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The Effect of Aphasia on Sixty-Six Years Old in Language Acquisition

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Abstract
This study aimed to describe language impairments (motor aphasia). The specific goals of the study include describing motor aphasia-related language impairments, their etiology, and the use of language by those who have these disorders (motor aphasia). In this study, the author discussed the effects of Aphasia on grandmother in language acquisition. In this study, the author observed the language of a grandmother who is 66 years old. This research was conducted in Medan. The grandmother who was a participant in this study was named Zaimah Kusuma. She has dementia in her language due to her old age. The researcher conducted this research using descriptive qualitative method. Data collection was taken by interview, recording, and documentation. Dementia is a disease that causes loss of memory and the ability to think. These conditions have an impact on the patient's lifestyle, social skills, and daily activities. According to the study's findings, the 66-year-old aphasia patients who were its participants are capable of speaking simple words, questions, and instructions. 66 years old aphasic patients can typically pronounce sentences with the pattern S-P, P-S, and P-K.
Keywords*: aphasia, acquisition, dementia, impairments, language*

Abstrak
Tujuan penelitian ini adalah untuk menggambarkan gangguan bahasa (afasia motorik). Tujuan khusus dari penelitian ini termasuk mendeskripsikan gangguan bahasa terkait afasia motorik, etiologinya, dan penggunaan bahasa oleh mereka yang memiliki gangguan ini (afasia motorik). Dalam penelitian ini, penulis membahas tentang pengaruh Afasia pada nenek dalam pemerolehan bahasa. Dalam penelitian ini penulis mengamati bahasa seorang nenek yang berusia 66 tahun. Penelitian ini dilakukan di Medan. Nenek yang menjadi partisipan dalam penelitian ini bernama Zaimah Kusuma. Dia menderita demensia dalam bahasanya karena usianya yang sudah tua. Peneliti melakukan penelitian ini dengan menggunakan metode deskriptif kualitatif. Pengumpulan data dilakukan dengan wawancara, pencatatan dan dokumentasi. Demensia adalah penyakit yang menyebabkan hilangnya ingatan dan kemampuan berpikir. Kondisi tersebut berdampak pada gaya hidup pasien, keterampilan sosial, dan aktivitas sehari-hari. Menurut temuan studi tersebut, pasien afasia berusia 66 tahun yang menjadi pesertanya mampu berbicara kata-kata sederhana, pertanyaan, dan instruksi. Penderita afasia usia 66 tahun biasanya dapat mengucapkan kalimat dengan pola S-P, P-S, dan P-K.
Kata kunci*: afasia, akuisisi, demensia, gangguan, bahasa*

Introduction

Aphasia is a disorder in the use of language, expression, and understanding in any modality, including speaking, writing, or linguistic cues, and it is caused by some type of acquired brain damage (Ba, 2010). Dementia is a cognitive impairment that impairs thinking, memory, and reasoning and has an impact in a day activity of person. Patients with dementia sometimes experience personality changes and emotional instability. The intensity of dementia can range from the least severe stage, when it is hardly interfering with a person's capacity to function, to the most severe stage, when the person is completely dependent on others for basic daily tasks. Instead, then referring to a specific illness, the term "dementia" is used to characterize poor memory, reasoning, or decision-making that makes it difficult to carry out daily responsibilities. Alzheimer's disease is the most common cause of dementia. In this case, dementia that often occurs in someone who is over 65 years old, but there are also those who experience dementia under the age of 65 because of disease factors. Children do not have dementia. Dementia is a condition (a collection of related symptoms) known as a steady decline in brain function. This may involve problems with memory loss, quick thinking, and mental agility (Asyrofi & Rokhmani, 2019).

Aphasia is a disorder caused by brain damage that results in impaired processing of language input and output in various forms, including auditory–verbal, textual, and sign language (Hallowell, 2023). Damage to language-related parts of the brain affects language processing in many ways, such as the ability to combine content, the complexity of syntactic structures, the use of grammatical rules, the formation of morphological units, and the rate of language production (Wilshire et al, 2014). People with aphasia (PWA) experience a variety of language difficulties, including sentence production deficits (SPD), also known as agrammatism. Agrammatism refers to the difficulty to produce complete or correctly constructed sentences (Poirier et al, 2021).

