



## **The Factors That Impact The Speech Delay In The First Three Years Of A Child's Life**

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### **Abstract**

In presence of speech delay, a young learner struggles to develop language according to his age and associated developmental milestones (Al-Fadhli & Al-Bunaian, 2017). This study aims to investigate elements that contribute to delayed speech in children aged between birth to three years old. The researcher narrowed down the purpose to two main questions; First, what are the factors that impact speech delay in the first three years of a child's development? Second, what are the advantages of early intervention for a child with a speech delay?

The systematic literature review (SLR) gathered all papers that fulfill the research questions, highlighting factors that impact speech delay alongside the advantages of early intervention. Selected studies implemented both qualitative and quantitative, which supports the level of accuracy in revealed data. The researcher reviewed total of 48 articles, eliminating 26 out of them to include 22 studies in the SLR. The study revealed on the factors that affect speech development on both domains; receptive and expressive language, highlighting the environmental and genetic roles on resulting speech delay. It identified that males are more likely to experience speech delay than females, stressing on the impact of healthy environment that emphasize social interaction with children in evolving their speech skills. The study provides recommendations on the importance to investigate further risks that impact children with speech delay and expanding the study by including other aspects associated with speech delay in early ages up to three years.

**Keywords:** Speech; delay; communication; language; acquisition

### **1. Introduction**

Language and speech skills are essential to be developed for children in preschool age. A language is a form of a symbol system used by children to communicate and adapt to their environment. It involves cognitive, emotional, social, and environmental development. It is important for children's cognitive and overall development later in life (Al-Fadhli & Al-Bunaian, 2017). The delay in language development can impact a child's school achievement; it may also affect their self-esteem and future career. Speech is the product of verbal language communication, in which children can share ideas and emotions.

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Language skills can be divided into expressive: the ability to express needs and emotions through speaking, and receptive, understanding what others say. Speaking and language are mainly influenced by internal and external factors. Internal factor is an innate condition including the physiology of the organ involved in language and speech skills. Meanwhile, the external factor is a form of a stimulus around the child, basically, the words that the child heard or addressed (Akbar & Ismail, 2021). Children usually mastered the fundamental skills of speech in early age within the first three years (Al-Fadhli & Al-Bunaian, 2017). After the children acquire the fundamental skills for language development, they start to build up their understanding of vocabulary, then they start using words in sentences.

Speech delay implies that the children are developing the language in the correct order but slower than expected according to their age (Al-Fadhli & Al-Bunaian, 2017). This study aims to determine the factors that influence speech delay in children in the preschool age, representing the stage from birth till three years old. By gathering relevant and related studies that are systematically organized, the study addressed two main questions. First, what are the factors that impact the speech delay in the first three years of child's development? Second, what are the advantages of early intervention for the child with speech delay?

Speech is the communication through using the verbal expressions, while the language is understanding the symbols used for communication. The child diagnosed with speech delay if his speech ability extremely below other children within the same age. According to one study done by Leung and Kao in 1999 they found that the speech delay is a common childhood problem and it is familiar within males than females, the result indicates 3% to 10% of children have speech delay in childhood (Leung & Kao, 1999).

Speech delay may be an indication of various disorders such as expressive or receptive language disorders, Autism, mental retardation, hearing loss, cerebral palsy, selective mutism, bilingualism, and maturation delay (Leung & Kao, 1999). Also, there are many symptoms that may indicate that the child has speech delay in the early years. For instance, if by age of 12 to 15 months the child not babbling or by age of 18 not understanding simple commands may these two early symptoms indicate that the child will develop a speech delay. Also, if by age of two years old the child unable to speak with one or two words, by age of three years not making sentences, and by age of five have difficulty in telling a simple story these symptoms are enough to indicate that the child has speech delay (Clark & Casillas, 2015).

However, if the child has any of these symptoms, the appropriate intervention must be considered and take place to minimize the speech gap later in the child's life. However, children acquire information about language from their caregivers and the adults around them. Learning how to talk about events and objects around them depends on the language they hear. Then, they start building up their ability to speak fluently (Clark & Casillas, 2015).

