

The Relationship Between Parental Communication Patterns And Language Delays In Toddlers

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ABSTRACT

Speech delay is one of the most common developmental disorders among toddlers and may negatively affect academic performance, social interaction, and future quality of life. One important factor influencing language development is parental communication patterns. According to the Indonesian Pediatric Society (IDAI), approximately 5–8% of toddlers experience speech delay. Data from the Pekanbaru City Health Office in 2024 indicated that the highest number of toddlers was found in the working area of Payung Sekaki Public Health Center, where several cases of speech delay were also reported. This study aimed to analyze the relationship between parental communication patterns and language development delay among toddlers. A quantitative study with a correlational analytic and cross-sectional design was conducted from July to August 2025. The instruments used were a parental communication questionnaire and the Denver II screening tool. The population consisted of 399 toddlers, with 200 respondents selected through purposive sampling. Data were analyzed using univariate and bivariate analysis with the Chi-Square test. The results showed that 124 parents (62%) had good communication patterns. Statistical analysis revealed a significant relationship between parental communication patterns and language development delay ($p\text{-value} = 0.000$; $\alpha < 0.05$). Most toddlers demonstrate normal language development.

Keywords: Parental communication, Language development, Toddlers.

INTRODUCTION

Untreated speech delay may have serious long-term consequences on an individual's life. Its impact can persist into adulthood, affecting communication abilities in the workplace and social interactions, which may subsequently reduce quality of life (McLaughlin, 2011). Children's quality of life is strongly influenced by their speaking abilities because effective communication supports social, emotional, and academic development (Hawa & Spanoudis, 2014). In Indonesia, one of the factors contributing to declining quality of life among children is speech delay. Speech delay is one of the most common developmental problems among

children under five years of age. In general, speech delay refers to a condition in which a child's communication abilities are not appropriate for their developmental age (Ananda, 2022a).

Speech delay in early childhood is considered a serious problem that requires immediate intervention because it is one of the most prevalent developmental disorders among children (Wallace et al., 2015). Signs of speech delay can be identified through unclear word pronunciation and a reliance on gestures or sign language during communication. as a result, parents and communication partners often experience difficulty understanding the child's intentions, even though the child may actually understand the speech of others (Nelson et al., 2006).

When a child's speech development is impaired or delayed, it can automatically affect the child's academic achievement. This occurs because children may experience difficulties in spelling and reading, whereas reading serves as the fundamental basis of the learning process. In addition to lowering academic performance, children with speech delay may also encounter difficulties in social interaction and establishing friendships with peers, as they often struggle to participate in activities and games with other children of the same age (Rista Angraeni, 2024). Recent studies have also shown that speech and language delays are associated with poorer educational outcomes, reduced social competence, and behavioral difficulties during school age (Norbury et al., 2016; Law et al., 2021).

Toddlerhood is considered a golden period of brain development that plays a crucial role in determining a child's quality of life. Therefore, this stage represents a valuable opportunity for families to provide optimal stimulation and early intervention to support children's growth and development (Oktaviani, 2022). Early childhood intervention has been widely recognized as an effective strategy to improve cognitive, language, and socio-emotional development outcomes in children with developmental delays (World Health Organization, 2023).

Approximately 20% of children in Indonesia experience speech delays, based on data presented by the Director General of the Indonesian Speech Association (IKATWI) on May 20, 2022. In addition, the Indonesian Pediatric Society (IDAI) reported that approximately 5–8% of preschool children experience speech and language developmental problems. The prevalence of speech delay among children

in Jakarta has even reached 21% (Ministry of Health of the Republic of Indonesia, 2024). According to data from the Pekanbaru City Health Office in 2024, among the 15 community health centers (Puskesmas) in Pekanbaru City, the highest number of children aged 1–5 years was recorded at the Payung Sekaki Community Health Center.

