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Production of Verbal Expression Sentence of Spok in Indonesian Language and Neuropsikokognitif Disorders on Patient With Broca's Aphasia in the Medan Hospital

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Abstrac

The objectives of this study were to classify the expression disorder of Indonesian basic sentence pattern on Patient with Broca's aphasia and to classify neurocognitive disorders in Patient with Broca's aphasia. This research uses neuropsycholinguistic theory. Theoretically this study explains the intervention and capability of memories, productions, thoughts, meanings, and emotions that are very influential in one's speech when told because of Broca's broken area in the inferior frontal gyrus. Patient of this research are 5 peoples from USU hospital. They are called as the FBA 1-5 in this research. The method of data collection is recording, interviewed and told the life story of the patient. The method of data analyzing is classification of sentence disorder and neurocognitif of the patient. This research also to see the degradation of articulatory's patients. This study will sort out the basic sentences of expression of Indonesian language and neuropsychocognitive disorders by patient with Broca's aphasia. The conclusions are (1) The basic sentence patterns of Indonesian language are invalid. (2) The neurocognitif of FBA 1-5 as memory, mind and emotion are very uinq. FBA sufferers in this study are not able to put the basic sentence pattern of Indonesian in the context of correct and correct speech by Indonesian language.

Keywords: Disorders of expression, neuropsychocognitive, Indonesian, Aphasia

Producción de la oración verbal de expresión de Spok en idioma indonesio y trastornos de neuropsikokognitif en pacientes con afasia de Broca en el hospital Medan

Resumen

La investigación actual tiene como objetivo evaluar las habilidades de rendimiento. Los objetivos de este estudio fueron clasificar el trastorno de expresión del patrón de oración básico indonesio en pacientes con afasia de Broca y clasificar los trastornos neurocognitivos en pacientes con afasia de Broca. Esta investigación utiliza la teoría neuropsicolingüística. Teóricamente, este estudio explica la intervención y la capacidad de los recuerdos, las producciones, los pensamientos, los significados y las emociones que son muy influyentes en el discurso cuando se les dice debido al área rota de Broca en la circunvolución frontal inferior. Los pacientes de esta investigación son 5 personas del hospital USU. Se les llama FBA 1-5 en esta investigación. El método de recolección de datos es registrar, entrevistar y contar la historia de vida del paciente. El método de análisis de datos es la clasificación del trastorno de la oración y el neurocognitivo del paciente. Esta investigación también para ver la degradación de los pacientes articulatorios. Este estudio clasificará las oraciones básicas de expresión del lenguaje indonesio y los trastornos neuropsicocognitivos por paciente con afasia de Broca. Las conclusiones son (1) Los patrones básicos de las oraciones del idioma indonesio no son válidos. (2) El neurocognitivo de FBA 1-5 como memoria, mente y emoción son muy sutiles. Las víctimas de FBA en este estudio no son capaces de poner el patrón de oración básico de indonesio en el contexto del habla correcta y correcta por idioma indonesio.

Palabras clave: Trastornos de la expresión, neuropsicocognitivo, indonesio, afasia.

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1. INTRODUCTION

1.1 Background

This research is motivated by the existence of verbal expression disorder in the form of basic sentence of Indonesian and neuropsikocognitive disorder in Broca Afasic patient with Stroke Patient case at Hospital in Medan City. The tendency of verbal expression disorder in forming basic phrases patterned SPOK and neuropsikokognitif disorders caused by brain dysfunction, impaired thinking, disorders in expressing speech or called Broca aphasia. The phenomenon of language in this study is the symbolization of the idea or the only way to express the mind verbally through speech and not in writing like writing. Actually speaking the thoughts orally or in the writings of a person is led to 5 things or parameters to be followed in order to understand the elements stored in them, such as: (1) Speaking, (2) Hearing, (3) Repeating, (4) Reading, (5) Writing (Gustianingsih, 2016)

The speech function is closely related to the cerebral hemisphere, especially the dominant hemisphere. Nine out of ten people are righ handed up to 90% of people and have dominant hemispheres on the left. The remaining 10% is the right hemisphere. Three of the tenths are dominant in the dominant hemisphere of the right. So only 3% of all people are dominant hemisphere on the right and

the remaining 97% and are domiciled on the left side of the brain. (Gustianingsih, 2017) Talk is a pronunciation that shows a person's uttering skills by making a sound in a word and can also be called a receptive language. Receptive language is the ability to understand what is seen and what is heard. In addition to receptive language there are also expressive languages. The expressive language is the ability to communicate symbolically either visually (writing, marking) or auditing. If there is a receptive and expressive language difference from the normal person's language, it can also be called aphasia. (Gustianingsih, 2018).

