

Speech delays: some possible factors (a research on 3-6 years old children)

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Abstract - This qualitative research was to describe the language development of children who was indicating speech delay and to find out what factors make these children delay in speech. The data were got from a depth-observation of three children indicate speech delay; 4 and 6 years old children of the first researchers, and a 3 year-old-child of the researchers' friends. The observation was done since the children were indicating speech delay until November 2019. Besides, an open-ended interview was also administered with the mother of the youngest subject. The data were analyzed by using the normal pattern of children's speech development by Blum and Baron (1997) and the main possible factors of speech delay as presented by Shetty (2012). This research found that the subjects experienced speech delay at the ages of 1 year. However, the development of speaking started to increase at the age of 3. Some factors that caused the condition to the subjects were maturation delay, developmental expressive aphasia, bilingualism, and social deprivation.

Keywords: children's speech development, factors of speech delays, speech delay, 3-6 years old children

1. Introduction

Language generally functions to express desires both in verbal and non-verbal forms and is used to socialize with the community. As Usman (2015) mentions five functions of language, namely language as a means of expressing desires, as a means of expressing emotions, as a tool for obtaining information, as a tool for social interaction, and as a means of personal identification. Understanding the function of language is a form of feeling in every human being expressed through the expression of desires, and emotions, which in essence language is a tool to be able to communicate and socialize with the environment. These also happen to children who need to acquire the language at their early ages in order to help them to convey their thought.

There are three views expressed in the theory of language development in children. First, the Nativism theory which argues that language is complex and complex, so it cannot be learned in a short time through the "imitation" method. So, there are several important aspects regarding language systems that already exist in humans naturally. This theory is represented by Chomsky (1965) that children are born with the Language Acquisition Device (LAD). This tool is a biological gift from God as a physiological part of the brain specifically for language processing and has no connection with other cognitive functions.

Second, the theory of behaviorism emphasizes the process of language acquisition which is controlled from the outside of the child's self, namely stimulation from the environment around the child. The view of behaviorism emphasizes verbal behavior. This view of behaviorism is represented by Skinner (1974) saying that the rules of language are verbal behaviors that allow someone to answer or say something. So this theory of behaviorism reinforces that children's language skills are due to stimuli from the environment that can strengthen the child's language abilities so that children's language development is an advancement of verbal disclosure that supports the actual ability to communicate through related response-stimulus and impersonation process.

Third, the theory of cognitivism represented by Piaget (1954) states that language is not a normal aspect, but because of the skill that comes from the cognitive maturation of the infant. Piaget said that language development in children is not something from nature and is also not derived from something learned from their environment, but the language structure arises as a result of continuous interaction between the child's cognitive function level with his linguistic environment.

However, many cases are found that not all children born with language development similar to the normal pattern of language development. It is found that delayed speech is one of the most common causes of developmental disorders in children. The causes of speech and language disorders are very broad and numerous, there are several risks to watch out for to make this disorder easier. As a parent or teacher, one must be attentive in order to provide a solution to the root of the child's language development issues as quickly as possible (Zulela et al, 2017).

This research is to describe qualitatively the language development of children and to find out what factors make these children delay in speech. It is motivated by one of the writer's in-depth observations on her two children and one child of her friend's initial MR. The writer herself is a mother who spends 16 hours at home for 5 days a week and 24 hours full for 2 days a week. For the rest, she spends time outside the house to teach and other activities. While MR is a mother who works as an online shop owner and also a freelancer teacher. This study establishes the writer's child and her friend's as the subject of the study because there is a clear fact of the development of the child with the problem of speech delay. Therefore, this research problem formulation is (1) How is the development of the children's language? And (2) what factors are causing the children to delay in speech?