Speech delay disorders may be influenced by various risk factors, which are generally categorized into internal and external factors. Internal factors include individual-related aspects such as age, sex, premature birth, low birth weight, pregnancy history, genetic factors, and chromosomal abnormalities. Meanwhile, external factors are associated with the environment and parenting patterns, including parenting style, parents' occupation and educational level, family history, the number of languages used in daily communication, the level of gadget exposure, and the number of children in the family. One important aspect of parenting within the family is the communication pattern between parents and children, as this pattern plays a significant role in shaping children's character and developmental outcomes (Putu et al., 2024).

Communication patterns between parents and children play an important role in shaping children's character and developmental progress. In parent–child interactions, there are four types of communication patterns, namely verbal communication, group communication, nonverbal communication, and individual or interpersonal communication

Based on the study conducted by Purnomo et al. (2022), the findings revealed that the majority of respondents, namely 32 participants (88.9%), demonstrated good communication patterns and were not at risk of experiencing language developmental delays. Meanwhile, a smaller proportion of respondents, specifically 4 participants (11.1%), had moderate communication patterns and were also not at risk of language development delay. The Chi-square test results showed a p-value of 0.003, which was lower than $\alpha = 0.05$, indicating that H1 was accepted and H0 was rejected. Therefore, the study concluded that there was a significant relationship between parental communication patterns and the risk of language developmental delay among preschool-aged children.

Based on the study conducted by Rechika Amelia Eka Putri (2024), the results showed that 35 respondents (57.4%) applied an authoritative parental communication pattern, while 19 respondents (31.1%) applied a permissive communication pattern, and 7 respondents (11.5%) applied an authoritarian communication pattern. Regarding children's language development, 38 respondents (62.3%) were categorized as having adequate language development, 16 respondents (26.2%) had poor language development, and 7 respondents (11.5%) demonstrated good language development. The results of the Spearman Rho test showed a significant value of $p = 0.001 (<0.05)$, indicating a significant relationship between parental communication patterns and language development among preschool-aged children in Tilongkabila District. The study suggested that parents should provide positive responses to children's language expressions and pay greater attention to children's verbal interactions in order to support optimal language development.

Based on a preliminary survey conducted in the area surrounding the Payung Sekaki Community Health Center, 5 out of 10 parents were found to have poor communication patterns, and among them, 2 children experienced speech delay.

METHOD

This study employed a quantitative approach with an analytical cross-sectional design. This design was used to analyze the relationship between variables observed at a single point or within a specific period of time.

The study was conducted in the working area of the Payung Sekaki Community Health Center, including Posyandu Suntain Lestari, Posyandu Teratai, Posyandu Mekar Sukma, Posyandu Sari Kenanga, as well as through door-to-door visits in Labuh Baru Barat Village. The research was carried out from July 25 to August 16, 2025. The study population consisted of all preschool children aged 3–5 years in the working area of the Payung Sekaki Community Health Center, Pekanbaru City, in 2024, totaling 399 children. The research sample comprised a portion of preschool-aged children within the study area.

The sampling technique used was non-probability sampling with a purposive sampling method, in which participants were selected based on predetermined

inclusion and exclusion criteria. The total sample size in this study was 200 respondents.

The instruments and tools used in this study included attendance lists, questionnaires, and the Denver Developmental Screening Test II (DDST II/Denver II) assessment sheet. Data analysis was conducted using univariate and bivariate analyses. Bivariate analysis was performed using the Chi-square statistical test to determine the relationship between the research variables.

RESULTS

The research findings consist of general data and specific data. The general data includes parental age, occupation, educational level, child's age, and child's gender. Meanwhile, the specific data present parental communication patterns and language development delays among toddlers in the working area of Puskesmas Payung Sekaki.

