

IMPLEMENTATION OF SPEECH THERAPY (A, I, U, E, O) IN NON-HEMORRHAGIC STROKE PATIENTS WITH VERBAL COMMUNICATION DISORDER PROBLEMS

Dhimas Ammar Raihan Nur Karim^{1*}, Agustina Retno Hapsari¹, Ngatini²

¹Diploma Three Nursing Study Program, Politeknik Kesehatan Karya Husada Yogyakarta, Jl. Tentara Rakyat Mataram No.11B, Bumijo, Yogyakarta 55231, Indonesia

²RSUP Dr. Sardjito Yogyakarta, Jl. Kesehatan Sendowo No.1, Sendowo, Sinduadi, Mlati, Sleman, Yogyakarta 55281, Indonesia

*dhimasammar930@gmail.com

ABSTRACT

Stroke is a condition where blood circulation in the brain occurs due to blockage or bleeding of blood flow to the brain. Non-hemorrhagic stroke patients often experience verbal communication disorders. Treatment of stroke with verbal communication disorders can use pharmacological and non-pharmacological methods such as A, I, U, E, O speech therapy. Determine the level of development of verbal communication in non-hemorrhagic stroke patients. This research uses a descriptive method which aims to describe the patient's condition objectively. The respondent experienced verbal communication disorders so he was given AIUEO speech therapy 2 times a day for 3 days, carried out for 10 minutes with 3 repetitions and there was an increase in the aphasia scale as measured using the DFCS (Derby Functional Communication Scale) scale, the patient's speaking ability increased on the third day. 3 with an aphasia score of 10 or moderate aphasia. A, I, U, E, O speech therapy is able to increase the scale of communication in stroke patients with verbal communication disorders.

Keywords: aiueo speech therapy; non-hemorrhagic stroke; verbal communication disorders

INTRODUCTION

Stroke is a condition where blood circulation disorders occur in the brain. This situation can also cause the death of tissue in the brain so that a person can experience paralysis and can also result in death (Shinta & Sara, (2020)). The main cause of stroke is blockage of blood flow so that the supply of blood and oxygen to the brain decreases. The initial symptoms of a stroke are that the face, hands and feet suddenly become numb and are usually accompanied by a headache (Prasetia & Susanto, 2022). Stroke or cerebrovascular accident is not only suffered by someone aged 50 years and over, but this disease can also attack someone in their productive age, namely at the age of 45 years. Stroke is one of the highest diseases that can cause a person to experience physical and verbal disability, and death (Ekayanti et al., 2018). The incidence of stroke in the world according to the World Stroke Organization (WSO, 2022) experienced an increase of 70% while the increase in deaths due to stroke was 43%. Increased stroke prevalence by 102%. Based on data from the Ministry of Health of the Republic of Indonesian, the prevalence of stroke in Indonesia increased from 7 per 1000 population in 2013 to 10.9 per 1000 population in 2018 (Kemenkes_RI, 2018). For the province of Special Region of Yogyakarta, it ranks second with an incidence rate of 14.6 per 1000 population (Dinaskesehatan, 2023). Meanwhile, data on cases of inpatient stroke patients at RSUP Dr. Sardjito in 2023 there were 1127 cases, while there were 502 stroke patients treated in Gatotkaca 1 ward in 2023.

Someone who is experiencing a stroke often experiences neuro-musculoskeletal problems which can affect the patient's mobility or movement ability. One of the clinical symptoms that can be caused by stroke is verbal communication disorders (Pangaribuan et al., 2021). Verbal communication disorder is a condition where a person experiences an inability to receive, delays

and an inability to process which is characterized by symptoms such as slurring, stuttering, aphasia, difficulty constructing sentences, difficulty expressing body and face (PPNI, 2017). Stroke sufferers with communication disorders often feel useless to themselves or others, and lose self-confidence and even experience excessive depression (Sunardi, 2015). Aphasia is a speech disorder caused by damage to the brain hemispheres. This disorder occurs in 21 – 40% of stroke patients (Halimah et al., 2022). How to treat verbal communication disorders can use pharmacological methods such as blood thinning drugs or you can also use anticoagulants. Apart from using pharmacological methods, there are also other methods of treatment, namely using non-pharmacological methods such as using speech therapy (Suwaryo et al., 2021).