Aphasia is an acquired neurogenic language disorder resulting from an injury to the brain, typically the left hemisphere that affects the functioning of core elements of the language network. Aphasia involves varying degrees of impairment in four primary areas: spoken language expression, written expression, spoken language comprehension, reading comprehension. Aphasia may also result from neurodegenerative disease. For example, primary progressive aphasia is a subtype of fronto temporal dementia in which language capabilities become progressively impaired. Aphasia is often described as *nonfluent* or *fluent,* based on the typical length of utterance and amount of meaningful content a person produces. There are various subtypes of aphasia within these two categories based on differences in other aspects of expressive and receptive language skills.

In general, therefore, aphasia is caused by lesions of the areas of the brain primarily responsible for language processing (Broca area and Wernicke area) or other areas of connection with different brain centers variously involved in the function. These areas are generally located in the left hemisphere for right-handed subjects (in the rare cases in which they are located in the right hemisphere it is called "cross aphasia"). In left-handed people, in 60% of cases they are in the right hemisphere, while in the remaining 40% in the left hemisphere or both.

Basically, there are many various in language disorder, such as:

a. Motor Aphasia

Motor aphasia comes in three different forms, including: *(1). Cortical motor aphasia,* the Broca's region cortex is where speech codes are kept. There won't be any more words to be spoken if the storehouse is destroyed. As a result, motor aphasia is the inability to verbally articulate one's thoughts. Though unable to verbally express themselves at all, the patient can nevertheless grasp spoken and written language. (*2). Subcortical Motor Aphasia,* Broca's area's surface layer (cortex) is where speech codes are kept, therefore even if damage to the lower portion (subcortical) happens, all words are still securely preserved there. However, the word cannot be issued because it is interrupted; however, the order to issue the word can still be communicated to the warehouse for delivery of the word (broca's warehouse) so that verbal expression is still possible with provocation; consequently, the patient cannot express his thoughts by using words, but he can still express verbally by reciting. *(3).Transcortical Motor Aphasia,* when the direct link between Wernice's and Broca's regions is broken, transcortical motor aphasia develops. This indicates a disruption in the direct connection between language cognition and expression. Transcortical motor aphasia is a cortical lesion that primarily affects Broca's region. The patient can then utter the word substitution. Using a pencil as an example, you may respond to the question "What is the name of this thing I'm holding?" He struggled to express himself. However, being able to say "that, tu, tu, tu" while writing." The term "nominative aphasia" also applies to this condition.

b. Sensory Aphasia

Damage to Wernicke's region cortical lesions in the dominant hemisphere is the root cause of sensory aphasia. The location of the area is in the associative region between the visual, sensory, motor, and auditory areas. Wernicke's area damage impairs not only the ability to grasp what is heard (the auditory sense), but also the ability to understand what is seen (the visual perception). As a result, those who have sensory aphasia are unable to grasp spoken or written language. Even though neither he nor anybody else could understand what he was saying, he continued to have verbal outbursts.

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Dementia's preliminary signs and symptoms include: Dealing with change is challenging. Having trouble embracing scheduling or environmental changes, for instance, short-term memory impairment. Alzheimer's patients often have vivid memories of 15 years ago. The perfect words can be difficult to choose. Word associations or memory become more challenging. Repeat a phrase. For instance, repeatedly asking the same question, working on the same project, or retelling the same tale, Confuse of the directions. Previously well-known places may now look exotic. They might also have trouble driving the same route they've driven for years since it appears unfamiliar. Difficult to understand what the other person is saying. It might be challenging for people with dementia to follow a tale or description. Mood changes in dementia patients are depression, frustration, and rage are rather prevalent. A decline in interest, losing interest in pastimes or pursuits they once found enjoyable as an illustration. Confusion with the familiarity of people, places, and events may have changed. Dementia patients could forget familiar faces. They feel difficult with routine chores.

Language is the means of spoken or written communication. How people manage their speech is strongly tied to and consistent with how a newborn human's development unfolds. Words will evolve throughout time to become abstract words or words with meaning. The process of verbal expression and auditory comprehension in language disorders is a cerebral process, which implies that neurons, or nerve cells in the brain, carry out these functions. This language condition can be roughly classified into two categories. First, because of interference with medical issues such irregularities in brain function or because of problems with speech-making devices. The second is brought on by social environmental variables, such as being excluded or isolated from the natural environment of human civilization, which is an unnatural habitat for humans.

