Speech Production on Special Needs Children (Down Syndrome): a Psycholinguistic Study at SLB Mekar Sari 1 Cibinong

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Abstract
Children with mental retardation are those who experience disturbances in cognitive aspects. This will affect the process of acquisition and production of speech. This study aims to describe the forms of words and sentences that can be uttered by mentally retarded children, especially Down Syndrome, and the influence of the family environment on the development of their speech production. This research uses descriptive qualitative method. The focus of this research is how Down Syndrome children produce words and sentences. In addition, this study also looks at family environmental factor that can affect the process of producing words and sentences. This research was conducted on children with Down Syndrome aged 8 years at SLB Mekar Sari 1 Cibinong. Data collection was carried out through observation, interviews and literature studies. Then, the data obtained are subjected to a reduction, presentation, and verification process. This study produced several findings; First, children with Down Syndrome at the grade 1 level (8 years) have not been able to produce many complete words. Second, they still need stimulation so that they are able to say simple words or sentences with the SPO (Subject, Predicate and Object) pattern.

Keywords: down syndrome, speech production, psycholinguistics

INTRODUCTION

Language is a very important thing in human life, namely as a communication tool (Daria, 2022; Yue & Pizzi, 2022). By language, one’s goals and objectives can be achieved. If there is no language, a person is not able to do social interaction with the surrounding community. Psycholinguistics is the study of language from a psychological point of view (Gleitman & Gleitman, 2022). Psycholinguistics has a main focus, namely: language acquisition, language understanding and language production, including how speech production is produced (Tripp & Munson, 2022). The problem of language acquisition is related to how humans acquire language skills or how a person can put his ideas into words (Saputra & Kuntarto, 2018). According to (Saputra & Kuntarto, 2018) the problem of understanding language is related to how humans understand, store, and recall information, while the problem of language production is related to speaking, writing and reading (Langacker, 2017; Todd & Aitchison, 1980). The discussion on language production is further related to how speech is produced from the beginning only in the form of the formation of an idea in the speaker’s mind until the seconds before the utterance is uttered. Knight in (Saputra & Kuntarto, 2018).

Humans do not realize that actually when uttering a word or sentence, it requires detailed mental planning from the level of discourse to the implementation of its articulation. This means that speech production requires not only a psychological process to assemble the elements we will say in a reasonable order but also proper coordination with neurobiology. Speech made by humans involves many organs of the body and performs many processes before the utterance is uttered. In the brain, for example, the speech production process involves three parts of the brain, namely, Wernick, Broca, and the Supplementary Motor, all of which are the left hemisphere of the human midbrain. Then the production of speech goes through four levels: (1) The message level, where the message to be conveyed is processed; (2) the functional level, where the lexical form is selected and then assigned a syntactic role and function; (3) The positional level, where constituents are formed and affixation is performed. (4) The phonological level, where the phonological structure of the speech is realized. (Saputra & Kuntarto, 2018)
Mentally retarded children are one of the groups of children with mental disorders who have intellectual abilities or intelligence below average and have limitations in terms of thinking, low thinking skills, weak attention and memory power (Saputra & Kuntarto, 2018). Among intelligence abilities, interaction skills and language skills, the language skills of children with Down Syndrome occupy the lowest group (Nurdyna et al., 2014). Every human has the same opportunity to acquire language, both verbal and nonverbal. However, in reality, children are not always born with normal language skills, but there are also abnormal ones. Abnormal language skills in question are language skills caused by disturbances, both physically and mentally, resulting in delays in the development of speech production. One of the delays in language development caused by physical and mental disorders is Down Syndrome.

Physical and mental retardation in people with Down Syndrome causes delays in the development of speech abilities (Rondal, 1998). People with Down Syndrome have an inability to produce speech in verbal communication. This disability can be seen from the lack of vocabulary, articulation weakness, the habit of speaking using separate words (Baihaqi, 2011). Many find that until they graduate from SLB which is equivalent to the elementary school level, ADS still has difficulty pronouncing sentences (Niswariyana & Milandari, 2019).

Children with special needs with Down Syndrome generally face psycholinguistic problems. (Nurdyna et al., 2014). In this case, the researcher took the subject of children with Down Syndrome who experienced delays in terms of verbal abilities in grade 1 SLB. Some of them are said to be able to communicate with their families with simple words such as, say “mama (mother)”, “ayah (father)”, “kaka” (brother), terima kasih (thank you), drink (minum) etc. From the explanation above, the researcher wants to know how the speech development of children with Down Syndrome in producing speech forms of words and sentences are more complex. In addition, the researcher wants to know how the family environment influences and increases the development of speech production. Researchers limited this study to children with Down syndrome aged 8 years. This aims to limit the data so that it is not too widespread.

**METHOD**

The subjects in this study were children with Down Syndrome aged 8 years in grade 1 elementary school, which was carried out using purposive sampling technique. This research was conducted at SLB Mekar Sari 1 Cibinong by a descriptive qualitative method. This research is descriptive because it is a description of utterances in the form of words and sentences that are absorbed in the form of conversations which are analyzed into narrative form. The data in this study were obtained from observations and interviews children with Down Syndrome at school and their families. In this case, what is used as data are the language that comes out of the subject's speech directly. In other words, all speech forms (words and sentences) that come out of the subject's speech are used as data.