One way to treat verbal communication disorders is to use speech therapy A, I, U, E, O. This therapy is usually used to improve the way one speaks or utters so that the language style of someone who experiences communication disorders can be understood. This speech therapy has a big impact on the speaking ability of someone who has had a stroke (Yunica et al., 2019). According to research from Halimah et al., (2022) entitled "Analysis of the Application of AIUEO Therapy on Post-Stroke Speech Ability" which was measured using the Derby Functional Communication Scale. The results were obtained after taking action on 2 respondents for 7 days and given twice a day. The results of the speaking ability of 2 respondents were obtained. Improvement from moderate aphasia to normal. According to research conducted by Sofiatun et al., (2016) with the title "Effectiveness of AIUEO Therapy and The Token Test Therapy on the Speaking Ability of Stroke Patients Who Experience Motor Aphasia at Mardi Rahayu Kudus Hospital" with the research design used, namely a true experiment for 3 days with treatment once a day with AIUEO speech therapy and the token test. The sample used by 40 respondents assessed their level of speaking ability before and after therapy, so it was concluded that AIUEO speech therapy was effective.

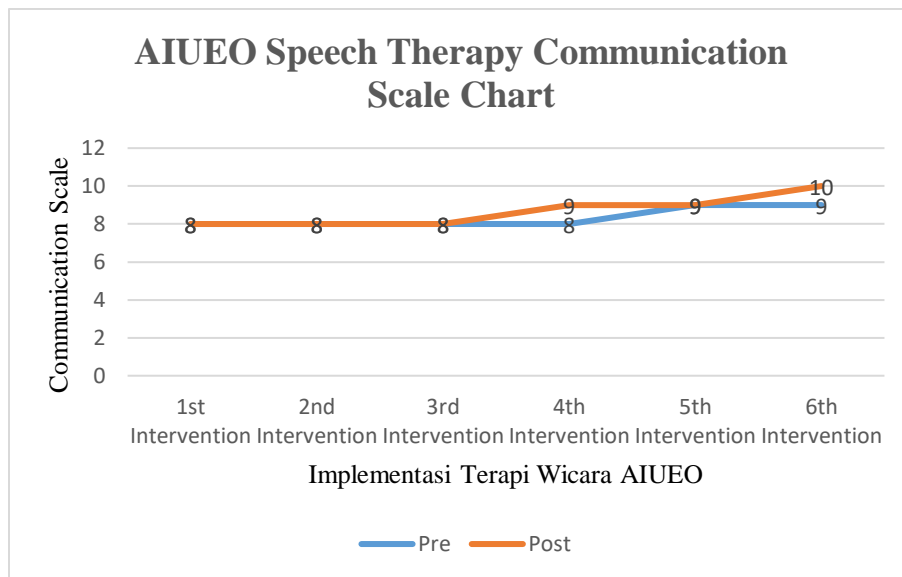
METHOD

The design used to carry out this research is to use a descriptive method. The focus of this case study is to apply speech therapy techniques A, I, U, E, O to determine the level of development of verbal communication in non-hemorrhagic stroke patients. The data collection method used is observation, including assessing the communication scale using the Derby Functional Communication Scale. Another method used in collecting data in this research is interviews which include the respondent's identity, main complaint and medical history

RESULT AND DISCUSSION

An overview of the research carried out in Gatotkaca 1 Ward, Irna Stroke Room 1, RSUP Dr. Sardjito Yogyakarta. Characteristics of the respondent, male, aged 73 years, who has been diagnosed with Aphasia Global Cum Lateralisasi Dextra Onset Akut Et Causa SNH dd SH. The results of the assessment, the family said the patient felt cold and the patient's right hand and leg experienced muscle weakness, the patient's vision was reduced, the family said the patient had difficulty speaking after being found in the field with a fainting condition, the patient could only say the vowel O while to communicate with other people the patient used body language. Speech Therapy A, I, U, E, O for 3 days was carried out 2 times a day for 10 minutes 3 repetitions, the results were:

Day	Intervention	Pre speech therapy A,I,U,E,O	Post speech therapy A,I,U,E,O	explanation
1	1st intervention	8	8	The patient has difficulty saying A, I, U, E
	2nd intervention	8	8	The patient has difficulty saying A, I, U, E
2	3rd intervention	8	8	The patient has difficulty saying A, I, U, E
	4th intervention	8	9	The patient can say A, E and O but it is not very clear
3	5th intervention	9	9	The patient can say A, E and O
	6th intervention	9	10	The patient can say A,U,E,O. the letter U is not yet clear



Based on the table and graph above, it shows that the results of the aphasia scale increased after speech therapy was carried out for 12 meetings from the previous scale of 8 which increased on the 3rd day of implementation to a scale of 10 measured using the derby scale.