Aphasia is a disorder that occurs due to damage from the part of the brain that takes care of the language, ie loses the ability to form words or lose the ability to grasp the meaning of words so that the conversation can not take place properly. Aphasia creates problems in spoken language (speech and understanding) and written language (reading and writing). Usually reading and writing are more disturbed than speech and understanding. Aphasia can be mild or severe. The severity of the disorder depends on the magnitude and location of the damage in the brain.

Here is the illustration of the expressive disorder of Broca's Broccoli sufferer below:

Researcher: What do you do today?

AFB 1: [ma ... an .. ku .. ni ..] (eating I today) stammered pronounced

Seen from the above conversation, that the formation of basic sentences successfully produced by Broca's aphasia, but not perfect. Basic sentence that should be produced [I eat today]. This basic sentence pattern is a DSS. Patients have been producing with [ma ... an .. ku .. ni ..] (eating I today) with PSDet pattern. The sufferer removes the pattern of information today. Patients just express this, and the subject pattern I expressed with my alone.

The disorder of this patient is very different from the normal person's speech. should be answered with "work done on this day" Question "What are you doing today?" should be answered with "I / I eat today, or I am sitting, or I am looking down the street today". The work that focuses the question. Focus answers should keep the work done by the patient. The patient keeps saying the work done today is just "eating" nothing else. Broca Aphasia sufferers, AFB-1 has deviated from the basic sentence structure agreed from Jakarta Language Center. AFB-1's answer is relevant only there are some elements that are omitted and exchanged. Cognitively AFB-1 understands the focus of the question, but he is unable to express the correct and correct language.

Aphasia can be divided into three major parts, namely Motor Aphasia (Broca), Sensory Aphasia (Wernicke), and Global Aphasia. Motor aphasia has characteristics, such as: (1) Occurred due to Broca's broken area in the inferior

frontal gyrus; (2) Understanding the content of the conversation, but not being able to answer or express opinions; (3) Also called Affasia Expressif or Broca's Aphasia; (4) Can issue 1 - 2 words (nonfluent), (Arifuddin, 2006)

Sensory aphasia possesses characteristics, such as: (1) Occurred due to damage to Wernicke's area in the superior temporal gyrus; (2) Do not understand the content of the conversation, but can issue words (fluent); (3) Also called Receptive Aphasia or Afasia Wernicke. Global Aphasia has characteristics, such as: (1) Regarding Broca and Wernicke areas, (2) Do not understand and can not get words out.

The hospital in Medan City as a public hospital has dealt with Broca's aphasia from the point of psychology and neurology, but from a linguistic point in which it relates to neuropsycholinguistics from the syntactic angle of language has never been done. This research seeks to make a valuable contribution to the management of language and psychocognitive behavior through the research of verbal expression disorder of Indonesian basic sentence on Broca's aphasia. This research also hopes to make the management of language, psychology and neurocognitive of Broca's Broca case stroke patient in RS in Medan City. This study requires special handling of linguists for linguistic, psychiatric or psychiatric management for neuropsychological therapy. The Medan city government needs to know about Broca's aphasia treatment thoroughly.

2. THE TEORETICAL STUDY

2.1 Concept of Disorders Speech (language disorder)

Neuropsycholinguistics utilizes clinical data to uncover the mechanisms of physiology and neurophysiology that underlie language disorders and this mechanism has provided a method for assessing the internal structure of the language and speech and the underlying cerebrum mechanism. (Banret, z, 2007). Disorders of spoken language and written language caused by the cracking of the cerebral cortex have caused problems to be overcome by neurolinguistics and neuropsycholinguistics. The intensive collaboration between these two disciplines has successfully examined certain aphasia problems by relating them to related linguistic frameworks. In addition, this collaboration has tried to link the direct evidence of physiology to determine the localization of experimentally obtained language functions of the normally functioning brain. This neuropsycholinguistic discovery has contributed to the knowledge of the nature of aphasic phenomena and implicit language knowledge as described by linguists. [6]. This knowledge has indicated something about the psychological realities of linguistic assumptions that can embody the grammar of a particular language.

De Saussure, a linguistic figure from Sweden reveals language is social, while speaking is individual. Both these traits are interconnected. Language resides in the brain and is social in terms of ontogenesis (developmental history) and from the point of acquisition. The relationships between the shadows of hearing and the concept are acquired by the individual as the role of the objects and the people around the individual. Everyone who learns language gets it this way. Language learning is social in terms of synchronic, whereas speech is idiosyncratic because it is determined individually. Language is natural, because it is abstract and hiding in the brain, while speaking is not natural, because it depends on the willingness of the speaker and is intellectual.