In this study, several methods and techniques of data collection were used. Data collection was carried out through observation, interview, and literature studies. The observation method is a data collection method used to collect research data. In this case, the researcher conducted a direct observation process to obtain objective data. The data was collected based on the observations of researchers by the five senses. Researchers are involved on the learning process in the classroom to feel the atmosphere of teaching and learning activities and see student responses. Researchers saw directly and observed how the language use of children with Down Syndrome. The technique used in this study is observation, where the researcher directly observes the object that will be sampled in this study.

Next is the interview method, the researcher explores the main sources, namely class teachers, parents, and children with Down Syndrome. Interviews were conducted in-depth to obtain comprehensive data from various points of view. Then the data from the
interviews were processed and analyzed according to the focus of this research and continued with a literature study.

RESULTS AND DISCUSSION

Based on the findings of this study, it can be explained that the ability to use words in children with Down Syndrome grade 1 (age 8 years) is very little and is still difficult to pronounce. Children with Down Syndrome show semantic problems, have limited word meanings in their usage and understanding the vocabulary, Marder and Cholmain in (Nurdyna et al., 2014). Children with Down Syndrome are also more focused on the people around them than other objects. At the time of the study, the researcher also had difficulty getting the words out, and the majority of them invite to communicate through body language (gesture).

Speech Production in Grade 1 (8 years old) situation, chats, and responses in the classroom.

Researcher: Namanya siapa sayang? (The researcher asked a DS child (girl) with the initial D).
D: Ia (She didn’t mention her full name)
Researcher: D cantik ya, sedang apa?
D: Uis A (She wrote the letter A)
Researcher: Ini warna apa D? (She pointed at the red color on the colored pencil)
D: Erah (Merah)
Researcher: Me … rah …
D: Me … rah …
Researcher: Warna apa ini?
D: Erahhh …

D is quite good in motor skill and quite able to communicate well, some words can be spoken such as “foto”, “ape (HP)”, “kaka”, “mama”, “buku”, “tas”, “sini (di sini)”. D understands people's words without needing frequent repetition. D is very active and cheerful. Several times, she attracted researchers to ask to be taken picture because she saw the researcher were holding cellphones. D wanted to see the researcher’s face who was wearing a mask.

From the result of the study, it is also found that each child with Down Syndrome is different in the ability to produce speech that comes out even in the same word, but most of them are still not perfect in pronouncing sounds.

Researcher: Merah …
X: Wawah …
Researcher: Me …rah …
X: Me …wah …
Researcher: Rah …
X: Rah …
Researcher: Merah …
X: Merrrwahh …

Researcher: Sedang menggambar apa sayang?
Y: Wah (he pointed house picture)
Researcher: Oh gambar “rumah” ya?
Y: Wawah …
Researcher: Ru …mah …
Y: Wa … wah …
Researcher: Ru …mah …
Y: Ru … wah …
Children with DS grade 1 (the age of 7-8 years) have actually been able to pronounce words with pronunciation per syllable, but the words they can pronounce are limited. There are also those who are not able to pronounce words at all. They are only silent or use body language. However, Children with DS are able to understand the words and commands of the person who are talking to them. Medium-light DS is able to pronounce words clearly, although they are still assisted by hooking with the initial syllables, then the child continues the final syllable. Moderate-to-severe DS has not been able to communicate verbally at all, the speech of the interlocutor has not been able to understand with reactions. So the DS children in grade 1, have not been able to pronounce full words, and have not been able to pronounce sentences. To express their wishes is assisted by hand gestures (sign language).

Children with Down Syndrome have limitations and delays in verbal terms. In producing speech, the vocabulary that comes out is very limited even though most children with Down Syndrome are able to understand what other people are instructed to do. The utterances produced by children with Down Syndrome grade 1 at SLB Mekar Sari are somewhat different from the actual words. This happens because of their difficulty in pronouncing words and their lack of vocabulary. Children with Down Syndrome grade 1 at SLB Mekar Sari are mostly only able to communicate verbally with the stage of one word or one word at a time which is not perfect and has not formed simple sentences well, sometimes only the initial or final sound is heard.

**Family Environment on the Development of Speech Production for Down Syndrome Children**

The family environment is the first environment for DS children to be able to support everything they need. This first environment is the main factor that will help their speech production process. Based on the observations of the researcher, parents and families that really try to provide a stimulus to their children to be able to communicate will produce children who are able to produce good speech. Examples that are carried out by families are being stimulated to chat every day, being provided with supporting facilities to stimulate speech production, being invited to play and socialize with the surrounding environment without limiting the scope of DS children. This is also added from the support of the school environment. The school environment has a positive impact on the development of DS children to be independent and able to interact with others. The school environment also has a big influence on the speech production of DS children.

**CONCLUSION**

From the research that has been done, the researcher concludes that children with Down Syndrome grade 1 (age 8 years) have not fluent in pronouncing one word perfectly yet. When they want to make speeches, they must get a stimulus from other people or the interlocutor. Most of research subjects are only able to pronounce the beginning or end of a word. Children with Down Syndrome can also understand the intentions of the interlocutor, and carry out orders well, it is just that their limitations in verbal language are not perfect (Niswariyana & Milandari, 2019). Simple sentences or SPO patterns (Subject, Predicate and Object) still cannot be produced by children with Down Syndrome grade 1 (age 8 years). Family environmental factors greatly affect the process of producing words.
and sentences in children with Down Syndrome, because it is in the family environment that children spend most of their daily life. Families must continue to support them by stimulating them so that they can be helped a lot in mastering and producing simple speech. The goal is that the child has independence in interacting with others regarding their daily activities.

BIBLIOGRAPHY