Categorizes language problems are into three categories: speaking disorders, language disorders, and thinking disorders. Even if the individual with the condition has a normal hearing loss, it is still possible to overcome the three problems; it may not be easy or even very easy. Here, the term "language problems" refers to a person's inability to speak a language fluently (Buckingham, 1978). People with motor aphasia have trouble pronouncing words, which causes their verbal expression to be less than fluent. This is as a result of Broca's field being damaged. The front hemisphere's motor cortex is damaged by Broca's aphasia, which makes it difficult to regulate the muscles in the face, mouth, chin, and throat. Speech disorders are brought on by the paralysis of the vocal folds caused by motor nerve injury in the nerve center (McNeil & Pratt, 2001). Based on the study explanation above, this study aims to find out the effect of aphasia on sixty-six years old on her language acquisition.

Method

This study used a qualitative method. A grandmother was observed by auhor, her name is Zaimah Kusuma, as a participant. The data was collected by using interviews, recording and documentation. This research was conducted at grandmother's house in Medan, this study conducted on Sunday-Monday 6-7 November 2022. The reason of the researcher chose Zaimah Kusuma as a participant in this study, because researchers met her more often, and visited her house every Sunday. In accordance with the qualitative understanding above, the reason why researchers use qualitative descriptive method, because qualitative research methods are descriptive methods and tend to use analysis, making it easier for researchers to conduct research and find accurate and correct research results related to the results of researchers. In qualitative research, a theoretical basis can be used as a guide so that the focus of research carried out by researchers is in accordance with the facts in the field. The technique of collecting data carried out by researchers is interviews, recording and documentation to obtain accurate and reliable data.

Result and Discussion

In this case, the results of a study will be presented on what is ready for a 66-year-old grandmother named Zaimah Kusuma whose house is in Medan. The grandmother often had trouble speaking. Participants often spoke in inappropriate language. In speaking, sometimes use irregular words. In this study, the authors observed and observed the extent of aphasia in a 66-year-old grandmother. Is it light or heavy?. Based on research data, 66 years old aphasia sufferers can say news sentences such as the data below:

1st Data (1*) "Nengarep aku belonjo..alah.. neng kede ne Dewi"*
(*saya pergi ke kedai dewi)*

2nd Data (2) "*Nde… pulak...ndeene pulak nande"*?
(*Dimana dia*?)

3rd Data(3) *"alah. Dulu nanti..."*
(*Sabarlah*)

4th Data(4)"*Aku masak udah…"*
(*Saya sudah memasak*)

5th Data : "*tidur aina*"
(*Aina tidur*)

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6th Data **:** *Jatuh dia*
(*dia terjatuh*)

7th Data **:** *Manala... pulak pulakk pulak?*
(pergikemana?)

1. Types of sentences that can be obtained in this study by people with aphasia

Based on the results of the study, people with aphasia aged 66 years who were the subjects of this study could say *news sentences, questions, commands, and single sentences*. Each type of sentence is described below:

a. News Sentence

Sentence (1) is a ***news sentence*** because in the sentence *"Nengarep aku belonjo.. alah... neng kede ne Dewi"*

It conveys information to the researcher that yesterday the participant went shopping at the Dewi's shop. This opinion is supported by Kridalaksana (2008:103) He explains that news sentences conclude with a period and are composed of words with news intonation and typically have the meaning "state or give something." The results of this study are consistent with those of research by Dardjowidjojo (2008: 158), which found that people with aphasia have imperfect language because the condition affects speech in the form of difficulty speaking as a result of a brain disorder.

b. Question sentence

2nd Data (2) "*Nde… pulak...ndeene pulak nande"*?
(Where is she?)

