Factors Affecting Speech Delay In Toddlers

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The problem of speech delays in preschool children is estimated at 5% of the normal population. It is known that 19% of toddlers have speech and language development disorders, with details of 6.4% speech delay, 4.6% speech and language delay, and 6% language delay. This study aimed to identify factors associated with speech delay in toddlers. This study uses the Literature Review design. The article was taken from the SINTA, Garuda, PubMed, Science Direct, and Google Scholar databases with the keywords (((speech delay) AND toddler) AND influencing factors). The criteria for the articles used are 2018-2021 publications. The articles were selected using the PEOS framework and the JBI Critical Appraisal tools. The results showed that the factors that influenced the occurrence of speech delays included two articles related to gender, one article related to the incidence of physical trauma, two articles related to genetic factors, two articles related to neurological disorders, three articles related to the use of gadgets, and six articles related to parenting. Suggestions that further research can be carried out on the effect of implementing parenting patterns on speech delays in toddlers.

Keywords:
Speech delay factors
Toddlers
Parenting

Introduction

The golden period is the time when the brain develops rapidly and optimally. The golden period occurs when the baby is still in the womb until the child reaches the age of 2 years, which is included in toddlerhood. During this golden period, stimulation is needed to support the growth and development of children (Soetjiningsih, 2012). According to the Ministry of Health (2015) quoted in the Journal of Professional Nurse Research, some of the developments that occur in children at the age of toddlers include the ability to speak or speak, creativity, attitudes and emotions of children, social skills or social awareness and children's intelligence (Suhadi, 2019). Children will catch the stimulus provided by the surrounding environment, which will affect the development experienced. Development in children can lead to positive or negative things according to the stimulus received by the child. The child will lead to good development if the child gets a good stimulus such as positive support from parents, a quality environment, and good association or friendship. However, if the child does not receive attention or support from both parents during his development, is in an environment and has friendships that are not good, the development experienced by the child will not be optimal.

One of the developments in children that must be considered is language and speech development. Language and speech are things that children need at a later stage of development because language and speech are a means to communicate and socialize with other people. If these developments are met, it can help further development. This inhibition of language and speaking skills will result in children not being able to express what they feel so that what they want is not fulfilled because other people do not understand what they want. The inhibition of children's language and speech abilities is called speech delay (Suhadi, 2019).

Speech delay is one aspect of development that often occurs at the age of toddlers and is a concern for parents. A child is said to have a speech delay if he cannot or is less than optimal in speaking to others at the age he should be. According to (Kemenkes, 2015), quoted in the Journal of Professional Nurse Research, the characteristics of children who can be said to have abnormalities in speech and language development and need to get more attention are if children aged 1-1.5 months cannot smile, at the age of 1-1.5 months. At three months, the child cannot speak yet; the child has not been able to say 4-5 words at the age of 18 months, has not been able to say his name at the age of 2 years, has not been able to tell a short story about something at the age of 4.5 years. This behaviour detection needs to be done to discover the problem of children's language development (Suhadi, 2019). Language and speech are essential in human life because they are communication tools. Through speaking, a person can interact and convey messages so that others understand what is wanted or expected (Taqiyah & Mumpuniarti, 2022).

A child is said to have a speech delay if his speech is below normal for his age, such as making many mistakes in language or adding or deleting consonants. In addition, at the age of 4-6 years, children who experience speech delays are seen when children read who have decreased reading skills, are unable to spell their creations, children's verbal and spelling skills are poor, children's inability to know the meaning contained in writing. The existence of behavioural problems, and children having difficulty communicating, affects other developments, such as children's social, emotional, cognitive, psychological, and academic development (Hasanah & Sugito, 2020).

According to Haryatiningsih, quoted in the Journal of Professional Nurse Research, several reports on speech delays in children explain that the rate of speech and language disorders in children is around 2.3-24.6%. The number of cases of delay in speech and language development in toddlers in Indonesia is increasing. It is stated that in Indonesia, the rate of speech delay in children is between 5% - 10% in school children (Suhadi, 2019). The problem of speech delays in preschool children is estimated at 5% of the normal population. As many as 70% of these cases are handled by therapists. It is known that 19% of children aged five years have speech and language development disorders with details (6.4% speech delay, 4.6% speech...
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and language delay, and 6% language delay) (Indah, 2018).

