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Language Disorders of Elementary School Students in the Perspective of the Coastal Languages of Sibolga-Tapanuli Tengah

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Abstract

Neuropsycholinguistics is a science that combines psychology, neurology and linguistics, and can be used to analyze language disorders, and is a combination of psycholinguistics and neurolinguistics. Language disorders in children occur due to brain development and are also due to the influence of learning language from other people and producing words that are sometimes pronounced in different ways. This research used a qualitative approach by collecting data through observation, interviews and recording on 3 students with language disorders at MIN 7 Tapanuli Tengah which were then analyzed using Neuropsycholinguistic theory by connecting it to the Coastal Languages of Sibolga- Tapanuli Tengah. Research found that the main cause of language disorders in 3 children could be identified through Neuropsycholinguistic theory, namely disrupted mental and brain development due to health conditions in the past which then had to be overcome through appropriate teaching methods and special attention to the child's psychological condition. The Coastal Languages of Sibolga- Tapanuli Tengah, which contains many words with changes, reductions and additions of phonemes from Indonesian, will disturb children with language disorders so they must receive special attention.

I. Introduction

Language disorders appear to be caused by abnormalities in parts of the human brain, however Speech is an important part of the language process that perfects the speech apparatus to convey ideas that have been processed in the brain. The language process can be likened to a computer process, namely that initially all data is stored as an electronic password, which can be used again when needed. Mulyana and Nuryani (2020) state that if there is a disruption in the relationship between one part and another, it will cause problems for humans themselves, or language problems. Speech theory has been put forward by several experts and it can be concluded that thought is a type of speech behavior that begins with speech production (Nuryani and Putra, 2013).

The brain's working system is one of the components in the human body that greatly influences language activities. The brain's working system greatly influences language activities because the brain is the center of all activities of the human body. Therefore, when the brain's working system is disrupted, language activities are also automatically disrupted. Damage to parts of the human brain can cause language disorders.

Everyone can experience language disorders, especially children, because they continually acquire language from other people and produce words that are sometimes pronounced in different ways. Children need to interact within the family so that they can

Keywords

NeuroPsycholinguistics; Language Disorders; Elementary Schools; Coastal Languages of Sibolga-Tapanuli Tengah



talk or speak in front of others in the future. Parents are expected to teach their children to speak or use good and correct words when talking to other people. Delays in speaking can arise if children rarely talk to their parents, or interact with them (Parahita et al, 2022). If they have a speech delay, the child will not be able to interact well with other people because they only acquired a small vocabulary from their parents when they were small.

Children's language disorders can initially be identified through the child's language acquisition. Language acquisition is a process that occurs in the brain of a child (baby) when learning his mother tongue. Therefore, language has been present in the human body since birth. (Sari and Rasyimah, 2021). According to Chaer (2003), it is important to remember that when children learn language from their mothers, two processes occur, namely the competency (ability) process and the performance (treatment) process. Unconscious mastery of grammar is a process of competence. The competency process consists of two processes, namely the process of understanding (comprehension) and the process of publishing or producing sentences. The comprehension process involves the ability to observe or perceive the sentences heard, while the publishing process involves the ability to express. A child's linguistic abilities increase after mastering these two competency processes.

Language disorders will then become apparent when the child reaches school age. Especially when entering elementary school age, communication skills through language are really needed. This ability is needed to interact with friends or receive information provided by the teacher. Children who have language disorders will be very likely to be behind in their development at elementary school age.

Language disorders can be analyzed through science Neuropsycholinguistics. Neuropsycholinguistics is a study that combines Psychology, Neurology and Linguistics which is a combination of Neurolinguistics and Psycholinguistics. Linguistics is a science that studies language, while Neurology is a branch of medicine that deals with nervous system problems centered in the brain (Mael, 2020). According to Sastra (2010), it can be said that Neurolinguistics is a branch of linguistics and medicine that studies the relationship between the human brain and language. It discusses the structure of the human brain for processing language, as well as disorders in producing language. Neuropsycholinguistics is a combination of psycholinguistics and neurolinguistics. Neurolinguistics studies the biological basis of language and brain mechanisms that influence the acquisition and use of language, while psycholinguistics studies the psychological and neurobiological factors that make people use, acquire and understand language (Arifuddin, 2010). It was further explained that neuropsycholinguistic studies investigate the biological basis of language and brain mechanisms that influence language acquisition and use. Language is simply a means of communication, and human intelligence is the result of the rapid growth and larger size of the human brain. Bearing in mind that this extraordinary human brain is the source of intelligence and that this intelligence was powerful enough to mark the extraordinary development of the human species, it is somewhat implausible to say that language as a means of communication contributed to the level of human intelligence.