In addition, speech delay is a common problem that can affect 3 to 10 percent of children. According to Leung and Kao (2005), this disorder is three to four times more frequent in boys

than girls. Speech and language delays in preschoolers have shown various levels, from 0% to 100%, with most between 40% to 60% (Nelson et al, 2006). The prevalence of delays in language development in Indonesia has not been extensively studied. 1125 the number of pediatric patient visits there were 10.13% of children diagnosed with speech and language delays (Data in the RSCM Medical Rehabilitation Department in 2006). Wahjuni's research (as cited in Judarwanto, 2009) in 1998 in one of the villages in Central Jakarta found a prevalence of language delays of 9.3% of 214 children under the age of three.

2. Method

The approach taken in this research was a qualitative descriptive approach and the research method was a case study. The data in this study were obtained through one of the researchers' observations of her children and interviews with MR regarding the information on children's language development since the child was born until November 2019. Thus, data collection techniques in this study were done through observation and an open-ended interview.

2.1 Participants

The researchers provided short data about the research subjects which include three children under 7 seven years old. The oldest one was “WB” born in 2013, the second was “KH” born in 2015, and the third was “F” who was born in 2016. The subjects in this research were outlined in the following table.

Table 1 Research Subjects Background

No.	Initials	Age	Parents' Initials		Parents' Age		Parents' Professions	
			Mother	Father	Mother	Father	Mother	Father
1	WB	6yo	MK	BI	30	38	Teacher	Lecturer
2	KH	4yo						
3	F	3yo	MR	MZ	30	30	Lecturer	Trader

2.2 Data Analysis

The data about the children's language development were analyzed by using the normal pattern of children's speech development by Blum and Baron (1997) as follows.

Table 2 Speech Development of the Children

Normal Pattern of Speech Development (Blum & Baron, 1997)		Research Subjects		
		WB	KH	F
Age	Achievement	Yes/No	Yes/No	Yes/No
1 to 6 mo	Coos in response to voice	Yes	Yes	Yes
6 to 9 mo	Babbling	Yes	Yes	Yes
10 to 11 mo	Imitation of sounds; says “mama/dada without meaning	Yes	Yes	Yes
12 mo	Says ‘mama/dada ‘with meaning , often imitates two and three syllable words	Not exactly as the pattern.	The kid didn't produce specific amount of vocabulary.	Not exactly as the pattern. However, the kid can be very expressive when facing
13 to 15 mo	Vocabulary of four to seven words in addition to jargon, <20% of speech is understood by strangers	He expressed some unclear words that might be understood only by		
16 to 18 mo	Vocabulary of ten words, some echolalia and extensive jargon; 20% to 25% speech understood by strangers			
19–21 mo	Vocabulary of 20 words, 50% speech understood by Strangers			
22 to 24 mo	Vocabulary >50 words, two word phrases, dropping			

	out of jargon, 60-70% of speech is understood by the strangers	their caregivers and mother.	something interesting for him.
2-2.5 yo	Vocabulary of 400 words, including names, two-three word phrases, use of pronouns, diminishing echolalia, 75% of speech understood by strangers		
2.5-3 yo	Use of plurals and past tense, knows age and sex; counts three objects correctly, three to five words per sentence, 80-90% of speech understood by strangers		
3 to 4 yo	Three to six words per sentence; asks questions, converses, relates experiences, tells stories, almost all speech understood by strangers		-
4 to 5 yo	Six to eight words per sentence, names four colors, counts ten pennies correctly	Yes.	-

The next variable regarding factors causing speech delay is described based on several main possible factors as explained by Shetty (2012) as follows.