Early identification of a child's speech delay and access to early intervention early can improve the child's outcomes, adaptive skills, self-efficiency, and reduce behavioral problems (Sapiets et al., 2020). Moreover, the first three years of child's life are very important and has a lifelong impact on the child development in the area of social and communication, cognitive, emotional intelligence, and physical growth. Haven't these stages been taken advantage of during the stages of readiness, the child is prone to develop learning difficulties towards specific skills such as speaking.

## 2. Method

All studies conducted the systematic literature review (SLR) focused on the studies that include the factors that impact speech delay in the first three years of child language development. Quantitative and Qualitative approaches were used in the SLR. The study focused on speech delay in the early years, and

several studies focused on the importance of early intervention for the child who faces speech delay. Additionally, social and developmental psychology, medical and pediatric researchers were included in the SLR. On the other hand, many studies have been excluded from the SLR, such as political and business studies.

All the research articles, journals, and books were related to the studies that mentioned the influences that impact speech delay in the first three years of a child's life. Most of the studies were collected from multiple databases such as google scholar and World-Cat. Moreover, other articles, journals, and books were accessed from several online platforms. The keywords used to find articles related to the research topic were "language acquisition," "early intervention," "First three years of child development," "Speech and language delay," "Risk factors impact speech development." Moreover, some of the research articles were accessed using references from previous studies related to the main research topic.

Articles were chosen based on the topic's title if it is related to the main research topic. Additionally, the researcher went through each study's abstract, findings, and results to make sure it is relevant to its aims.

To conclude, a total number of 48 articles were evaluated to be included in the systematic literature review study; 26 of them were excluded as they are not relevant, and the remains of 22 in total were included.

### **3. Literature Review**

The first three years are so critically important for the child normal development (Bruner, 1999). One of the most important skills that the child must develop in the first three years are speech and language because they are the key for the cognitive, social, and emotional development. This chapter focused on the factors that impact the child's language and speech development. The literature review was organized systematically based on the order of the research questions.

#### *3.1. Factors that impact the speech delay in the first three years of child's life.*

Many parameters have been found which have significant risk factors for speech and language delay in children less than three years old. In a study conducted by Mondal et al. in 2016 reported that the speech and delay prevalence ratio was 27% in a study conducted on finding the risk influences the speech delay in children below three years old. The study found several parameters that influence the speech delay in young children, such as speech delay associated with the male gender more than the female, also family history of speech delay and weak child environment. Furthermore, two studies done by Mondal et al. in 2016 and Keegstra et al. in 2006 found that males have more chance to develop speech delay than females (Tan et al., 2019).

According to a study done by Campbell et al. (2003) which agreed on the same factors that influence the speech delay in young children. The study reported that the family history of developmental communication disorder and male sex significantly increase the risk for the child to develop speech delay in the early years. Also, they reported that maternal education acts as a significant factor that impacts the child's speech delay. Thus, child with family history of communication disorder, and whose primary caregiver (the mother) not well educated has a huge chance to develop speech delay. As a result of Campbell et al. (2003) study all these factors work in combination. However, both studies agreed on the same risk factors that influence the speech delay in the first three years of child's life which are critical period for the child to develop and acquire the language.

According to a study done by Tan, Mangunatmadja & Wiguna (2019) related to the social interaction between children and caregivers in the first two years of child development, the study found there is no

relationship between speech delay and caregiver (Campbell et al., 2003). Also found there is no relationship between speech delay and the number of siblings in the family. Similar to one study conducted in (2016) by Suparmiati, Ismail & Sitaresmi, who found there is no significant relationship between speech delay and interaction between mother or sister.

In comparison, a study done by Keegstra et al. in 2004 suggests that only one child in the family without a brother or sister has a high chance to develop speech delay, comparing with a child with a sister or brother (Campbell et al., 2003). Also, the lack of social interaction between a child and his parents affects the child to develop language and speech adequately. On the other hand, Rice et al. found that weak social interaction leads to speech delay, and children with positive social interaction have less chance to develop speech delay (Campbell et al., 2003).

Many studies suggested that the development of gross motor skills is essential for speech development because it is given a chance for the child to explore the world (Tan et al., 2019).

