycholinguistics investigates how the brain recognizes sounds, understands meaning, and constructs sentence structures. Through this perspective, researchers and educators can see that language development is not simply about speaking words, but the outcome of complex interactions between cognition, memory, perception, and social experience. Thus,

14 John W Creswell and Cheryl N Poth, *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (Sage publications, 2016).

15 Wei Hao Kevin Liang et al., "Speech and Language Delay in Children: A Practical Framework for Primary Care Physicians," *Singapore Medical Journal* 64, no. 12 (2023).

16 William E. Tunmer and Wesley A. Hoover, "The Cognitive Foundations of Learning to Read: A Framework for Preventing and Remediating Reading Difficulties," *Australian Journal of Learning Difficulties* 24, no. 1 (January 2019): 75–93, <https://doi.org/10.1080/19404158.2019.1614081>.

17 Shi Beibei, "Psychological Impact of Languages on the Human Mind: Research on the Contribution of Psycholinguistics Approach to Teaching and Learning English," *Journal of Psycholinguistic Research* 52, no. 6 (December 2023): 2027–45, <https://doi.org/10.1007/s10936-023-09977-w>.

psycholinguistics provides a scientific foundation for understanding the mental mechanisms underlying speech and communication.

The aspects of psycholinguistics include several interconnected components. First, phonology, which refers to the recognition and production of speech sounds. Second, morphology, the formation of words. Third, syntax, the rules that govern sentence structure. Fourth, semantics, which concerns understanding meaning. Lastly, pragmatics, which involves using language appropriately in social contexts.¹⁸ All these aspects are crucial in language development. If one of them is underdeveloped, it can hinder speech clarity and comprehension. Each aspect contributes to building a child's linguistic ability, and any disruption can affect communication effectiveness in daily interactions.

In the context of speech delay, psycholinguistics helps explain why some children take longer to master language. By examining phonological and morphological aspects, we can understand how children process sounds and form words. When auditory perception or sound discrimination is weak, a child may find it difficult to imitate and remember words they hear.¹⁹ Furthermore, limitations in working memory can interfere with the ability to organize correct sentence structures. Therefore, a psycholinguistic approach allows speech delays to be viewed not merely as behavioral issues but as reflections of how language and thought processes develop and interact in the child's mind.

Psycholinguistics also interprets speech delay as the result of immature mental processes. Children whose cognitive functions are still developing might not yet process language quickly or efficiently. They may require extra time to understand messages and produce verbal responses. In this case, symbolic thinking and the association between words and meanings play important roles in language processing.²⁰ Psycholinguistics regards language as a mirror of mental activity, meaning that speech delay indicates that a child's cognitive system is still developing and not yet fully capable of managing complex linguistic tasks such as comprehension and production.

Additionally, the connection between language and thought in psycholinguistics shows that speech delay is not only a delay in speaking but also in thinking and understanding. Language serves as the main tool for forming and expressing thought. If language development is delayed, cognitive processes such as reasoning and concept formation may also progress more slowly.²¹ A child who struggles to say words may also have difficulty grasping abstract or complex ideas. Therefore, speech delay can affect how a child perceives and interprets the world. Psycholinguistics emphasizes that language and thought evolve together, influencing and reinforcing each other during development.

Overall, the relationship between psycholinguistics and speech delay in children highlights that language development cannot be separated from mental and cognitive growth. A child with

18 Carlos Gussenhoven and Haike Jacobs, *Understanding Phonology* (Routledge, 2025).

19 Markus Christiner and Susanne Maria Reiterer, "Early Influence of Musical Abilities and Working Memory on Speech Imitation Abilities: Study with Pre-School Children," *Brain Sciences* 8, no. 9 (September 2018): 169, <https://doi.org/10.3390/brainsci8090169>.

20 Gary H. Lyman, "Perception, Cognition and Thought: Part II Symbolic Processing and Language," *Cancer Investigation* 41, no. 7 (August 2023): 617–20, <https://doi.org/10.1080/07357907.2023.2233317>.

21 Meng Zhang and Judith A Hudson, "The Development of Temporal Concepts: Linguistic Factors and Cognitive Processes," *Frontiers in Psychology* 9 (2018): 2451.

speech delay may face challenges not only in pronunciation but also in understanding meaning and constructing language structures. Psycholinguistics explains that language results from complex mental processes involving sound recognition, memory storage, meaning comprehension, and social context use. Understanding this relationship helps educators, therapists, and parents gain a more comprehensive view of children's language development, allowing them to provide more effective support and guidance for improving communication skills.