Based on these problems, the author is interested in researching language disorders in elementary school students which are analyzed through Neurolinguistics. The location chosen was elementary school children with a cultural background on the coast of Tapanuli Tengah with the Coastal Languages of Sibolga- Tapanuli Tengah. The coastal communities of Sibolga - Tapanuli Tengah use coastal languages as an intermediary language to communicate. Coastal languages have an important role in everyday life. They can see this role in many aspects of their lives, such as activities in the market, fishing, working on the beach and sea, visiting, playing and joking. The aspects mentioned above cover all members of society, from children to the elderly. The uniqueness of the coastal language is what the author wants to examine in relation to language disorders in elementary school students which are analyzed through theoryNeuropsycholinguistics.

II. Research Method

The method used is qualitative research based on constructivism which argues that reality is a social experience that is widespread, interactive and multidimensional (Sugiyono, 2010). Research data was collected using observation, interviews and recording and then the results were 111analyzed using theory Neuropsycholinguistics. The elementary school aged children studied were several MIN 7 Tapanuli Tengah students who, based on the results of interviews with teachers, experienced language difficulties. The data is then viewed from the perspective of the unique character of the Coastal Languages of Sibolga-Tapanuli Tengah.

III. Results and Discussion

The initial stage of this research was to conduct interviews with several teachers at MIN 7 Tapanuli Tengah to find students who were experiencing disorders of language and collect initial data that will support research findings. Based on the results of interviews with teachers, the author determined 3 students who would be studied for language disorders and the reasons why the children had delays. The analysis was carried out using Neuropsycholinguistic theory but focused more on psycholinguistics to find language disorders based on psychological aspects but still collected data on the child's health history to then be analyzed using Neurological theory.

Child 1 was 9 years old and when studied in grade 2 of elementary school, was a child who had experienced language disorders since the age of 3 years. For children aged 9 years, Child 1 still finds it difficult to learn and perfect language. The results of observations and interviews found that one of the causes was speech disorders as a result of laryngeal factors, or vocal cords. One of the characteristics of vocal cord disorders is a voice that is hoarse and sometimes lost. Child 1's voice seemed a little round and hoarse from the voice intonation that the writer heard. Then, pronunciation is not so clear when aged 3–6 years. Then there are changes when he is 7-9 years old. Child 1 began to speak clearly, and the hoarseness was still audible, but the voice did not change. Psychogenic disorder of spoiled speech was also found which resulted in a lack of many phonemes at the age of 3 years until entering the 2nd grade of elementary school.

Also found difficulty when speaking, vowels are lost. Just like "tobi" becomes "obi", "sibolga" becomes "ibolga" and "seribu" becomes "sibu". Then it is difficult to pronounce words that are rarely heard and have many letters, such as "bagustian" becomes "ustian". Child 1 pronounces the phoneme correctly in one word but incorrectly in another phoneme, for example the phoneme /n/ is pronounced correctly for the word "nangis", but when pronouncing the word "nakal", it is pronounced "makal". The results of interviews with parents found that this condition was experienced from the age of 3-6 years and there had been changes since the age of 9 years. It was also found that the pronunciation of the

word "karena" becomes "karano" and the word "sekolah" becomes "sikolah" which is a typical dialect of the Sibolga Coast-Tapanuli Tengah.

The condition experienced by Child 1 is thought to be a symptom of Dyslexia, namely a language disorder caused by the child's inability to understand words or sounds as a whole. When children have difficulty distinguishing between the letters b and d or the letters p and q, it is clear that these symptoms of dyslexia really strengthen the researchers in their analysis. Child 1 still experiences dyslexia even though he is 9 years old. He still fails to understand or differentiate the letters b and d, as well as the letters p and q. A common cause of dyslexia in boys is the hormonal development of the fetus. The results of interviews with parents showed that she had experienced serious illness when Child 1 was in the womb, so she suspected that the brain development process had been disrupted as a result. Apart from that, psychological factors also had an influence because the pressure from Child 1's parents was so excessive, that he looked a little stressed when the author took a language test on him.

Child 2, 8 years old, who is in grade 1 of elementary school, has a language disorder so that the letters he pronounces cannot be heard clearly unless letters of the alphabet are added or subtracted. As I have tested by reading story texts, because I am quite proficient in reading. Phonology Child 2 always speaks too fast when communicating, can spell letters visually, but when read it will be different from what he spells. For example, when reading the word "orang" when it is spelled "orang" but when it is pronounced "urang", then the word "makan" is spelled "makan" but pronounced "makam". The pronunciation of the word "kemana" was also found which was spelled "kemana" but pronounced "kemano" or the word "siapa" was pronounced "siapo" which is a typical dialect of the Sibolga-Tapanuli Tengah Coast.