Based on research data, people with aphasia can say interrogative sentences. Sentence (2) is an interrogative sentence because the sentence " *Nde… pulak...ndeene pulak nande*?" using question words that indicate a place (Nde...= where). A sentence that asks a question is known as an interrogative sentence. According to Manaf (2009: 92), sentences that contain the fundamental idea of questions are what he refers to as interrogative sentences with interrogative terms. Basically, based to the writer's point of data, this sentence occurs when the context of this sentence occurs when participant wants to go with her daughter, but her daughter does not come, so Participant asks which maybe in normal language "where is Aina?" Aina is her daughter.

c. Imperative sentence

Based on the research data, people with aphasia can say command sentences such as the results of the data below:

3rd Data(3) *"alah. Dulu nanti..."*
(be patient)

The context of this sentence was issued by the participant, namely because the participant was ordered for going to home by her daughter, then the participant issued the sentence. Sentence (3) is a command sentence because in the sentence "*Alah.. dulu nanti..*!" produced by the aphasia sufferer above is a command sentence, namely the subject orders her daughter to be "patient". Order which are sentences that contain the meaning of an order, are also known as command sentences. Manaf (2009: 99) supports this viewpoint by referring to command sentences as imperative sentences, that is, statements that have the fundamental sense of commanding.

d. Single Sentence

Based on research data, people with aphasia can say single sentences such as the data below:

4th Data(4) "*Aku masak udah…"*
(I have cooked)

Sentence (4) is a single sentence, because in the sentence "*aku masak udah*…" there is only one independent clause. In the context, the sentence "*aku masak udah* " when the researcher asks the participants "have you eaten"? Then she said like that. According to the aforementioned information, people with aphasia only use independent clauses in their sentences, hence the sentences they make are all single sentences. This is consistent with (Febriani, 2013) assertion that a single sentence is a sentence made up of a single independent clause.

2. Sentence Structures of Aphasia Patients

The participant 66 years old can typically pronounce sentences using the S-P, P-S, and P-K patterns. The following description provides research information about sentence patterns that have been identified:

a. S-P Pattern

Sentences with the S-P pattern, researchers found in sentences produced by people with aphasia such as the data below:

5th Data : "*tidur aina*"
(Aina tidur)

The element that fills the subject is a noun (name of a person), the element that fills the predicate is a verb. The meaning of the sentence uttered by the respondent in the example above is to inform that "Aina sleeps" (Aina is her daughter).

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b. *P-S Pattern*

P-S patterns were also present in sentences made by aphasic individuals, such as example

6th Data **:** *Jatuh dia*
(Dia terjatuh).

c. P-K Pattern

P-K pattern sentences were also observed in those spoken by aphasics, as in the following example

7th Data **:** *Manala... pulak pulakk pulak?*
(pergikemana?)
'[Aina is daughter from the participant] (Pergi kemana?)

The predicate filler element is a verb or verb (V), the adverb filler element is a question word that shows a place. The meaning of the sentence uttered is to ask where someone wants to go.

The study provides valuable insights into the speech characteristics of a 66-year-old grandmother named Zaimah Kusuma, who experiences aphasia. Aphasia seems to manifest as difficulty in articulating words, including the use of irregular language and inappropriate words. The observed speech patterns align with existing research by Dardjowidjojo (2008) and Kridalaksana (2008), highlighting the impact of aphasia on speech. The data reveals a diversity of sentence types produced by individuals with aphasia, including news sentences, questions, commands, and single sentences. This diversity suggests that aphasia affects various aspects of language production, not limited to a specific category of speech. The study demonstrates that individuals with aphasia can form interrogative sentences, as evidenced by sentence (2), where the participant inquires about the location of someone. This challenges stereotypes about the limitations of question formation in aphasia and adds nuance to our understanding of linguistic abilities in this population.

The study emphasizes the importance of considering contextual factors in understanding aphasic speech. For instance, the imperative sentence (3) is influenced by the context of the participant being ordered to go home by her daughter. The findings align with previous assertions by Febriani (2013) that individuals with aphasia predominantly use single sentences, comprised of a single independent clause. This insight contributes to the broader understanding of language structure in aphasia. Aphasia patients in the study exhibited sentence patterns, including S-P, P-S, and P-K structures. The identified patterns reflect the versatility of aphasic language production, showcasing the ability to convey subject-action, action-subject, and action-location relationships. Understanding the diverse sentence structures and patterns employed by aphasia patients can aid in developing effective

communication strategies tailored to their linguistic capabilities. Tailoring communication approaches based on the observed patterns can enhance comprehension and interaction for individuals with aphasia.