Psycholinguistic Factors Influencing Speech Delay in Three-Year-Old Children

Speech delay in three-year-old children is a condition that often causes concern among parents. At this age, most children are already able to form simple sentences, recognize a variety of words, and communicate with those around them. However, some children still show limited speech abilities, such as using only single words or unclear pronunciation. From a psycholinguistic perspective, speech delay is not merely a physical issue but also involves complex mental and linguistic processes. Psycholinguistics views language development as an interaction between thinking ability, memory, sound perception, and meaning comprehension, all of which play crucial roles in a child's speech formation and overall language acquisition.

One major psycholinguistic factor influencing speech delay is phonological perception. This refers to a child's ability to recognize, differentiate, and process the sounds of language they hear. A child who struggles to distinguish between sounds, such as /p/ and /b/, may have difficulty imitating or pronouncing words correctly.²² This ability develops through consistent auditory exposure and interaction with spoken language in their environment. When a child cannot clearly perceive sound differences, the process of mentally forming and storing words becomes disrupted. As a result, their speech development progresses more slowly than that of peers with stronger phonological perception skills.

Another important factor is language memory processing, especially verbal working memory. In language use, children need to store and recall sequences of sounds or words before speaking. A three-year-old experiencing speech delay may have limited working memory capacity, making it difficult to remember word order or sentence structure.²³ For instance, when hearing a long sentence, the child might only remember a portion of it. This causes speech to sound fragmented or incomplete. Underdeveloped language memory also affects the child's ability to follow directions, repeat new words, and expand vocabulary. Hence, memory plays a critical role in both understanding and producing spoken language during early development.

Cognitive ability is another key component within psycholinguistics that affects speech development. Language and cognition are deeply interconnected because language serves as a tool to express thought. A child with limited cognitive growth often struggles to connect words to their corresponding concepts. For example, a child who has not yet understood the concepts of "big" and "small" will misuse or avoid these words in sentences. Slow cognitive development may also

22 Anis Komariah, "Problems in Pronouncing the English Sounds Faced by the Students of SMPN 2 Halong, Banjar," *Journal of English Language and Pedagogy* 1, no. 2 SE- (February 2019), <https://doi.org/10.36597/jelp.v1i2.4127>.

23 Maleki Shahm Mahmood Toktam et al., "Cognitive and Language Intervention in Primary Language Impairment: Studying the Effectiveness of Working Memory Training and Direct Language Intervention on Expansion of Grammar and Working Memory Capacities," *Child Language Teaching and Therapy* 34, no. 3 (October 2018): 235–68, <https://doi.org/10.1177/0265659018793696>.

hinder the ability to comprehend grammar or structure ideas into meaningful utterances.²⁴ Thus, speech delay frequently reflects the child's level of cognitive maturity and how well they can organize thoughts into language.

Another psycholinguistic factor influencing speech delay is semantic ability, which refers to a child's understanding of word meanings and relationships between words. By age three, children generally begin to realize that words can have multiple meanings depending on context. However, when semantic ability is underdeveloped, a child may have difficulty grasping word meanings accurately, leading to limited word use. For instance, the child might use the word "eat" for any action involving the mouth, such as drinking or biting.²⁵ This shows that their mental representation of word meanings is not yet fully formed. Poor semantic understanding can make it harder for children to construct meaningful and varied sentences during communication.

In addition, syntactic ability, or the capacity to arrange words into grammatically correct sentences, plays a vital role in speech development. Children who have not yet mastered sentence structure tend to speak in incomplete or disorganized phrases.²⁶ For example, they might say "want play" without specifying what or with whom. At three years old, children are expected to produce short sentences of two to four words. However, if syntactic development is delayed, their sentences will remain simple, irregular, and sometimes difficult to interpret. Psycholinguistics explains that syntactic growth depends on the coordination of memory and cognition, both of which help children structure and produce language accurately.

Another influential psycholinguistic factor is pragmatic ability, which refers to a child's capacity to use language appropriately in social contexts. Children with underdeveloped pragmatic skills often struggle to understand conversational rules, such as when to speak, how to adjust tone, or how to respond appropriately. For example, a child might remain silent when asked a question, not because they don't understand, but because they have not yet grasped the social function of communication. At the age of three, pragmatic skills should begin emerging through social interaction. When these abilities lag behind, the child's communication becomes ineffective, slowing their natural progress in learning to speak through everyday experiences.