2.2 Broca's Aphasia

This form of aphasia is named after the inventor of the part of the brain responsible for producing speech. Broca's aphasia is often called "motor afasia" to emphasize the production of disturbed language (such as speaking) while other aspects of language do not have problems. In stroke, damage to the Broca is the result of disruption of blood flow through the blood vessels that supply this part with oxygen and nutrients. Generally, Broca's aphasia prevents a person from forming a clear word or phrase, but they still understand what others are talking about. Often, aphasic sufferers feel frustrated because they can not get their thoughts into words. Some aphasic sufferers may say a few words, which they use to communicate in the type of speech characteristics known as telegraphic speech. Because some blood vessels that affect Broca's aphasia also carry blood to the part that controls the movement of one side of the body (usually the right side), Broca's aphasia is generally accompanied by other disorders such as hemiparesis, or hemiplegia on the right side of the body, alexia and agraphia.]

2.3 Basic Indonesian Sentences

Sentence is a writing that has a minimal structure of the subject and the predicate and the final intonation shows the writing that has been equipped with meaning. Sentence element is a syntactic function consisting of subject, predicate, object, complement and description. Sentences are said to be perfect if they have at least a Subject and Predicate elements. The basic sentence consists of several sentence structures formed with five sentence elements namely S, P, O, Pel, Ket. Based on the function and the grammatical role there are six types of sentences that are used as the basic sentence patterns of Indonesian language are: 1. Basic Sentences SP pattern, 2. Basic Sentence SPO Pattern, 3. Basic Sentence SP-Pel Pattern, 4. Basic Sentence SP-Ket Pattern , 5. Basic Sentences Patterned S-P-O- Pel. (Djajasudarma, 2014)

3. METHODOLOGI

This research applies research and development methods (research & development). Borg & Call (1984)[8], Huitema (1990)[9], Fraenkal & Wallen (1990)[10], state that research and development is oriented to a cycle that begins with gathering information that is followed up with the development process of a product and its development process. Product development was tested and revised the results of the trial, and finally obtained a model that can be used to improve the process and learning outcomes. Relationship of acquisition, learning Indonesian language with reading and cognitive behavioral therapy and perception, and writing therapy, social behavior of long and short term memory of dislexed patients in this development research was carried out starting from designing and testing the results of reading and writing deviations (phonological aspects (phonemes for phonemes), morphological aspects (phrases or groups of words, and syntactic aspects (simple sentences in order of words for words in forming simple sentences), done in the first year.

How the influence of cognitive areas, such as memory, input processing speed, ability to manage time, aspects of coordination, and control of motion, and visual difficulties when reading and writing, is also done in the first year. In the second year of work "Strategic / Manual Reading and Writing Model for Dyslexic Patients theoretically, procedurally, as well as empirically (doing treatment, and testing tests (Guidelines / Cognitive, Affective, Psychomotor Models in Reading and Writing for Dyslexic Patients).

The steps of this research are as follows:

1. Planning

Planning includes goal setting activities, finding deviations in reading and writing dyslexic patients in the form of visual, auditory, cognitive, affective, and psychomotor deviations in terms of reading and writing and strategic steps to read and write that are fun and full of confidence. Furthermore, a limited feasibility test will be carried out on the design to be developed.

2. Model Development and Testing

This management can be done in earnest and high accuracy in order to obtain maximum results, according to the field of study. This research is a collaboration between linguistics (linguistics which includes reading and writing deviations by a psychiatric physician). This doctor will be the factors that cause dyslexia suffered by the patient, clinical examination and neuropsychological therapy. This collaboration will produce a standard model of competence, competence basic, the design model reads and writes CALISDIS.

North Sumatra, in this case the City of Medan, Coal, and Pematangsiantar as a city that stands many extraordinary schools, but the management of dyslexic

patients is still not optimal and requires special treatment from linguists for language therapy, psychiatrists or experts psychiatric for neuropsychological therapy. The therapy program especially in the field of language needs to be refined using the right methods and theories. The Government of North Sumatra needs to know in full the handling of language disorder sufferers.