Table 3 Causes of Speech Delays

No.	Causes	Explanation
1.	Mental Retardation	Mental retardation is the most common cause of speech delay, accounting for more than 50% of cases. A mentally retarded child demonstrates global language delay and also has delayed auditory comprehension and delayed use of gestures. In general, the more severe the mental retardation, the slower the acquisition of communicative speech.
2.	Hearing Loss	Intact hearing in the first few years of life is vital to language and speech development. Hearing loss at an early stage of development may lead to profound speech delay. Hearing loss may be conductive or sensorineural conductive loss is commonly caused by otitis media with effusion, malformations of the middle ear structures and atresia of the external auditory canal.
3.	Maturation Delay	Maturation delay (developmental language delay) accounts for a considerable percentage of late talkers. In this condition, a delay occurs in the maturation of the central neurologic process required to produce speech. The condition is more common in boys, and a family history of “late bloomers” is often present. The prognosis for these children is extremely good and they usually have normal speech development by the age of school entry.
4.	Expressive Language Disorder	Children with an expressive language disorder (developmental expressive aphasia) fail to develop the use of speech at the usual age. These children have normal intelligence, normal hearing, good emotional relationships, and normal articulation skills. The primary deficit appears to be a brain dysfunction that results in an inability to translate ideas into speech. A child with expressive language disorder needs active intervention to develop normal speech as it is not self-correcting. They are also at a risk for language learning disabilities (dyslexia).
5.	Bilingualism	A bilingual home environment may cause a temporary delay in the onset of both languages. The bilingual child’s comprehension of the two languages is normal for a child of the same age; however, and the child usually becomes proficient in both the languages before the age of 5 years.
6.	Psychosocial Deprivation	Physical deprivation (e.g., poverty, poor housing, and malnutrition) and social deprivation (e.g., inadequate linguistic stimulation, parental absenteeism, emotional stress, and child neglect) have an adverse effect on speech development. Abused children who live with their families do not seem to have a speech delay unless they are subjected to neglect.
7.	Autism	Autism is a neurologically based developmental disorder, onset before the age of 36 months. Autism is characterized by delayed and deviant language development, failure to develop the ability to relate to others and ritualistic and compulsive behaviors, including the stereotyped repetitive motor activity. A variety of speech

		disorders have also been described, such as echolalia and pronoun reversal. The speech of some autistic children has an atonic, wooden, or a sing song quality. Autistic children in general, fail to make eye contact, smile socially, and respond to being hugged or use gestures to communicate.
8.	Elective Mustism	Elective mutism is a condition in which children do not speak because they do not want to. Typically, children with elective mutism will speak when they are on their own, with friends and sometimes with their parents, but they do not speak in school, public situations or with strangers. It is seen more commonly in girls than in boys. The basis of mutism is usually family psychopathology. The children are negativistic, shy, timid, and withdrawn. The disorder can persist for months or years.
9.	Receptive Aphasia	A deficit in the comprehension of spoken language is the primary problem of receptive aphasia. The speech of these children is not only delayed but also sparse, agrammatic, and indistinct in articulation. Most children with receptive aphasia develop a speech of their own, understood only by those who are familiar with them.
10.	Cerebral Palsy	Delay in speech is common in children with cerebral palsy. Speech delay occurs most often in those with an athetoid type of cerebral palsy. The speech delay may be due to hearing loss, spasticity of the muscles of the tongue, coexisting mental retardation or a defect in the cerebral cortex.

3. Results and Discussion

The following section describes the results of the interview of the writer to the mother of F and the writer's observation of the two children of hers.

3.1 Speech Development on Children with Speech Delay

In this section, the author wants to investigate the speech development of research subjects referring to the normal pattern of speech development described by Blum & Baron (1997). Table 2 displays the speech development of children with speech delays. The research subjects are coded from the oldest, “WB”, “KH”, then “F”. The check-list is limited until the age of 5 years old.

The table shows that the children’s speech development was different from the normal pattern since the child 12 months old. They actually developed their language ability but not as they should be. The writer’s children at first developed as the other normal babies but when they were 11 months old they tended to be lazy to express their feelings in words even though parents had tried to stimulate them to speak. WB was still babbling until he was almost 2 years old even though he was expressive but not in words. He understood the instructions well since he was 1.5 years old. However, the development as stated by Blum & Baron (1997) seemed to fast develop at the same time when he was 4 to 6 years old. He drastically improved his language ability.

The same as her older brother, KH also skipped some phases in her age. She used to point to things she wanted since she was 1 year old until she was 3.5 years old. She did not even understand the instructions given to her until she reached 4 years old. She also skipped all the stages where she was able to make sentences until she was 4 years old. Even though in this year, her speech was only being understood by some people (not all strangers) but she was able to make sentences.