Lastly, metalinguistic awareness (the ability to think about and reflect on language itself) also affects speech development. Children with stronger metalinguistic skills are better at understanding that words are symbols representing things or ideas. In contrast, those with low metalinguistic awareness may not yet recognize the relationship between sounds and meanings, making it harder to learn new vocabulary. By age three, some children begin showing early metalinguistic skills, such as playing with sounds or noticing word patterns. When this ability is underdeveloped, children take longer to grasp language rules, detect their own speech errors, and make corrections, all of which are essential for fluent and accurate speech in everyday communication.

24 Teresa Brown, Karen Winter, and Nicola Carr, "Residential Child Care Workers: Relationship Based Practice in a Culture of Fear," *Child & Family Social Work* 23, no. 4 (November 2018): 657–65, <https://doi.org/10.1111/cfs.12461>.

25 Luiz Antonio Del Ciampo and Ieda Regina Lopes Del Ciampo, "The Child Who Doesn't Want to Eat: Why Does It Happen?," *European Journal of Nutrition and Food Safety* 16, no. 8 (2024): 53–59.

26 Aleksandr N. Kornev and Ingrida Balčiūnienė, "Lexical and Grammatical Errors in Developmentally Language Disordered and Typically Developed Children: The Impact of Age and Discourse Genre," *Children* 8, no. 12 (December 2021): 1114, <https://doi.org/10.3390/children8121114>.

The Role of Family and Society in Addressing Psycholinguistic Factors Affecting Speech Delay in Children

Speech delay in children is not solely the responsibility of parents or professionals but also a shared responsibility of the wider community. A child grows and develops within a social environment that influences both their thinking and language abilities. An environment rich in language, full of interaction, and responsive to communication needs can greatly accelerate speech development. In contrast, an environment that lacks engagement or opportunities for a child to speak can slow down the learning process. Therefore, society plays a crucial role in creating supportive social situations, especially in helping children with speech delays develop communication skills through natural, engaging, and linguistically stimulating interactions that encourage verbal growth.

One key contribution society can make is by creating a communicative environment. A communicative environment provides children with many opportunities to listen, speak, and imitate language from those around them.²⁷ For example, in playgrounds, caregivers or neighbors can talk with children about the things they see or the activities they are doing. Through this, children gain exposure to various sentence structures and new vocabulary. An active speaking environment helps children develop phonological perception and meaning comprehension. Simple activities such as talking while playing or reading together can have a powerful impact on a child's psycholinguistic development, supporting their ability to process and produce language effectively.

The community can also contribute by promoting early literacy culture. Literacy culture goes beyond reading books; it includes introducing language through stories, songs, and word games. Activities such as public storytelling at kindergartens, health centers, or community libraries can effectively stimulate children's semantic and syntactic development.²⁸ When children listen to stories, they learn about event sequences, understand word meanings, and develop imagination. A community that supports literacy provides natural language exposure, enriches vocabulary, and enhances cognitive functions related to speech and comprehension. This early engagement with language helps build strong psycholinguistic foundations necessary for fluent and meaningful communication.

The family, as the closest unit within society, plays a central role in enhancing daily verbal interaction. Parents and family members serve as language models for children. By talking frequently, answering questions, and responding attentively, adults help children develop pragmatic and phonological abilities more effectively.²⁹ Through these interactions, children learn how to use language socially and take turns in conversation. For example, parents can encourage

27 Robin Samuelsson, "Environments for Imitation: Second-Language Use and Development Through Embodied Participation in Preschool Routine Activities," *Journal of Research in Childhood Education* 35, no. 1 (January 2021): 22–40, <https://doi.org/10.1080/02568543.2020.1734121>.

28 Maria Cahill, Soohyung Joo, and Kathleen Campana, "Analysis of Language Use in Public Library Storytimes," *Journal of Librarianship and Information Science* 52, no. 2 (June 2020): 476–84, <https://doi.org/10.1177/0961000618818886>.

29 Stephen Grossberg, "How Children Learn to Understand Language Meanings: A Neural Model of Adult–Child Multimodal Interactions in Real-Time," *Frontiers in Psychology* 14 (August 2023), <https://doi.org/10.3389/fpsyg.2023.1216479>.

children to talk about their daily experiences or play word-guessing games together. These simple, everyday activities allow children to strengthen memory, thinking, and sentence-forming skills, all of which are vital components of psycholinguistic growth in early speech development.