4. RESULTS AND DISCUSSION

4.1 Expression Disorders of Basic Indonesian Sentences on Patient with Broca's Aphasia

The disorder in this paper is the expression of the spoken language of a person who is not the same as a normal human being universally. This unequal form can be the existence of the elements of kabahasaan, elemental enhancement, the exchange of elements or elements of language that are reversed. It can be a subject element, a predicate, an object, or a description. The fact that can not be denied that found the phenomenon of language that is far from the actual conditions. This phenomenon is present in a condition called Broca's aphasia. Broca's aphasia condition is a functional form caused by the main factor that is the process of language disorder caused by a disturbance in the human brain. their brain is disturbed caused by many things. Disorders of the brain that resulted in a language disorder, the speech of the patient deviates from normal orang talk, such as distortions expressed Broca's aphasia sufferers with mild stroke cases (AFB) at Pirngadi Hospital Medan, below:

(2) Researchers: What do you do today?

AFB-2: nut ... nut ti ban ... ban ... nu ... aya ... ni ... (was..was...hing my ...clo...thes today) means "washing my clothes today". If formed this sentence patterned POSK or it could be POK (washing clothes I today) or patterned sentences like this (washing my clothes today)

O	S	K		P	O	K
---	---	---	--	---	---	---

AFB-2 stammered expressly, not smoothly and many words are not perfect. Nut ... nut ... ti is understood as a wash, then said tires ... ban ... nu .. understood as a shirt. The sound [j] is expressed as [n]. My word is expressed with aya, missing the sound [s]. The word today is only expressed with this. If it is related to the Indonesian grammar it is in harmony with this as a determinant, whereas the word today functions as a description of time. When viewed the expression AFB-2 expresses, it is very different as has been studied.(Khon, Susan, 2009) said that Almost all the writings on Broca's Aphasic suggest a non-fluent or

faltering language form, but the language is not reversed. In this case the language is reversed, as illustrated in the sentence (3)

(3) Researcher: Kemanakah Bapak pagi ini?

AFB-3: Rok ..rokkok... bel ... bel ... lik.. tad ... tad..di..ku .. (rokok belik tadi aku) to declare "aku membeli rokok tadi pagi" . AFB-3 is only able to express the sentence with rokok belik tadi aku previously patterned O P K S. Forms like this sentence never expressed normal people. This morning should have appeared in AFB-3, but AFB-3 was only able to express earlier, said morning lost or did not appear. In contrast to AFB-2 and 3 in expressing basic Indonesian sentences. AFB-4 is able to express its sentences without having to backtrack, but still stumbles and eliminates important elements in the sentence, such as [di].

(4) Researcher: di rumah sakit ini, Ibu dijaga siapa?

AFB-4: [ib..ib..bu ... jag ... jag ... ga..an ... an..nak.] (Ibu jaga anak). AFB-4 also stammered

express the basic sentence. [Ibu jaga anak].” I care to the children”
S P O

Judging from the above conversation, that the formation of basic sentences successfully expressed by AFB-4 patients is not perfect. The basic sentence that should be expressed [Ibu dijaga anak di rumah sakit ini], but AFB-4 expresses with [Ibu jaga anak] (Ibu dijaga anak). This basic sentence pattern is SP O. Patients hve expressed with SP O. AFB pattern -4 has omitted the element [di], thus changing the meaning contained in the sentence The patient intends to express Ibu dijaga oleh anak, but it means turning into Ibu yang menjaga anakny. Ibu as /S/ (Subject)” Doer”. In this case it seems as if the child is sick and guarded by the mother. AFB-4 understands what is being asked, but is unable to express the perfect and correct language according to the universal rules and understandings of the Indonesian language.

Exactly what the experts say about Motoric Aphasic: (1) Occurs due to Broca's brokenness in the inferior frontal gyrus (2) Understand the content of the conversation, but can not answer or express opinions (3) Also called Aphasic Expressif or Broca's Aphasia (4) Can issue 1-2 words (nonfluent). [9]

(5) Researchers: Apakah Bapak masih ingat, Apakah pendidikan terakhir Bapak?

AFB-4: (shaked his head sed ... sed sede ... ku ni..on (head shake aku SD. Aku ini tahun) means that his last education is only elementary school. Structurally, the expression of AFB-5 is also not the same as the actual Indonesian language structure. Patients express basic sentences with their own

patterns, based on their thoughts with pattern PSK. When viewed from the Indonesian language structure that applies universally "Shaking my head, Aku sekolah SD tahun ini". This sufferer also expresses disjointed, incomplete and reversed basic sentences, and uses nonverbal expressions as well to shake his head meaning "do not remember". Expressive of the basic cues proposed in this study is very different from previous studies, the language is discontinuous and many elements are wiped out and flipped through the language.