Two studies conducted in 2007 agreed on the importance of breastfeeding for children in the early years for speech and language development. First, a study done by Dee, Li, Lee & Grummer-Strawn in 2007 found a relationship between child speech development and breastfeeding, stating that children with a short breastfeeding period of fewer than six months are at risk of developing speech delay. Second, a study conducted by Vestergaard et al. in 2007 suggested that children who had breastfed for a long period will display early speech compared with children who had a short period of fewer than six months at risk for speech delay. Both studies agreed on the same point, which is the importance and the effects of breastfeeding for children at an early age.

In conclusion, many factors significantly impact speech development in the first three years of a child's life. Also, there are innate factors that may lead to speech delay. All the factors have been discussed in this part of the systematic literature review. Parents and child's caregivers must be aware of all the risk factors which may lead the child to develop speech delay and try to reduce the environmental factors that impact the speech development such as lack of social interaction with the child and keep the child watch the electronic devices more than two hours a day (Byeon & Hong, 2015). If they saw any risk factors, the positive intervention must be taking place early.

### *3.2. The advantages of early intervention for the child with a speech delay.*

Speech-language delay is a common difficulty in toddler age (from 1 to 4 years). It is associated with reading difficulties and communication problems later in a child's life. It may be accounted by a primary condition such as autism, hearing impairment, behavioral or emotional disorders, or general developmental difficulties (Law et al., 2004). As a result, it may affect a child's learning and socialization later in life. Therefore, early speech and language intervention is considered influential for the child with speech delay, especially in the first three years, to minimize the child's speech gap. There are two types of early intervention to improve speech or language: First, Receptive or expressive phonology (understanding or production of speech sounds).

Second, Receptive or expressive vocabulary (understanding or production words), or Receptive or expressive syntax (understanding or production of sentence and grammar (Zhang et al., 2020).

Early intervention can promote speech development and ordinary acquisition of literacy skills for children with speech delay (McLaughlin, 2011). The first three years of life are considered critical for children to develop speech ability, and it is significantly affected by environmental stimuli and parents' involvement. Therefore, a positive environment helps the child to acquire the fundamental skills for

speech. Furthermore, early identification of speech delay and provide appropriate intervention services for children (Reichow et al., 2016), it is utmost importance to develop and acquire the ability to speak fluently and develop the language in a proper way.

Moreover, early intervention services at an early age can lead to a significant improvement in a child's education, health, and well-being (Gwynne et al., 2009). All the parents and caregivers must provide the initial support for their children in the first three years if needed to enhanced speech and language development. Also, the ideal strategies must be taught to the parent to help them support their children. Moreover, many early intervention strategies such as speech therapy, pre-school enrollment, and special education services can help children receive the support they need (Zengin-Akkus et al., 2018). To conclude, there are many advantages for the early intervention which parent supposed to be aware of. In addition, understand the advantages of their involvement in their child early intervention.

### *3.3. The Need for Parent-Implemented Interventions*

Early intervention can significantly improve children's intellectual performance and academic achievement (Campbell & Ramey, 1994). However, the most benefits of the early intervention can appear after three months intervention period. And children who didn't receive intervention by early age have a greater risk of having language and speech delay than the children who received an intervention. Moreover, the caregivers' involvement in the intervention could improve their children's use of language facilitation strategies, resulting in positive, receptive language and a little influence on the expressive language outcomes (Roberts & Kaiser, 2015).

Developing effective early language intervention for children with a speech delay is something very important in the early years, especially during the critical period to acquire the language. However, according to one study done by Robert and Kaiser in (2012) they found that there is a little number of studies investigated the benefits of early language intervention, and what its effect on the child speech development. Also, they Found that the positive interaction between child and caregivers can lead to a huge progress; therefore, the involvement of parents of the child to be a part in the intervention is very important.

