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Research Article

The Progress of Speech Production in People with Autism (Case Study on a Girl Named Aliya Salsabila Ramadhani)

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ABSTRACT

This study is titled the progress of speech production in people with autism (case study in a girl named Aliya Salsabila Ramadhani). The study was conducted by Mu'thia Mubasyira, Zainal Rafli and Endry Boeriswati. To correspond the email used is muthiamu-basyira_9906921003@mhs.unj.ac.id and the orchid number is 0000-0002-4084-3382. This study was conducted with the aim to find out how the progress of speech production in people with autism with the object of research on a girl named Aliya Salsabila Ramadhani who is now 9 years old. This study tried to analyze the primary data obtained by explaining the progress of language and Aliya speech production from the age of 3 months old until now. This research uses descriptive qualitative methods that seek to describe the progress of Aliya language and speech production with a short narrative and exposure to data retrieval techniques used through observation of video documentation of activities carried out and through questionnaires and interviews. In addition, this study also uses relevant references as study materials so that holistic and thorough discussion results are obtained. From the characteristics that seem to be known that Aliya is classified as experiencing mild austism. It is also obtained through the analysis of language development and how Aliya interacts with the environment and the surrounding people. Aliya also has abstinence from certain foods to suppress so that her behavior is not too hyper or excessive. Aliya's language progress and speech production made significant increasement after she received developmental therapy and speech therapy and attended a special needs school. This research is expected to add to the treasures of science, especially those related to psycholinguistics with the study of language development and speech production in people with autism.

Keywords: *progress, speech production, autism*

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Introduction

The development of human language has a certain level of phase and is part of the cognitive processes that take place in the human brain. Language development is a basic ability that every child should have. According to Noam Chomsky, mastery in language is natural meaning that language is a biological gift, in line with the opening of lingual abilities that have been genetically programmed. (Sharifah, 2014) However, not all children have the same language development. There are some children who have disorders in speech production that limit themselves so that their language and speech development does not take place normally. Among them is austism disorder. Children with autism are classified as those who have language disorders and usually found also symptoms that they have difficulty in the speech process. As stated by the expert that: "Children with developmental language disorder have difficulty in speech processing" (Elmahallawi et al., 2021)

The word autism comes from the Greek word autos which means self so that autism can be interpreted as someone who is always busy with his own world and not obsessed with the environment and interactions with others. No wonder that children with autism will be indifferent to their environment. (Hikmawati, 2018) In addition, they will be very rigid with the routine that he likes because that is the focus in the nature of his mind. Expert opinion says that: "Neurodevelopmental disorders (NDDs), including autism spectrum disorder (ASD) and intellectual disability (ID), are heterogeneous conditions in which there is a perturbation of brain development." (Díaz-Caneja et al., 2021) Based on this opinion, it can be said that autism is one of the neurodevelopment disorders that occur in the brain. This is in line with the opinion that autism is a disorder or syndrome that interferes with the development of basic compound psychological functions, such as the development of behavior, language, and motor movements. It is not surprising that people with autism experience impairment in carrying out cognitive, emotional, and psychomotor functions. (Subekti, n.d.) Another opinion states that: "Brain imaging studies ofautism have revealed a large-scale reorganization of the autisticbrain which may reflect enhanced cortical plasticity." (Mottron et al., 2014) Based on this opinion, it can also be said that people with autism have an increase in cortical plasticity on a large scale. This is the picture obtained through brain imaging studies in people with autism.