Stroke or what is commonly called cerebrovascular disease is a neurological disease caused by disruption of the blood supply to the brain(Wayunah & Saefulloh, 2016). Non-hemorrhagic strokes are caused by thrombi and emboli which occur due to decreased blood flow in certain places in the brain(Azzahra & Fitriyani, 2023). Verbal communication disorders are a decrease or inability to receive, process and use systems and symbols which is characterized by lack of eye contact and speech disorders(Prasetia & Susanto, 2022).A, I, U, E, O speech therapy is a non-pharmacological therapy carried out on stroke patients with communication, swallowing and language disorders. This therapy is easier for respondents to imitate vocal formation, lip, tongue and jaw movements(Anggraeni et al., 2023).The implementation results for the respondents above showed

a gradual increase shown from the results of the derby scale, before implementing speech therapy A,I,U,E,O the patient's aphasia scale was on a scale of 8 which indicates severe aphasia, then after implementing speech therapy A,I,U,E,O there was an increase aphasia scale gradually and was able to reach a scale of 10 on the 3rd day of implementation which indicates moderate aphasia on the derby scale. When the implementation was carried out, the patient looked calm and relaxed, and he was also very interested in following the directions given during speech therapy. The patient's family also often taught the patient to speak slowly so that the patient could quickly communicate normally again.

This research is in line with the results of research from (Yuliyanto et al., 2021) with 1 respondent as the subject, the results of the application of this research showed that after being given AIUEO speech therapy for 7 days, verbal communication abilities increased from scale 9 to scale 11. AIUEO speech therapy was carried out for 7 days and at least 2 times a day. In this study, the patient's communication skills increased on the 3rd day on a scale of 10, in line with research from (Yuliyanto et al., 2021) which improved on day 3 with an aphasia score of 10. Research result (Hastuti & Aderita, 2022) with the subjects used in this research, namely 3 respondents who experienced communication disorders with a moderate communication scale score of 14. From this research, speech therapy was carried out for 14 days, twice a day every morning and evening. After speech therapy was carried out for 14 days, the communication scale score became lighter with a score of 21 with the result that the subject experienced improved communication. In this study, respondents experienced an increase on the 4th day due to several factors such as support from the family.

Research result (Halimah et al., 2022) with the title and research subjects using 2 respondents who experienced strokes with verbal communication disorders. In this study, the results showed that after the application was carried out twice a day for 7 days, there was an increase from moderate aphasia to normal on the 5th day, because the respondent, when applying the therapy, initially felt embarrassed and uncomfortable, which hindered the increase in the scale of the respondent's communication. Previous research (Yunica et al., 2019) said that there was an effect of AIUEO therapy on verbal communication abilities in patients who experienced stroke with aphasia. This is also confirmed by the research conducted (Sofiatun et al., 2016) which compared AIUEO therapy with the token test therapy. This research states that AIUEO therapy is more effective for stroke patients who experience verbal communication disorders. From the interventions that have been carried out and previous research that supports this speech therapy, speech therapy A, I, U, E, O is able to increase the scale of communication in stroke patients with verbal communication disorders.

CONCLUSION

After performing A, I, U, E, O Speech Therapy on Non-Hemorrhagic Stoke patients which was carried out 2 times a day for 3 days with a duration of 10 consecutive minutes, it can be concluded that there was an effect in providing A, I, U, E, speech therapy. O to increase the development of the verbal communication scale in non-hemorrhagic stroke patients before and after the procedure by obtaining a change in the scale from (8) severe aphasia to (10) moderate aphasia scale.