Child 2 is thought to have a speech delay, Aleksia, because she seems quite adept at writing but has difficulty reading correctly for a 7 year old who should be able to pronounce what is spelled correctly. This age is considered enough to combine the right words even though they don't have sufficient reading skills. Child 2 has difficulty combining the letters he has spelled. Child 2's speech cannot hear vowels and consonants because he speaks too quickly, and the sentences he pronounces are not clear.

Based on the results of interviews with Child 2's parents, information was obtained that at the age of 1 year he had experienced a very high fever which was thought to have caused brain injury, disrupting speech development. These results were also confirmed by the parents' statement, that Child 2 was slow in speaking and when speaking was too hasty so that what was said was not clearly pronounced.

Child 3, 11 years old and in grade 5 of elementary school, has a lisp and generally cannot pronounce the letter "r". Based on observations of several words tested, it was clear that Child 3 had difficulty pronouncing the spoken words. Some words show language disorders, such as a lisp that changes the phoneme "r" to "l", "y", "h", "I" and "w". However, the pronunciation of words without the /r/ phoneme is pronounced clearly. Child 3's voice also sounded hoarse and rough, which based on the interview results happened too often. The words spoken are also classified as unclear and slow for his age.

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Table 1. Changes in Children's Phonemes 3	
Pronunciation	Phoneme Changes
guhu	r becomes h
Ceita	r becomes i
bewwana	r becomes w
Hayga	r becomes y
Walna	r becomes l
	Pronunciation guhu Ceita bewwana Hayga Walna

It was also found that the pronunciation of the word "kerja" which is typical in the Coastal Languages of Sibolga- Tapanuli Tengah is pronounced "karejo" with a faint r pronounced when it is said spontaneously without thinking. Likewise, without realizing it, when you say the word "orang" which in the Coastal-Tapanuli Tengah language is pronounced "urang". The letter r is faintly pronounced if Child 3 speaks without focusing on pronouncing the word, but the letter r is not pronounced if Child 3 focuses on pronouncing it, especially if asked to spell it.

Author's guess, Child 3experiencing dysarthria or a lisp because it is caused by a disorder of the nerves that control the muscles that help when speaking. This is because there was no communication disruption that occurred between the author and Child 3, whether in speaking, writing or reading tests. However, the pronunciation of words when speaking sounds slurred, slow and unclear for his age. This allegation was strengthened by the results of interviews that when Child 3 was in the womb, the mother experienced serious illness so that Child 3 was forced to be born by caesarean section and prematurely.

Child 1 is suspected of having dyslexia, namely having difficulty learning language, such as recognizing or differentiating letters, spelling, and experiencing delays in learning.Dardjowidjojo in Haifa et al (2020) explains that the causes of dyslexia occur due to educational, psychological and biological factors. Educational factors focus on how language teaching is taught, which should be taught as a unit, not as a sound form of writing. For example, if a child is at a stage where he cannot differentiate between similar letters, such as b and d, then the first step to take is to teach the letters one by one. It will take longer, but it will be enough for dyslexic children to recognize letters fluently. Psychological factors consider dyslexia as a psychological or emotional disorder due to lack of discipline, excessive pressure, not having parents, frequently changing schools, and lack of cooperation with teachers. Stress may also cause dyslexia, but stress can definitely make learning problems worse. Meanwhile, biological factors assume that dysfunction of parts (certain parts of the brain) is the cause of dyslexia who will experience different development from children in general, however, this does not mean mental disorders. Dyslexic children only differ in the way parts of the brain work and learn.

Through Neuropsycholiguistic analysis of the symptoms of Child Dyslexia 1, initially it occurred due to brain development disorders caused by hormonal disorders while still in the fetus, then strengthened by language learning when the child started speaking which was not done well for the condition of the child who experienced this disorder. Child 1 needs to be taught language more patiently and slowly than other normal children. The pressure given by parents as a result of a child's lateness worsens the condition because it causes stress for the child. The author also found wrong ways of teaching language from pronouncing words in a spoiled dialect which is a habit from toddlerhood, for example when parents say the word "makan" with the pronunciation "matan" or other words that reduce several letters to make it look spoiled and easy for children to understand. . In fact, this habit causes language problems in children in the future.

Child 2 is suspected of having alexia disorder which results in difficulty distinguishing letters. Alexia is the inability to read resulting from brain damage (Cumming, 2023). This is different from dyslexia, which is a developmental abnormality that causes a person to be unable to learn to read, and from illiteracy, which occurs in people with a low educational background. Alexia can also occur without aphasia or communication disorders caused by damage to the brain and is sometimes the only disorder present.