Table 1 Frequency Distribution of Respondent Characteristics in the Working Area of Payung Sekaki Health Center

Respondent Characteristics	Frequency	Percentage (%)
Mother's Age		
25–35 years	146	73
36–45 years	54	27
Education Level		
Junior High School	46	23
Senior High School	127	63.5
Bachelor's Degree	27	13.5
Occupation		
Housewife	159	79.5
Private Employee	34	17
Teacher	7	3.5
Child's Age		
3 years	69	34.5
4 years	118	59
5 years	13	6.5

Child's Gender		
Male	84	42
Female	116	58
Total	200	100%

Based on the respondents' characteristics, the findings showed that the majority of parents were aged 25–35 years, accounting for 146 respondents (73%). Based on educational level, most respondents had completed senior high school education, with 127 respondents (63.5%). In terms of occupation, the majority were housewives, totaling 159 respondents (79.5%). Meanwhile, based on the characteristics of the children, most were 4 years old, consisting of 118 children (59%). Regarding gender, the majority of the children were female, with 116 respondents (58%).

Table 2 Frequency Distribution of Respondents Based on Communication Patterns and Language Development in the Working Area of Payung Sekaki Community Health Center

Category	Frequency	Percentage (%)
Communication		
Pattern		
Good	124	62%
Fair	37	18.5%
Poor	39	19.5%
Language		
Development		
Normal	140	70%
Delay	60	30%
Total	200	100%

Based on communication patterns, the majority of respondents demonstrated good communication patterns, with 124 respondents (62%). Meanwhile, based on

language development, most children showed normal language development, accounting for 140 respondents (70%).

Table 3 The Relationship Between Parental Communication Patterns and Language Development Delay Among Toddlers in the Working Area of Puskesmas Payung Sekaki

Commu nication Pattern	Language Development						P- Value	POR (95%)
	Normal		Delay		Total			
	F	%	F	%	F	%		
Good	11	93.5	8	6.5	124	100.		
	6					0	0,000	3.41
Enough	15	40.5	22	59.5	37	100.		
						0		
Not	9	23.1	30	45.0	39	100.		
enough	14	70	60	30	200	0		
Total	0					100.		
						0		

Based on the results of the analysis, respondents with good communication patterns mostly had children with normal language development, totaling 116 respondents (93.5%). In contrast, respondents with poor communication patterns predominantly had children with delayed language development, accounting for 30 respondents (76.9%).

The statistical test showed a p-value of 0.000 ($p < 0.05$), indicating a significant relationship between parental communication patterns and language development delay among toddlers. The prevalence odds ratio (POR) value of 3.41 suggests that children exposed to poor parental communication patterns were 3.41 times more likely to experience language development delay compared to those with good communication patterns.

DISCUSSION

The results of the study showed that the majority of parents of toddlers in the working area of the Payung Sekaki Community Health Center had good communication patterns, accounting for 93.5%. Meanwhile, 40.55% had moderate communication patterns, and 23.1% had poor communication patterns. These findings indicate that most parents are aware of the importance of communicating with their children, particularly during the golden age period of development. However, a small proportion of parents still have not optimally established effective interactions with their children.

Communication patterns refer to the form of interaction between two or more individuals in the process of sending and receiving messages so that the information can be understood effectively. Positive parental communication patterns can accelerate children's language development by increasing vocabulary acquisition, improving speaking and comprehension skills, and enhancing children's self-confidence, thereby reducing the risk of language delay. Conversely, poor communication patterns may contribute to language developmental disorders in children, including speech delay (Luthfiyah & Yuliana, 2023).

These findings are consistent with the study conducted by Purnomo et al. (2022), which found that 88.9% of parents with good communication patterns had children with normal language development. In contrast, parents with moderate and poor communication patterns were more likely to have children at risk of experiencing speech delay.

Another study by Noviatul Zahra et al. (2021) also emphasized that openness, consistency, and assertiveness in communication between parents and children positively influences children's personality, behavior, and language development. Good parental communication patterns greatly affect children's language development. Positive communication practices, such as engaging children in daily conversations, providing guidance, and responding to children's questions, function as important forms of stimulation that accelerate language acquisition and speech development.