A person can develop autism due to several causes, including genetic factors. As stated by experts who say that: "Many cases of autism are "polygenic", whereas disease is associated with variants in more than one gene. As environmental components are common, the term 'multifactorial' in often applied." (Kreiman & Boles, 2020) Another expert's opinion states that: "Strikingly, genes encoding the key molecular players have been repeatedly implicated in neuropsychiatric disorders, including autism, depression, and schizophrenia." (Mullins et al., 2016) Based on this opinion, it can be concluded that genetic factors are one of the causes of autism. In addition to genetic factors, autism can also be caused by transmission during the womb, for example, side effects to alcoholic beverages or drugs (especially epilepsy drugs for pregnant women) during the womb, the influence of other disorders, such as down syndrome, cerebral palsy and premature birth, especially babies born at 26 weeks of pregnancy or less. (Handayani, 2019)

Children with autism in addition to experiencing disturbances in speech and language production also experience socializing disorders and disorders of behaving as usual they tend to be alone and busy with their own activities even some of them do activities that harm themselves such as biting fingers hard or banging their heads against the wall. This is supported by the opinion that states that: “Austism is described as range of developmental conditions characterized by impaired skills for communication/interaction with others, and restricted interests and repetitive behaviors, impacting on the ability to function in every-day life contexts.” (Den Hoed & Fisher, 2020)

Of the many signs that characterize autism above, limited communication and slow learning of language are characteristics that indicate language disorders and produce speech. This is in line with expert opinion which reveals that: "Parallels can be found in work on language

acquisition in autism, where it has been proposed that atypical attention capture by speech may underlie difficulties in language acquisition." (Jones et al., 2014) Based on this opinion it is known that children with autism will have difficulty in language acquisition. Language disorders in children with autism can vary, there are children who can not produce speech at all, there are children who can produce speech but have obstacles to the pronunciation of certain phonemes or there are children who smoothly speak but the order of words produced is irregular. Then there are also children with autism who often repeat words or sentences and many more models of language disorders and speech production seen in children with autism. People with autism can be seen from an early age through observations made by their parents. This is in line with the opinion that says that: "When language output is still quite limited, parent-report questionnaires can be just as accurate in identifying early language disorder as a formal language assessment and are more time-efficient and therefore less costly" (Van Noort-Van der Spek et al., 2021)

In this study, it will be discussed about the development of language and speech that occurs in children with autism with the object of research on a girl named Aliya Salsabila Ramadhani who has been 9 years old.

Research Method

This study is a descriptive qualitative study that uses documentation, observation, interview and questionnaire techniques and the approach used is through psycholinguistic approaches. The object of the study focused on the production of speech with autism with a case study in a girl named Aliya Salsabila Ramadhani who was 9 years old. The primary data from this study was obtained through documentation in the form of speech activity videos produced by Aliya. In addition, primary data was also obtained through observations of activities conducted by Aliya and in-depth interviews and questionnaires aimed at Aliya's parents that contained aspects related to aliya's austime and the development of language and speech experienced. While secondary data is obtained through literature studies conducted through journals, books, articles related to the topics discussed in this study.

Results and Discussions

Here is a comparison made to the development of normal child language and speech taken from various references (Kedang, 2020) and the development of language and speech observed against the object of the study, namely a girl with austism named Aliya Salsabila Ramadhani who was 9 years old. The condition of every child with autism is different, meaning that people with autism with each other have conditions that cannot be equated. This is in accordance with the opinion that states that: "Autism is heterogeneous condition; no two children or adult with autism have exactly the same profile but difficulties fall into core domains that are reliably measured and usually consistent across time eventhough specific behaviors may change with development." (Mundkur & Sankar, 2007).

No.	Age	Normal Child's Condition	Aliya's Condition (Child With Autism)
1.	3-12 months	The child's language development stage at 3 months of age will usually be more dominant to make sounds that are not yet word form. Two months later, the child will begin to 'speak' using a certain tone and try to follow the tone and gestures. Then, a few months later, the child will start playing the 'word' with a longer tone. At this time it is likely that children are able to say the word 'papa' or	Aliya at 6 months of age uses communicative and emotional cues to organize relatively good simple interactions. At this stage there was no significant difference in gaze in 6-month-old infants diagnosed with ASD (Autism Spectrum Disorder). Aliya in this age range issues some speeches such as 'neneh or nenen' although she may not understand the meaning.