Based on existing data and research, the problem of speech delays in children is a problem that must get more attention because the percentage of children who experience speech delays is increasing daily. If this is not treated as soon as possible, it will hamper the child’s further development. The results of research or literature on the factors that affect speech delay in children under five are still limited in number. Based on the description above, the researchers are interested in conducting a literature study on the factors that affect speech delays in children under five. This research aims to identify the factors associated with speech delay in children under five.

**Method**

The study design used in this research is Literature Review (LR), which is a method that identifies, assesses, and interprets all findings on a research topic to answer pre-defined research questions. The literature review search was conducted in September 2021. The databases used include Science Direct, Pubmed, SINTA, GARUDA, and Google Scholar. Furthermore, we used the PEOS framework in determining the inclusion and exclusion criteria.

Determination of keywords using Medical Subject Heading (MeSH). Keywords include (((speech delay) AND toddler) AND influencing factors) for English articles and the keywords speech delay, toddler, and influencing factors for Indonesian articles. Then use the PRISMA checklist to determine whether articles match the inclusion and exclusion criteria. Then, articles are assessed using The Joanna Briggs Institute Critical Appraisal Tools to summarise the quality of the studies. The article inclusion criteria are using a cross-sectional, descriptive, or observational design, with toddlers as the outcome, the main problem is speech delay, exposure is the influencing factor, and the year the article was published is 2016-2021. While the exclusion criteria are using a quasi-experimental or pre-experimental design, adolescents or adults as the outcome, the main problem is speech disorders, growth and development disorders, speech abilities, exposure, namely impact, therapy, or risk factors, the year of article publication is under 2016 or above 2021.

Based on the results of a literature search in five databases using keywords adapted to MeSH, the researchers found 240 articles that matched the keywords. From the obtained search results and then checked for duplicates, it was found that the same 120 articles were removed and the remaining 120 articles. Then the researchers conducted a screening that only contained the title and abstract. Found titles and abstracts of 104 articles and 16 full-text journals. Of the 104 articles, researchers examined those that did not meet the established PEOS and those that did not meet the inclusion criteria. The results found 104 journals that did not match, and 16 journals would be analyzed for quality. Quality assessment is carried out by analyzing the quality of the methodology in each study using a critical appraisal checklist by The Joanna Briggs Institute. The final screening results obtained 10 articles that achieved or more than a score of 50% that matched the critical appraisal criteria and were ready for data analysis.
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Results and Discussion

Characteristics of Study and Study Respondents

1. Gender. The results of the article review found that the male sex experienced more speech delay than the female sex (4 articles). At the same time, one article showed a more significant speech delay in women.

2. Physical trauma. The results of the article review showed that 1 article showed physical trauma, so toddlers experienced speech delays.

3. Genetic or neurological factors. From the results of the article review, it was found that four articles showed speech delay due to genetic disorders such as autism and ADHD (2 articles) and neurological dysfunction (2 articles).

4. Use of gadgets. From the results of the article review, it was found that three articles indicated the use of gadgets in toddlers who experienced speech delay.