Based on the study findings, parental education was identified as a significant factor influencing communication patterns. According to Suhartanti et al. (2022), parents

with higher educational backgrounds are generally more capable of understanding and adapting to new information. The results of this study conducted in the working area of the Payung Sekaki Community Health Center showed that 127 respondents had a senior high school educational background, accounting for 63.5% of the total respondents. This finding indicates that parental education plays an important role in shaping effective communication patterns with children. In addition to education, occupation was also found to influence parental communication patterns. Based on the respondents' characteristics, the majority of mothers in the working area of the Payung Sekaki Community Health Center were housewives, with a total of 159 respondents (79.5%). Occupational background may affect the amount of time, attention, and interaction parents provide to their children, which subsequently influences the quality of communication and developmental stimulation given to the child.

The findings of this study further demonstrated that parental education and occupation influence children's development through the provision of stimulation and communication. Positive communication patterns provided by parents contribute positively to children's developmental outcomes. Therefore, parental communication patterns can be considered one of the most important external factors influencing children's language development, particularly in preventing speech delay.

The results of this study showed that 30% of toddlers in the working area of the Payung Sekaki Community Health Center experienced language developmental delay (speech delay), while the remaining 70% demonstrated normal language development. This proportion is relatively high compared to the national prevalence reported by the Indonesian Pediatric Society (IDAI), which ranges from approximately 5–8%. The high prevalence found in this study indicates that speech delay remains an important issue in child growth and development, particularly in the working area of the Payung Sekaki Community Health Center.

Language developmental delay in children may be caused by both internal and external factors. Internal factors include sex, history of premature birth, low birth weight (LBW), genetic factors, and maternal pregnancy health history. Meanwhile, external factors include parenting style, lack of verbal stimulation, parental

educational background, excessive gadget exposure, and the number of children within the family.

The findings of this study are consistent with the research conducted by Putu et al. (2024), which identified the main risk factors for speech delay as low language stimulation from parents, limited interactive communication, and excessive exposure to gadgets. Inadequate parent–child interaction may reduce children's opportunities to develop vocabulary, speaking skills, and language comprehension during the critical stages of growth and development.

Furthermore, Siti Aminah and Ratnawati (2022) explained that children with language developmental delays are at greater risk of experiencing academic difficulties, particularly in reading and writing skills, as well as barriers in social interaction. Delays in language development may also affect children's emotional and behavioral adjustment in later stages of life.

Based on the findings of this study, the high prevalence of language developmental delay in the working area of Puskesmas Payung Sekaki highlights the urgent need for promotive and preventive efforts. These efforts should include parental education regarding appropriate communication and stimulation, as well as early screening and monitoring of children's language development to facilitate early detection and intervention for speech delays.

The results of the study showed that 93.5% of children whose parents demonstrated good communication patterns had normal language development. Meanwhile, 59.5% of children whose parents had fair communication patterns experienced language delay. In addition, 76.9% of children whose parents had poor communication patterns experienced language developmental delay.

Based on the findings of this study, the majority of mothers applied good communication patterns, accounting for 124 respondents (62%). Among these respondents, most children demonstrated normal language development, totaling 116 children (93.5%), while 8 children (6.5%) experienced language delay. Parents with good communication patterns generally exhibited behaviors such as frequent interaction, active communication, maintaining close relationships with their children, and engaging in discussions with them. These practices enable children to

acquire new vocabulary more quickly, learn sentence construction, understand word meanings, and confidently express their thoughts and feelings.

However, despite the presence of good parental communication patterns, several children still experienced language delay. This condition may be influenced by other factors, particularly excessive gadget use. Children who spend excessive time using gadgets tend to receive passive stimulation by only watching and listening, resulting in limited two-way interaction. As a result, children have fewer opportunities to practice pronouncing words, constructing sentences, and interacting directly with their surroundings. As a result, the communication stimulation provided by parents may not be optimally absorbed, leading to delayed language development in children.