No.	Age	Normal Child's Condition	Aliya's Condition (Child With Autism)
		'mama', even though they do not understand the meaning. Furthermore, at the age of 10 months the words spoken have certain intentions, such as asking for something, rejecting, greeting someone, and so on.	
2.	12-18 months	In the first year, the child begins to speak with the desired intent and purpose. New children understand the meaning of the words 'papa' and 'mama' at this age. Children also begin to be able to recognize the name of objects around them such as clothes, pants, dolls, cars, and so on. Then at the age of 18 months, the child begins to understand simple commands and explanations. He will come when he is called his name and over time understands using the word 'I'.	Aliya in this age range produces a variety of lower movements in interaction with the mother including language development and aliya speech that has regressed. Aliya suffered setbacks as well in the movement. Signs that Aliya has autism have begun to appear. There was a delay in the production of the first word.
3.	2-3 years	The words that children know and use will increase rapidly. He began to be able to ask using the words 'who', 'what', and 'where'. The child's language development stage at the age of 2 years will begin to use the word belongs and begin to understand its meaning in the third year. The child will be able to compose sentences with 3 or 4 words. He will also begin to understand commands such as 'come here, eat mangoes' and begin to understand answering questions, except for the 'why' and 'how' questions. At this age, the child uses almost all the tone in speech and begins to understand the rules of speaking, so will listen when others speak and speak after his turn arrives.	Aliya experienced a decrease in the use of movements early in the second year. The development of cognitive and social communication slows down. Aliya uses the change of gaze to interact socially. Aliya experienced delays in word learning and vocabulary growth. Aliya has less understanding of words/phrases than her age. This means a decrease in understanding of the meaning of some words. As for the speech produced by Aliya in this age range for example 'mamam, mimim, nenen, abih, mamah'. Aliya has not been able to speak with whole sentences and the production of speech produced in general is bilabial phonemes such as /m/ and /b/
4.	3-5 years	At the age of 3, children begin to use more complex sentences, namely using the words 'because', 'and', as well as 'if'. Children are able to use the words 'I' and 'you' correctly. He also began to understand the basic rules in composing sentences, so as to be able	Aliya in this age range is still unable to produce speech in whole sentences. Although there is an increase in phoneme production such as /t / which in the previous age range can not be pronounced by Aliya. Aliya's understanding of the meaning of certain

No.	Age	Normal Child's Condition	Aliya's Condition (Child With Autism)
		to tell stories with their own themes. These stories and sentences are understandable to parents. Children can also understand more complex explanations and understand many commands in one sentence. Then, at the age of 4 years, children can understand many words, although rarely use them. He can already understand emotions, such as 'happy', 'sad', and 'angry'. Children are also able to combine 2 sentences with the words 'because', 'or', also 'and' so that he will be more proficient in speaking in turns.	words is still limited. Aliya also still uses the word rudimentary pronunciation to refer to a meaning of a particular word. For example the words 'tetak' for 'cicak' which means lizard, 'abih' for 'abi' which means father, 'ibu' which means mother and 'bibi' which means 'aunt'. Aliya already understood that she was named Aliya and produced the saying 'aya' to call herself meaning 'Aliya'.
5.	5-9 years	Children begin to understand using tone suppression in sentences. He is able to tell good and interesting stories, along with more and more learning activities in school. At this age, children will also be able to give ideas or opinions, even able to tell stories like adults.	In this age range, Aliya can already communicate both ways by using simple phrases for example by producing the words 'mau ini' which means 'want this' and pointing to the object she wants, 'mau eh' which means want ice, 'minuh' for 'minum' which means drink, 'oh' for 'om' which means uncle, , 'api' for 'kopi' which means coffee, 'maih' for 'main' which means play, 'uluh' for 'turun' which means get down, 'ajah' for 'gajah' which means elephant, 'uda' for 'kuda' which means horse, 'omat' for 'tomat' which means tomato, 'ikuh' for 'ikut' which means join, 'ula' for 'bola' which means ball, 'iloh' for 'balon' which means balloon, 'acih' for 'kursi' which means chair, 'bobo' for 'bobok/tidur' which means sleep, 'adi' for 'mandi' which means take a bath and 'idu' for 'hidung' which means nose. These are some of the speeches produced by Aliya. From this it can be seen that Aliya has been able to understand the meaning of some words and use them to communicate but the production of speech against these words is not perfect and it takes time for others to understand the meaning of Aliya's speech.