The last and the youngest subject of the research is F, 3 years old who also has speech stages that are not the same as the normal pattern of speech development in children. According to the author’s interview with his mother, at the age of 2 years, F was able to say goodbye, imitate animal sounds, sing with good rhythm even though with no lyrics. He also responded positively when a story was told. Currently, F is still in the process of intensive therapy to improve and stimulate his speaking abilities.

Moreover, the writers revealed her children as facing speech delay because she discovered that her children clearly skipped the stages of a normal pattern of speech

development in children. She learned from some books and browsed the internet to uphold the issue that her children experience speech delay. She and her husband did not give the children specific medical check-ups as they knew that their children did not have serious or chronic illnesses. They were sure that their children could be stimulated by themselves and the help of the grandmother.

According to Lei (2018), children grow at their own rate, then there is No. need to be concerned if they take a slightly different path. Some kids will rush through milestones, and others will take longer. In addition, According to Moreno (2015), simple speech delays are often temporary. They can leave on their own or with assistance. Families can encourage their children to talk using gestures or sounds and spend extra time playing, reading, and talking with their children. However, in some cases, a child may need more help from someone outside the family, such as a speech and language therapist. Moreno (2015) says “these trained professionals can help work with children to develop or improve their speech patterns.” He also states

Your baby begins to communicate with you long before he or she can talk by crying, smiling, or responding to you. It is never too early to talk with your baby, sing to your baby, and read to your baby. The best way for babies to learn to communicate is by face-to-face communication with others.

Moreover, according to Indriati (2011), since it is linked to brain activity, motoric movements of the mouth, tongue, and esophagus, breathing, vocal cords, and muscle tone, a diagnosis of delayed speech and language is difficult to make. Besides, in the growth and development of children’s language, there are 2 kinds of languages, namely (1) Receptive language which is an acceptable language for children is characterized by being able to answer questions correctly. But if you want to know the existence of receptive language disorder is that the vocabulary of children is not much and the child has difficulty in answering every question posed to him. (2) Expressive language is the language that children express, in which they express their wishes or opinions, ask questions or answer questions.

Difficulty in expressing language causes frustration and children will try to communicate by pointing with their fingers, or by touching can be subtle or usually by slightly hitting the person being spoken to. Therefore children with expressive language skills usually look like the child is naughty or hyperactive, whereas, in reality, expressive language style is the child’s inability to express his intentions so that using his physical abilities to talk to people or friends around him.

3.2 Identification of Some Possible Factors Causing Speech Delay

This part describes some possible factors that may cause speech delay on children. To begin with, the writers explain the interview data based on some factors as stated by Shetty (2012). Based on Table 3, the subjects of the research did not have mental retardation, hearing loss, autism, nor cerebral palsy. However, there were other possibilities that might be faced by the children as explained in the following.

Table 4 Causes of Speech Delays

No.	Causes of Speech Delay	WB	KH	F
1.	Mental retardation	No	No	No
2.	Hearing loss	No	No	No
3.	Maturation delay	Yes	No	Maybe
4.	Expressive Language Disorder	Maybe	No	Maybe
5.	Bilingualism	No	No	Maybe
6.	Psychosocial Deprivation	No	Maybe	Maybe
7.	Autism	No	No	No
8.	Elective Mutism	Yes	Yes	Yes

9.	Receptive Aphasia	Yes	Yes	Yes
10.	Cerebral Palsy	No	No	No

First of all, WB was indicated having maturation delay because based on the specific observation of WB during the growth of his prognosis was fine and it proved that he started to have normal speech development by the age of school (5 to 6 years old). In line with this, as stated by Shetty (2012), a large number of late talkers have a maturational language delay (developmental language delay). The maturation of the central neurologic process necessary for speech production is delayed in this disorder. The condition is more common in boys, and a family history of “late bloomers” is often present. Such condition may lead to an argument that F probably is facing the maturation delay.