Based on the research findings, among 39 respondents (19.5%) who applied poor communication patterns, 9 children (23.1%) demonstrated normal language development, while 30 children (76.9%) experienced language delay. These findings indicate that children whose parents implement poor communication patterns are more likely to experience delayed language development. This condition may be attributed to the lack of interaction and communication between parents and children.

These results demonstrate that parental communication patterns play an important role in children's language development. The better the communication pattern applied by parents, the lower the risk of children experiencing speech delay. On the other hand, poor communication patterns may reduce children's verbal stimulation, thereby slowing vocabulary acquisition, sentence construction abilities, and speaking skills. Children who experience difficulties in communication tend to have lower self-confidence, become easily frustrated, and may encounter challenges in building friendships because they are limited in expressing their thoughts and emotions. In the long term, these difficulties may hinder the development of social skills required for community life and future workplace interactions.

The findings of this study are consistent with those reported by Saputra (2020), who stated that effective communication patterns can facilitate children's language development. The study concluded that there was a significant relationship between

parental communication patterns and language development among preschool children in Tilongkabila District.

In addition, Noviatul Zahra et al. (2021) explained that good parental communication patterns greatly influence children's language development. Children's language develops through social interaction with adults. Positive parental communication patterns, such as engaging children in conversations, providing guidance, and responding to children's questions, serve as important forms of stimulation that accelerate language acquisition and support optimal language development.

The findings of this study are consistent with the research conducted by Purnomo et al. (2022) regarding the relationship between communication patterns and the risk of language developmental delay among preschool children at PAUD RA Babussalam Kemuningan Sidoarjo, involving a sample of 36 respondents. The study found that almost all parents who applied good communication patterns had children who were not at risk of language developmental delay, totaling 32 respondents (88.9%). Meanwhile, a small proportion of parents with fair communication patterns also had children who were not at risk of language developmental delay, accounting for 4 respondents (11.1%).

Based on the findings of this study, it can be assumed that parental communication patterns are one of the key factors supporting children's language development. Parents who actively interact with their children, provide verbal stimulation, and positively support children's communication are more likely to minimize the risk of speech delay. In addition, effective communication fosters emotional closeness between parents and children, enabling children to feel more confident in expressing their thoughts and feelings. This self-confidence serves as an important foundation for language development, as children become more willing to speak, ask questions, and express themselves. Therefore, positive parental communication patterns not only influence children's language abilities but also contribute to their overall social, emotional, and cognitive development.

CONCLUSION

This study found that the majority of parents in the working area of Puskesmas Payung Sekaki demonstrated good communication patterns. Most toddlers also showed normal language development. Statistical analysis revealed a significant relationship between parental communication patterns and language developmental delay among toddlers ($p\text{-value} = 0.000$; $\alpha < 0.05$). Children who received positive and effective communication stimulation from their parents were more likely to demonstrate normal language development, whereas poor parental communication patterns were associated with a higher risk of speech delay.

These findings indicate that parental communication patterns play an essential role in supporting children's language development. Frequent interaction, active communication, emotional closeness, and positive verbal stimulation may enhance children's vocabulary acquisition, sentence construction, self-confidence, and communication skills. Therefore, promotive and preventive efforts, including parental education, early screening, and monitoring of children's language development, are necessary to reduce the prevalence of speech delay and support optimal child development.

LIMITATIONS

This study has several limitations. First, the study used a cross-sectional design, which only measured variables at one point in time; therefore, causal relationships between parental communication patterns and language developmental delay may not be established. Second, the study was conducted only in the working area of Puskesmas Payung Sekaki, which may limit the generalizability of the findings to other populations or regions. Third, the assessment of parental communication patterns relied on self-reported questionnaires, which may be subject to response bias and social desirability bias. Finally, several other factors that may influence language development, such as parenting style, socioeconomic status, duration of gadget exposure, family environment, and genetic factors, were not analyzed in depth in this study. Future research is recommended to use longitudinal designs and include broader variables to better understand factors associated with speech delay among children.

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