4.2 Neurocognitive and Psychocognitive Disorders Patient With Broca's Aphasia

Neurology and cognitive psychology called neurocognitive and psychocognitive are two branches in neurology and psychology that attempt to examine the cognitive processes of human behavior scientifically. Neurocognitive is used to assess neurological relationships with human language processes. Psychocognitive is used to examine the psychological relationships of 'science that examine universal human behavior' and linguistics as part of a scientific sciences that examines language behaviors that can ultimately be called cognitive psycholinguistics, psychology studies linguistics and human cognitive processes in the study of language behavior. What is meant by cognitive processes, is the mental processes, thoughts, motivations, and emotional human in regulating human experience and behavior and language behavior. The things that are mainly studied in cognitive psychology are how people cultivate, interpret, organize, store, exclude and use their knowledge, including the development and use of language knowledge. Neuropsycholinguistics applies linguistic, psychological, and neurological knowledge and language problems, such as language teaching, language learning, pre-reading and advanced reading, bilingualism, grammar, speech-related, such as aphasia, stuttering, autism, brain stroke and communication problems, language and thought relationships, dialect problems, pidginization and creolization and other social issues involving language, such as language and education, language and nation-building. Neuropsycholinguistics is an interdisciplinary science born as a result of one consciousness, that language study is so difficult and complicated that a single discipline alone is unlikely to be able to study and explain the essence of language. So, basically Neuropsikolinguistik it is a combination or cooperation between neurolinguistik and neuropsikologi. What if there is a neurocognitive and psychocognitive disorder in expressing basic Indonesian sentences. (Nagai, K, 2007)

4.2.1 Motivational Disorder

Motivation AFB 1-5 also deviates, because it is Broca aphasia suffered by these sufferers eliminate the motivation to speak to anyone, if not talked to them at all silent. After being talked to also have no motivation to create new words, always repeat the vocabulary delivered by others but also circling and back and forth. AFB1-5 can not remember the sequence of words logically to be communicated to others. In addition to sputtering and unclear articulation, AFB does not have expression in speech and usually ordinary people do not understand this patient's speech, as shown in the data (1-5).

4.2.2 Memory Disorders

American psychologists, arguing about memory as the most extraordinary phenomenon of the brain, sensory experiences, perceptions of action to change feel and remember, understand and decide (Khon, Susan, 2009).

When viewed from the results of interviews with researchers with the patient, views, perceptions, curiosity will something, remember something, and decide something has been heavy mengganggu. AFB1-5 never shows a high curiosity about the information, surrounding circumstances, and views about itself and others. This never happens when they have not had a stroke. The most basic evidence there is no difference AFB-1 answers to different questions. As researchers, long-term memory and short-term AFB-1 can be said to be disturbed. AFB- understands what's specifically asked "about eating", not food, so answers are the same for different questions. "Eating" and "food" must be different or different. Here's an illustration of his speech.

Researchers: Do you still remember your favorite food?

AFB-1: nat nat ... ti la ... maaa an. (Nasilah makan)

Short-term memory is the retention and acquisition of new information in seconds, minutes, hours, and days. Also called working memory, primary memory, and direct memory that includes remembering and holding new information, as well as information previously understood by the patient in a formal or informal manner.

Long-term memory, also known as memory of something such as counting, vocabulary or sentence in large and permanent quantities in the human brain. George Miller, a print researcher of cognitive and memory psychology, any human being who can store words in large quantities, more number of letters stored and recalled, pieces of information that are accommodated by short-term memory and sent easily into the run long. humans will have no problem recalling a 14-word sentence like "the wicked old witch led the two trusting children into the deep dark forest." Through word memories with very fast

sspeed, 10 words per second. [Nagai, K, 2007]. .

If you look at the definition of short-term and long-term memory, AFB1-5 is already disturbed as well. Patients can not remember perfectly both long-term memory and short-term memory, have no motivation and creativity in speaking. Patients will not greet people first, but they wait to be addressed.

5. CONCLUTION

Basic sentences of Indonesian language, can be expressed that Broca sufferers with stammer and not smooth. Many expressions are expressed in reverse, and there is also a missing language element that gives rise to a new meaning. The pattern that goes down is not the same as the normal person's sentence pattern in general.

Neurocognitive and psychocognitive also deviate from normal references.

Stroke patients in this study were unable to recall information ever before they were exposed to a stroke, when speaking expressionlessly, his face flat. FB1-5 never started the conversation, never greeted first, but waited to be addressed.

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