Society also plays a role in providing social and emotional support for families with children experiencing speech delays. Many parents feel anxious, ashamed, or confused when their child struggles to speak. Support from the community can help them feel accepted and motivated to seek solutions. Neighbors or friends, for instance, can share information about speech therapy services or accompany families to playgroups. Positive social support creates a comfortable emotional environment, which indirectly benefits a child's psycholinguistic progress. Children who grow up surrounded by encouragement and affection tend to be more confident in expressing themselves and more motivated to engage in verbal communication.³⁰

Another significant community role is in raising public awareness and education about the importance of early detection of speech delay. Through information sessions at health centers, schools, or community events, people can learn to recognize early signs of delay and how to provide appropriate stimulation. Such education can be facilitated by health workers, teachers, or professionals working with local residents. With adequate knowledge, communities can support not only their own children but also others in the neighborhood. Widespread awareness fosters a culture of care for children's language development and encourages early action to address psycholinguistic challenges before they become more serious.

Communities can also help by providing educational play spaces that encourage language-based interactions. Playgrounds, children's libraries, and reading corners in neighborhoods can serve as valuable places for children to practice speaking naturally.³¹ In these spaces, children meet peers, listen to stories, and participate in language-centered activities. Singing together, storytelling, or role-playing helps children strengthen phonological, syntactic, and pragmatic skills. Structured social interactions allow them to use language as a tool for communication while enhancing symbolic thinking, an essential element in psycholinguistic and cognitive development during early childhood.

Lastly, the community's involvement can extend through collaboration with professionals such as speech therapists, psychologists, and early childhood educators. Local organizations can arrange consultations or workshops for parents to learn effective ways to stimulate their children's language at home. This collaboration bridges scientific knowledge with practical daily application in community life. With professional guidance, societies can better understand how to nurture children's language development at various stages. Such cooperative efforts make speech delay interventions more comprehensive and sustainable, integrating families, experts, and social environments to collectively support every child's psycholinguistic and linguistic growth.

30 Nor Izzatil Hasanah and Hidayah Nor, "Parents' Efforts in Supporting A Child with Speech Delay," *EDULINK EDUCATION AND LINGUISTICS KNOWLEDGE JOURNAL* 5, no. 1 (April 5, 2023): 72, <https://doi.org/10.32503/edulink.v5i1.3465>.

31 Brenna Hassinger-Das et al., "Play-and-Learn Spaces: Leveraging Library Spaces to Promote Caregiver and Child Interaction," *Library & Information Science Research* 42, no. 1 (January 2020): 101002, <https://doi.org/10.1016/j.lisr.2020.101002>.

CONCLUSION

The findings of this study confirm that speech delay in three-year-old children is not merely the result of physiological or medical factors, but is also strongly influenced by complex psycholinguistic processes. Factors such as phonological perception, semantic comprehension, syntactic structure, language memory, and pragmatic competence play crucial roles in the formation and development of children's language ability. Each of these components interacts dynamically, limitations in phonological perception may hinder sound recognition and production, while weak language memory can affect the ability to recall and organize sentence structures. Furthermore, environmental factors such as insufficient verbal stimulation from parents, excessive screen exposure, and limited social interaction exacerbate the delay in speech development. Therefore, this study reinforces the view that speech delay arises from the dynamic interplay between cognitive, linguistic, and social factors that collectively shape a child's language system.

The primary contribution of this research lies in its integration of a psycholinguistic perspective to understand speech delay in early childhood. While most previous studies have focused on biological, medical, or environmental determinants, this study highlights the mental and linguistic dimensions that are often overlooked in traditional approaches. By examining the interrelations among mental processes such as sound processing, verbal memory storage, and syntactic construction, this study provides a more comprehensive theoretical foundation for explaining the mechanisms of speech delay. Moreover, it emphasizes the pivotal role of families and communities as mediators in facilitating linguistic stimulation. A language-rich and interactive environment is essential for accelerating psycholinguistic maturity, enabling children to comprehend meaning, form structured sentences, and develop pragmatic skills for effective communication. Consequently, this study contributes not only to strengthening the conceptual framework of child psycholinguistics but also offers practical implications for parents, educators, and professionals working in the field of child language development.

Despite its significant theoretical contribution, this study acknowledges several limitations. First, its library-based and conceptual approach does not capture direct empirical evidence from real-life settings. Second, many of the reviewed studies originate from different sociocultural contexts, which may limit their applicability to the linguistic development of Indonesian children. Future research should therefore employ empirical methods such as observation, longitudinal studies, and in-depth interviews with children, parents, and early childhood educators to obtain more concrete insights into the relationship between psycholinguistic factors and speech delay. Additionally, future studies should evaluate the effectiveness of family- and community-based interventions aimed at accelerating language development through the integrated stimulation of phonological, syntactic, and pragmatic aspects. Strengthening collaboration among academics, practitioners, and communities will enable the development of more contextual, sustainable, and evidence-based intervention programs to support optimal language growth in early childhood.

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