5. Parenting pattern. From the results of the article review, it was found that six articles indicated parenting as a cause of speech delay. Five articles with authoritarian parenting and 1 article with democratic parenting.
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<td>Suhadi &amp; Istati, (2020)</td>
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<td>Children aged 2-5 years, as many as 27 people</td>
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<td>Analysis of Oral Language in Children with Speech Delay (Speech Delay) Age 5 Years</td>
<td>Puspita, Perbawani, &amp; Sumarlam, (2019)</td>
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<td>Yulianda (2019)</td>
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<td>Three children under five</td>
<td>The influencing factors are genetic factors and the role of parents and family in nurturing.</td>
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<td>Detection of Speech Delay in Children Aged 48-72 Months Through Various Factors</td>
<td>Kurniasari and Sunarti, (2018)</td>
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<td>Factors Affecting the Occurrence of Late Speech at the House Of Fatima Child Center Malang City Speech Delay in 4 Years Old Children</td>
<td>Deviany Widyawaty and Jannah (2021)</td>
<td>Original research</td>
<td>Toddlers as many as 97 people</td>
<td>There is a relationship between the factors of Autism, ADD, and ADHD on speech delay.</td>
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<td>Factors and Impact of Speech Delay on Children's Behavior Case Study of Children 3-5 Years Old: A Psycholinguistic Study</td>
<td>Muslimat, Lukman and Hadrawi, (2020)</td>
<td>Original research</td>
<td>Toddlers aged 3-5, as many as 3 people</td>
<td>The influencing factor is that the child does not get a good model, does not get the opportunity to talk, has low motivation, and has a habit of watching television or YouTube on a cell phone. The factors found were the lack of parental roles in child development, technological factors, lack of stimulus from parents, minimal parental education, and socioeconomically disadvantaged parents</td>
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<td>The Relationship between Stimulation and Parental Knowledge on Language Development in Toddlers Age 1-2.5 Years At Puskesmas I Denpasar Selatan</td>
<td>Ni Wayan and Made, (2022)</td>
<td>Original research</td>
<td>40 children aged 1-2.5 years</td>
<td>The result of this study is that there is no relationship between parental stimulation and knowledge and language development in children aged 1-2.5 years</td>
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Use of Gadgets in Children: The Relationship of Parental Supervision and Interaction on Children's Speech and Language Development
Septyani, Lestari and Suryawan, (2021)
Original research
Children aged 4-5 years, as many as 86 people
Use of gadgets in children
This study's results show that parental supervision and interaction on the use of gadgets in children are associated with the risk of delays in speech and language development.

The Relationship between Parenting Patterns and Language Skills in Preschool Children at TK IT Az Zahro Samarinda
Khairunnisa and Zulaikha, (2021)
Original research
Preschool children as many as 24 people
Parenting patterns of parents with language skills of preschool children
Based on the research, it was found that there was a relationship between parenting patterns and language development in children with p-value = 0.002

Discussion
A literature review of 10 articles showed that the factors that influence speech delays in children under five include gender, the incidence of physical trauma, genetic factors, neurological disorders, use of gadgets, and parenting patterns.

Language can be expressed in two ways, namely verbal and non-verbal language. Verbal language can be expressed through speech and refers to verbal symbols. Meanwhile, the non-verbal language includes aspects of communication in the form of writing, gestures, and gestural/mime (Yuliafarhah & Siagian, 2023).

Children are said to be able to speak when these children can issue various sounds through their mouths and use articulations or words to convey something. The ability to speak in children varies, but these abilities can be compared with children of the same age. The development of a child’s speaking ability is normal if their speaking abilities are the same as children of their age and they can fulfil developmental tasks. When the development of speech skills is not the same, and the child cannot fulfil the tasks of speech development at that age, then the child can be said to experience developmental barriers to speech delay skills (Yuliafarhah & Siagian, 2023).

1. Gender.

Research by Suhadi (2019) and Campbell (2003) shows that men have the most significant ratio of speech delays. This condition is related to differences in female maturation in the development of the brain in the hemispheres of the left hemisphere's verbal function, which is better than that of males. In males, the development of the right hemisphere is better for abstract tasks and requires skills.

Gender factor, if seen in everyday life, there are differences in children with the male and female gender. Boys tend to talk less than girls. Boys do more activities than talk, while girls tend to be easier and braver to interact and express their feelings. This is because boys produce the hormone testosterone, which causes them to be active.

Boys have a "slower" ability to acquire language. Boys represent over 70% of late talkers and only 30% early talkers. Studies of early language development (first three years of life) find systematic differences between boys and girls in early communication development and language acquisition. Boys lag behind girls in developing many communication features, including eye contact, use of gestures, imitation of gestures, mutual attention, social reference, and others.

During the first year of life, on average, girls acquire language more quickly than boys and have a larger vocabulary. For example, at 16 months, girls have a vocabulary of 95 words, while boys have 25 words (Adani & Cepanec, 2019).

2. Physical trauma.

Puspita's research (2019) shows that physical trauma causes motor development to slow down. This is due to injuries from trauma that can affect a child's development, including language and speech development.