While related to the level of autism suffered by Aliya Salsabila Ramadhani, researchers also conducted observations and observations whose results are as follows:

No.	Component	Aliya's Condition
1.	Relationships with other people	The child does not want to look or look into the eyes of adults when spoken to. Feeling annoyed when invited to interact. Sometimes she is too cuddled or attached to her parents too much for her age. Sometimes she looks shy
2.	Imitation	The child still wants to imitate simple things or behaviors such as clapping, one or two words. The rest is difficult to ask her to imitate.
3.	Emotional response	Sometimes the child shows an emotional response that does not match the type and degree. Only laughs when she sees something she likes. Emotional responses do not match the surrounding situation.
4.	Body use	The child shows strange movements, for example, is not agile or unskilled. She also exhibits indistinct repetitive movements.
5.	Object use	The child likes to lose interest in toys and play less in accordance with the function of the toy, for example being sucked, kissed or slammed.
6.	Adaptation to change	When the routine changes, the child will try to do the old routine.
7.	Visual response	The child does not like to look at objects around her or is always reminded to look at things. She prefers to look at glass or a certain light or something spinning like a fan or a wheel. She also didn't want to look into other people's faces.
8.	Auditory response	The child doesn't seem to hear when called but if she hears something she like, she immediately show a response. When called must be repeated or the response is slow. Sometimes she is afraid of certain sounds that she shouldn't be afraid of.
9.	Response to touch and smell	The child likes to put things in her mouths or smell objects even though they have no taste or smell. The reaction to pain is excessive or vice versa, such as not feeling pain. She also did not like be stroked and cuddled, when she is picked up she refused
10.	Fear and restlessness	The child shows a fear of certain objects or certain sounds such as thunder
11.	Verbal communication and speaking skills	The child shows a speech delay. Speech is still there even though it is difficult to understand it.
12.	Mimics and expressions	Flat child expression. Her expression does not reflect the ability to communicate.
13.	Activity	The degree of activity does not disturb the surrounding environment.
14.	Cleverness	The child is not smart. Lack of ability in all areas.

Based on the description of the fourteen components above, Aliya's condition is classified as a mild autism sufferer. Aliya since the age of five years has attended ABK Bina Cendekia and participated in growth and speech therapy continuously. Speech therapy is indeed one solution so that the development of language and speech of children with autism can increase significantly. This is supported by the opinion that: "There is a wide range of disorders which can be treated via speech therapy namely, learning difficulties, language delay, hearing impairment, cleft palate, stammers, dyslexia and autism." (Mahalakshmi et al., 2017) Based on this opinion, language and speech disorders caused by autism can be overcome by conducting speech therapy. This is also evidenced by Aliya where after following speech therapy and growing and developing, the development of his language increased significantly. In addition, Aliya also has restrictions on certain types of foods including ice cream and foods that contain a lot of sugar and MSG and foods made from wheat flour. This is done in order to suppress the trigger factors of hyperactive and excessive movements carried out by Aliya and indigestion in absorbing certain food substances that she experienced. She is now able to communicate even though her parents sometimes find it difficult to understand what she wants. Aliya has been able to communicate two ways simply and Aliya even when experiencing difficulties can also ask for help from those closest to her.

Conclusion

Based on the above exposure, it can be concluded that children with autism have limitations not only in the pattern of behaving and socializing and adapting to the surrounding environment but also in language. The progress of language and speech of children with autism does not take place as normally as children in general. They have delays in language progress. In the case of Aliya who suffers from mild autism, it can be known that the development of language and speech is uncommon. In each phase of language and speech development, Aliya showed a very slow development but after following the learning in school was extraordinary, there was a significant development in the way Aliya communicated using simple language. But it takes time to understand the meaning of Aliya's simple speech because there are some phoneme pronunciations that Aliya said are not perfect so Aliya still needs to be trained in language skills and speech production.

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