As a result, involving parents in implementing the children's intervention may lead to an adequate child with speech delay. Many studies indicate that the parents can be thought specific strategies to support their child to develop his ability to acquire language and understand others and express his needs (Robert & Kaiser, 2012). Thus, the early intervention for children who face difficulty speaking correctly will significantly increase the child's ability to develop language and speech. Furthermore, the most significant result would be found through the collaboration between parent and child and outside therapy sessions. Parents play an essential role in helping their children develop speech and language. The parents need to become aware and be taught some strategies to help their children minimize the speech gap related to their age. Also, children who receive early receptive and expressive language intervention can develop their speech and language skills compared with the children who did not receive any support (Robert & Kaiser, 2012).

To encapsulate, the result of this study in the term of parent involvement in their child's ability to acquire and develop the language. A survey was directed to 34 teachers in one inclusive mainstream school in Dubai to highlight the teachers' belief in the importance of parent involvement in their child's speech and language development. The result was 93% of the teachers supported the vital role of parents' involvement in their children's ability to develop and acquire language. Moreover, role-play between

parent and child help children to develop the ability to think creatively and improve their communication skills, and problem-solving skills, which reflect the children's emotional and mental health.

#### **4. Discussion**

The purpose of this SLR was to indicate the main factors that affect speech delay in the first three years of a child's life. The study indicated that language growth depends on many factors to develop expressive and receptive language for the children. In fact, the development of language is affected by environmental and genetic factors (Zengin-Akkus et al., 2018). The study mentioned many factors affecting the child's language development, such as gender, etc. In addition to several symptoms which help the parent to discover if their child has a speech delay. Therefore, the children's healthy environment with effective social interaction between children and their parents in the early years will significantly help the child to acquire the language and speech without difficulties.

The evidence from this review indicates the impact of the children who received early intervention in the early years compared with those who did not expose to any early intervention. Therefore, the children who had intensive intervention will have greater receptive and expressive language skills development. Moreover, it has reflected the essential part of parent involvement in developing the language and speech for their children. Many studies indicated that many risk factors affect and impact children to develop speech delay. The lack of social interaction, gross motor skills, family history of developmental communication disorders, maternal education, duration of exclusive breastfeeding of fewer than six months; all is significant factors that significantly impact the child's ability to develop typical speech. The study showed that a survey was directed to 34 teachers about the importance of parents or caregiver involvement in the early intervention for children with speech delay. A high percentage of teachers supported the role of the parent in developing the speech-language to their children through the role play.

To conclude, the speech-language development is an essential skill, and all the children must develop before entering the school, as it will affect their learning and academic achievements. In addition, to behavior problems if the child cannot express his needs and understand other. Additionally, early intervention is significantly essential for the children with speech delay as it help to reduce the speech gap and improve child's outcome.

#### **5. Conclusions**

The limitation of this study that it was focused on only two main aspects, and it is not extended to include another majority which is the risk factors that impact the speech delay in the first three years in a child's development. And the second is the importance of parent involvement in their child's early interventions. Moreover, it was a small quantitative study, and the survey used to collect the data had specific questions with limited answers without open-ended questions. It didn't offer the participants to write their beliefs. It was very restricted to a specific topic, and the teachers used to stick to specific answers, which may not be what they believe. Moreover, the study didn't extend to include the impact of the external intervention for the child with speech delay. It was only focusing on the parent's involvement.

Additionally, the study research articles were reviewed and chosen from one researcher and assessed the included articles' ideality. Moreover, many articles were included in the research but may not have been cast wide enough. Also, the study was focusing on specific group ages. It didn't include the aspects of intervention after three years and the impact of a late child diagnosed with speech delay. Moreover,

the study didn't mention the types of a diagnostic tests for children with speech delay. It didn't justify the different types of disorders associated with a result of speech delay. Also, it didn't mention the literacy ability of children with speech delay or impairment. Additionally, the study didn't include the benefits of speech and language therapy. It focused only on parent involvement in the early intervention, and it didn't cover all the areas of in-depth understanding.

For the Future, follow-up studies are recommended to do an in-depth investigation and deep understanding of the risk factors that influence speech-language development in the early years. Also, it is recommended research include specific details about each factor and its influences on the child's language and speech development. Also, it is recommended to extend the research range to include the different categorizations of disorders/disabilities associated with speech delay. Moreover, it is recommended to include more studies related to the impacts of watching TV for a long time in the early years.

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