Severe physical trauma will cause motor development in children to slow down and...
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affect other developments, including the development of children’s speech. This is because the physical trauma experienced by the child will be carried away in his memory, so the child becomes cowardly, which can affect his development.

Factors that determine children affected by trauma include how many times they were traumatized, how severe it was, how close they were to the incident, the child’s relationship with the perpetrator, the age and developmental stage of the child at the time of the trauma, someone who supported the child during the trauma, and the role of genetics (Osofsky, 2019).

3. Genetic and neurological factors.

Widyawaty’s research (2021) shows that people with autism show distorted communication disorders. This communication disorder can be seen in speech delays, not speaking, speaking in a language that cannot be understood, or speaking only imitating (echolalia). ADD (Attention deficit disorder) is a disturbance of attention that can be seen in the failure of children to give full attention to something; it is effortless to switch attention from one thing to another, and they have difficulty concentrating if things are going on around them, they usually need environment, which is quiet to stay focused.

Attention Deficit Hyperactive Disorder is a disorder of activity and attention (hyperkinetic) is a psychiatric disorder that is quite common with main symptoms such as hyperactivity and impulsivity inconsistent with the developmental level of children, adolescents, or adults. Many children with ADHD also have speech delays, gross and fine motor delays, sensory problems, or sensory processing disorders. Suhadi’s research (2019) shows that families who have speech delays are at risk of experiencing speech delays. The Specific Language Impairment Consortium found a link between language disorders and two separate loci on chromosomes 16 and 19. The chromosomal 16 locus is associated with poor performance on word repetition and short-term memory tests, while the 19 locus is associated with poor performance on language tests expressive.

Children with neurological disorders experience obstacles in their development which cause children also to experience the risk of speech delays. One way to overcome speech delays in children with neurological disorders is with speech therapy so that children will get the motivation to speak.

4. Use of gadgets

Smartphones and gadgets are considered one of the main factors in children’s speech delays, especially those under three years. This delay is also accompanied by a child’s social impairment, like the symptoms of the autism spectrum.

Using gadgets is potentially detrimental and can interfere with children’s linguistic and motor development. In addition to children experiencing speech delays, children also have the potential to become passive language users. Due to being passive language users, children will take a long time to train their articulation organs to slow down speech perfection. These problems lead to speech delays (Putra et al., 2022).

Research by Damayanti (2017) and Septyani (2021) shows that factors that can influence the use of gadgets in early childhood include attractive features, sophistication, affordability, and environmental, cultural, and social factors. Using gadgets and social media by children who do not get proper parental supervision will harm children’s development.

The use of gadgets can also affect speech delays in children under five. The positive side that can be obtained from using gadgets for children is that they can more easily learn new things with a broader range; they can also easily express what they feel and want through gadgets. However, using gadgets must be accompanied by proper parental supervision so that children do not become addicted.

5. Parenting pattern

Research by Suhadi (2019) and Baumrind (2008) shows that family relationships and parenting patterns are factors for children late in speaking because of a healthy relationship between parents and children. One type of parenting that can interfere with children’s development, especially in developing communication skills, is authoritarian parenting. This parenting style is applied in a restrictive, punishing style and views obedience and absolute control. This causes the child to be unhappy, insecure and tends to be afraid, so the child’s communication skills become weak.
Appropriate parenting must be done so that children can develop optimally according to the age of their development. Giving children the freedom to make decisions on something is necessary so that children can grow into independent individuals. Good interaction between parents and children will cause children to get a positive stimulus that will support their development; children will be more open so that parents understand their wishes.

Conclusion

Language and speech are essential in human life because they are communication tools. Through speaking, a person can interact and convey messages so that others understand what is wanted or expected.

Based on the results of the article search, it was found that various factors can affect the occurrence of speech delays in children under five, including two articles related to gender, 1 article related to the incidence of physical trauma, two articles related to genetics, two articles related to neurological disorders, three articles related to gadgets, and six articles related to parenting styles.

Proper parenting must be done to minimize the risk of speech delays in toddlers. The existence of good interactions between parents and children will cause children to get positive stimuli that will support their development. In addition, children will be more open so parents understand their wishes. Parents need to increase insight in providing parenting to optimize the growth and development of their children.

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Conflict of Interest

There is no conflict of interest in this study.

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