The study sheds light on the nuanced nature of aphasic speech, encompassing various sentence types and structures. These findings contribute to a more comprehensive understanding of language capabilities in individuals experiencing aphasia, paving the way for improved communication strategies and support. The observed S-P, P-S, and P-K patterns in sentence structures suggest variability in the placement of verbs within sentences. This variability highlights the adaptability of aphasia patients in conveying meaning through different linguistic structures. The study indicates that individuals with aphasia effectively use verb-noun relationships, as seen in sentences like "tidur aina" (Aina tidur) and "Jatuh dia" (Dia terjatuh). This emphasizes the resilience of language processing mechanisms in conveying essential actions and relationships despite the challenges posed by aphasia. While the sentences may exhibit linguistic irregularities, the semantic clarity in expressing actions, locations, and relationships underscores the robustness of semantic processing in individuals with aphasia. This finding challenges assumptions about the comprehensibility of aphasic speech and highlights the importance of focusing on the core communicative intent. The presence of interrogative sentences, such as "Manala... pulak pulakk pulak?" (Pergi kemana?), showcases a certain degree of complexity in forming questions. Understanding the intricacies of question formation in aphasia contributes to developing targeted interventions and support strategies for enhancing communicative abilities.

The identified sentence patterns and linguistic characteristics provide valuable insights for speech therapists working with individuals with aphasia. Tailoring therapeutic interventions to address specific linguistic structures and patterns can contribute to more effective communication rehabilitation. Recognizing the diversity in speech patterns among individuals with aphasia emphasizes the need for personalized communication support strategies. Customizing support based on the observed sentence structures can enhance the overall quality of communication interactions for both individuals with aphasia and their communication partners. The study opens avenues for future research into the neural and cognitive mechanisms underlying the diverse linguistic expressions observed in aphasia. Investigating individual differences in language production among aphasia patients could further refine our understanding of the condition and inform targeted therapeutic approaches.

Recognizing the diverse sentence structures and patterns exhibited by individuals with aphasia underscores the importance of tailored therapeutic interventions. Speech therapists and caregivers can design interventions that address specific linguistic challenges observed in news sentences, questions, commands, and single sentences. The identification of S-P, P-S, and P-K patterns provides valuable

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insights for speech therapists in designing rehabilitation exercises. Targeted exercises focusing on these patterns may enhance language production and improve overall communicative effective. Acknowledging the influence of context on speech production highlights the need for context-based interventions. Therapists and caregivers can integrate real-life scenarios into language rehabilitation exercises to simulate the communicative challenges faced by individuals with aphasia. Understanding that individuals with aphasia can articulate various sentence types implies a potential for maintaining or regaining independence in daily activities. Rehabilitation programs can emphasize functional communication skills, empowering individuals to express their needs, preferences, and thoughts effectively. The study suggests the importance of educating communication partners, such as family members and caregivers, about the speech characteristics and patterns associated with aphasia. Training programs can enhance the ability of communication partners to comprehend and respond appropriately to the diverse expressions of individuals with aphasia. Comprehensive support for individuals with aphasia should extend beyond linguistic aspects to include emotional and psychological well-being. The study prompts a holistic approach to care, recognizing the impact of communication challenges on the overall quality of life for aphasia patients.

Previous studies have shown a specific interest in adult language acquisition as L2 or Ln in a variety of focus such as the impact of L1 background (Artieda, 2017), learners' distinguish aptitude (Kidd et al., 2018; Saito, 2017), a biological factor especially age (Abutalebi & Clahsen, 2018; Arnon et al., 2017; Deng & Zou, 2016), and environment that supports social interaction (Montrul, 2020). These findings are evidence that adult language learners' barrier is not always dependent on their cognitive skills. Another study also states that various studies indicate how aphasia subjects have success and failure patterns in understanding various structure types (Berndt et al., 1997). Even so, research on an adult who learns a language due to aphasia, to our knowledge, has never been discussed before.

Conclusion

Based on the results of the study in this case, the 66-year-old aphasia patient in Zaimah's mother is still classified as mild aphasia because the patient can say command sentences, interrogative sentences, news sentences, and single sentences. Aphasia seems to manifest as difficulty in articulating words, including the use of irregular language and inappropriate words. So, it can be concluded that 66-year-old grandmother named Zaimah Kusuma were classified as mild aphasia. Aphasia is a person's disorder in language or the loss of a person's ability to speak or speak. Someone who has a language disorder can be divided into two, namely because of medical factors such as abnormalities in brain function or abnormalities in speech,

and the second factor that affects a person's difficulty in language is the social environment.

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