Secondly, the three subjects of the research tend to have expressive language disorder in his growth and development processes. It can be seen from Table 2 that children with an expressive language disorder (developmental expressive aphasia) they have normal intelligence, normal hearing, good emotional relationships, and normal articulation skills. The primary deficit appears to be a brain dysfunction that results in an inability to translate ideas into speech. A child with expressive language disorder needs active intervention to develop normal speech as it is not self-correcting. On the contrary to the idea in table 2, WB proved that he was able to learn well since he was 5 years old. He could not be considered as having learning disabilities (dyslexia). F himself, was still under intensive therapy and his mother optimistically saw his positive progress while KH seemed to show positive progress in memorizing the lessons.

Thirdly, bilingualism may be the main factor of speech delay for F for his mother said that since he was a baby he watched English YouTube channels. The pediatrician said that such activity led F to have problems in expressing the language. According to Shetty (2012), The onset of both languages can be delayed temporarily in a bilingual home setting. In WB and F, the parents did not give access to foreign language, it was only Indonesian language used in the home until they reach 3 years old.

Fourthly, KH and F probably were having social deprivation (e.g., inadequate linguistic stimulation, parental absenteeism, emotional stress, and child neglect) harm speech development. It is said so because KH herself having a busy parent with grandmother as the caregiver who was also insufficiently having time to stimulate her to acquire the first language. WB and KH’s parents have tried to stimulate their kids to acquire the first language even though they are optimistic that the kids were just normal. The same case happened to F where his parents had an online shop where they controlled and handled everything by themselves. F was busy with only his toys and screens. However, luckily, his parents realized the situation fast, so he got treatment from the therapist.

Next, the three children seemed to have elective mutism. The writers found that her children spoke or expressed their feeling whenever they wanted to and were very selective to whom they talked to. This happened since her children were 6 months old until 2,5 years old. The same case also found in F where the writers had interacted with him since he was a baby. The writers found that F has the same character with her children. According to Shetty (2012),

elective mutism is a condition in which children do not speak because they do not want to. In addition, the basis of mutism is usually family psychopathology. The children are negativistic, shy, timid, and withdrawn. The disorder can persist for months or years.

Lastly, the three children may possibly have receptive aphasia. According to Shetty (2012) receptive aphasia is a disorder in which deficits in language formation are a significant issue. This condition is caused by production problems and speech delays. According to Denckla (1982), Nonverbal sound stimuli evoke natural responses in children with receptive

aphasia. Their parents sometimes referred to their children as "not listening" rather than "not hearing." This child's speech was not only late, but also inconsistent in form and articulation.

In addition to this, Moreno (2015) states that when a child is behind in a number of ways, this could indicate a speech or language delays. A related concern is that children can exhibit behavior issues, such as temper tantrums, as a result of their frustration at not being able to communicate what they need or want. If a child's pediatrician suspects a speech or language delay during a routine checkup, the pediatrician can ask additional questions, request a hearing test, or refer your child for further evaluation.

The earlier the disorder was detected, the better the recovery of the disorder. The sooner the cause of speech and language disorders were known, the faster the stimulation and intervention could be carried out on the child. Early detection of speech and language disorders must be carried out by all individuals involved in the handling of children including parents, families, obstetricians who care since pregnancy, care givers and pediatricians.

4. Conclusion

It can be concluded that the three research subjects experienced delays in speaking since they entered the age of 1 year. However, the fact is that when they enter the age of 3, the development starts to increase. Two (2) of the subjects who had passed the age of 4 years showed that they were able to catch up on the intelligence side. Delays in talking to children can be a phase that is disconnected by them although it is undeniable that parents, teachers and the closest people of children must act seriously when they realize that children do not experience the phase that should be experienced in their growth and development process. This research is very interesting to be continued in more detail with a bigger number of subjects. It seems to be essential to increase parental awareness about the importance of carefully known the normal pattern of children speech development and the factors that can cause delays in talking to children.

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