Neuropsycholiguistic analysis of the symptoms of alexia. Child 2 has alexia without agraphia. This is based on the opinion of Sinanovic (2011), namely that Alexia who does

not have agraphia is easily recognized because of the inability to read which is in conflict with good writing skills and the ability to read letters, or literal reading, is better than reading words, or oral reading. Sufferers are able to spell and recognize words spoken aloud, but if they write spontaneously, they have more difficulty copying the words. This disturbance is also exacerbated by language habits on the Sibolga-Tapanuli Tengah Coast which are mixed between Indonesian and Pesisir. Many words in the Coastal Languages of Sibolga- Tapanuli Tengah are almost the same as Indonesian but only change in phoneme and dialect, for example the word "where" becomes "dimano", or the word "lupa" becomes "lupo". For normal children, this will not have a significant effect, but for children with alexia such as Child 2, special treatment is needed to minimize the language problems they experience. Psychological environmental factors need to be adjusted so that Alexia children can develop more quickly, for example being supported rather than ridiculed or bullied.

Child 3 is suspected of having dysarthria, which is more commonly called a lisp. Setyono (1998) stated that dysarthria is a type of communication 114analysed114 disorder which is characterized by difficulties in the process of producing speech sounds rather than failure in symbolization. Speech disorder is a type of communication 114analysed114 disorder characterized by difficulties in the process of producing speech sounds, which causes phoneme articulation errors (Ulfa, 2020).

Neuropsycholiguistic analysis in Child 3 occurred due to neurological factors that occurred due to health problems that occurred in Mother and Child 3 during pregnancy who then had to be delivered prematurely by caesarean section. This is thought to result in the muscles and nerves used for language not developing properly. The communication 114analysed114 disorder known as Child 3 speech disorder is characterized by errors in the process of producing speech sounds. Errors in the process of producing speech sounds. Errors in the process of producing speech sounds cause children to make errors in the appearance of articulation (Point of Articulation) and pronunciation. Errors in these two aspects cause children to make omissions (omotions), substitutions, additions and unclear pronunciation (distortion).

Ulfa (2020) states that the cognitive ability of children aged 7-11, such as Child 3, has increased thinking ability to become logical due to the results of thinking and can solve concrete problems logically. However, dysarthria disorders that occur will hinder the development of this ability, due to the difficulty of communicating. The dysarthria that occurs in Child 3 is not only about how to pronounce words, but also about understanding words. This disorder is exacerbated by the child's psychological condition which, based on interviews, is often ridiculed and bullied which results in a poor mental condition. Child 3 is embarrassed to speak due to this condition, so that in the long term, it worsens the child's language skills.

When the children studied have different language disorders, if 114nalysed neuropsycholinguistically, several main causes can be concluded. Neurologically, we can conclude that the cause of this disorder was initially caused by a health disorder which resulted in disruption of the child's nerve and brain development. The main cause is neurological, it may be difficult to avoid at this time, but there are many therapies or methods that can be used to minimize the disorder and help children better improve their language skills. The therapy in question is through appropriate teaching supported by special attention to the child's psychology and environment.

Language teaching for children with disorders must be different from other normal children. This is something that teachers, or parents in general, have not paid attention to. Not to mention the environment which further worsens the psychology of children who experience this disorder. Teachers in education, parents in the family and other people in the environment should support the child's development process in language by providing

the right conditions, not providing conditions that can make things worse. Teachers are expected to be more patient and painstaking in teaching language questions to children who experience language disorders at school. Parents must better understand the needs of children who experience language disorders without applying pressure that makes the situation worse. And society does not bully or ridicule children who have language disorders.

Many words in the Coastal Languages of Sibolga- Tapanuli Tengah are phoneme reductions from words in Indonesian. Syafitri et al (2021) found many changes, additions and subtractions of phonemes made by children from the Sibolga and Tapanuli Tengah areas. According to the author, this does not have a big impact when children communicate informally outside of school. However, it will have an impact on the formal communication process carried out at school through learning in good and correct Indonesian. Children will have difficulty understanding the information provided by the teacher and disrupt the communication process. This condition will worsen children with language disorders due to confusion between communication with the Coastal-Sibolga Tapanuli Tengah language in their environment, and communication with Indonesian at school. So according to the author, children with language disorders in the Coastal-Sibolga Tapanuli Tengah cultural environment will find it more difficult to practice language skills than children who are not in the Coastal-Sibolga Tapanuli Tengah culture.

IV. Conclusion

Children who experience language disorders be analyzed can neuropsycholinguistically, so that several main causes can be concluded. Neurologically, we can conclude that the main cause of this disorder is initially caused by health problems that interfere with the development of the child's nerves and brain, then appropriate teaching methods and attention to the child's psychological condition are needed to overcome this disorder. Teaching language to children with disabilities must be different from teaching language to children who are developing normally. Both educational teachers and parents in the family and other members of society should help children's language development by providing the right environment, not by making it worse. The Coastal Languages of Sibolga- Tapanuli Tengah, which contains many words with changes, subtractions and additions of phonemes from Indonesian, does not have a big impact on children's non-formal communication outside of school but has an impact on formal communication at school, especially for children with language disorders.

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