REFERENCES

- Anggraeni, P., Cahyati, Y., & Rahman, A. (2023). Asuhan Keperawatan Pada Pasien Stroke Yang Diberikan Terapi Wicara A-I-U-E-O Di Ruang Flamboyan Rsud Kota. *Jurnal Kesehatan Mahardika*, 10(2), 50–59. <https://doi.org/10.54867/jkm.v10i2.178>
- Azzahra, S. D., & Fitriyani. (2023). *Stroke Non Hemoragik*. 7(1), 573–580.
- DinasKesehatan. (2023). Aktivasi Otot Pasien Stroke Dengan Kelumpuhan Melalui Sensasi Taktil Dengan Tekanan. <https://dinkes.jogjaprovo.go.id/berita/detail/aktivasi-otot-pasien-stroke-dengan-kelumpuhan-melalui-sensasi-taktil-dengan-tekanan>
- Ekayanti, M. S., Bachtiar, M. F., & Kembuan, M. A. H. N. (2018). Nilai Hematokrit Pada Stroke Akut Di Bagian Neurologi RSUP Prof . Dr . R . D . Kandou, Manado Periode Mei 2013-Mei 2015. *Jurnal Sinaps*, 1(1), 9–20.
- Halimah, N., Zakariyati, & Demawan, A. (2022). Analisis Penerapan Terapi A I U E O Terhadap Kemampuan Bicara Pasca Strok. *Garuda Pelamonia Jurnal Keperawatan*, 4(2), 51–69. <https://ojs.iikpelamonia.ac.id/index.php/Garuda/article/download/275/298>
- Hastuti, D. M., & Aderita, N. I. (2022). Penatalaksanaan Peningkatan Komunikasi Terapi Wicara Aiueo dengan Hambatan Komunikasi Verbal pada Pasien Stroke di Desa Ngesong. *Jurnal Stikesmhk*, 3(2), 127–134.
- KemenKesRI. (2018). Hasil Utama Riskesdas 2018. https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf
- Pangaribuan, R., Ayu, M., & Tarigan, J. (2021). Komunikasi Verbal pada Stroke Non Hemoragik di UPT Pelayanan Sosial Lanjut Usia Binjai. *jurnal Insan Cendekia*, 8(2). <https://doi.org/https://doi.org/10.35874/jic.v8i2.934>
- PPNI, T. P. S. D. (2017). *Standar Diagnosis Keperawatan Indonesia: Definisi dan Indikator Diagnostik* (1 ed.). DPP PPNI.
- Prasetia, Y., & Susanto, A. (2022). Asuhan Keperawatan Hambatan Komunikasi Verbal Dengan Stroke Non Hemoragik Di RSUD Prof Dr Margono Soekarjo Purwokarto. *Jurnal Inovasi Penelitian*, 3(5), 6–11. <https://doi.org/https://doi.org/10.47492/jip.v3i5.2077>
- Shinta, A., & Sara, O. (2020). Penerapan Prosedur Latihan Range of Motion (ROM) Pasif Sediti Mungkin Pada Pasien Stroke Non Hemoragik (SNH). *Jurnal Ilmiah Indonesia*, 5(10), 1015–1021. <https://doi.org/10.36418/syntax-literate.v5i10.1706>
- Sofiatun, I., Kristiyawati, S. P., & Purnomo, S. E. C. (2016). Efektifitas Terapi AIUEO dan Terapi The Token Test Terhadap Kemampuan Berbicara Pasien Stroke Yang Mengalami Afasia Motorik di RS Mardi Rahayu Kudus. *Jurnal Keperawatan dan Kebidanan*, 2(4), 230–238.
- Sunardi, S. (2015). Analysis Of Risk Factors Of Ischemic Heart Disease (IHD) On The Client's Hypertension. *Jurnal Keperawatan Poltekkes Kemenkes Jakarta III*.

- Suwaryo, P. A. W., Levia, L., & Waladani, B. (2021). Penerapan Terapi Cermin Untuk Meningkatkan Kekuatan Otot Pada Pasien Stroke Non Hemoragik. 4(2). <http://180.250.193.171/index.php/borticalth/article/view/2263>
- Wayunah, & Saefulloh, M. (2016). Analisis faktor yang berhubungan dengan kejadian stroke di rsud indramayu. 2(2), 65–76. <https://doi.org/https://doi.org/10.17509/jpki.v2i2>
- WSO. (2022). World Stroke Organization (WSO): Global Stroke Fact Sheet 2022. [https://www.dropbox.com/s/wm12nosylzkk5ea/World Stroke Organization \(WSO\)- Global Stroke Fact Sheet 2022.pdf?e=1&dl=0](https://www.dropbox.com/s/wm12nosylzkk5ea/World%20Stroke%20Organization%20(WSO)-%20Global%20Stroke%20Fact%20Sheet%202022.pdf?e=1&dl=0)
- Yuliyanto, G., Utami, I. T., & Inayati, A. (2021). Efektifitas Terapi “AIUEO” Terhadap Kemampuan Berbicara Pasien Stroke Non Hemoragik Dengan Afasia Motorik Di Kota Metro. *Jurnal Cendekia Muda*, 1, 339–343. <https://jurnal.akperdharmawacana.ac.id/index.php/JWC/article/view/222/133>
- Yunica, N. M. D., Dewi, P. I. S., & Heri, M. (2019). Terapi AIUEO Terhadap Kemampuan Berbicara (Afasia Motorik) Pada Pasien Stroke. *Journal of Telenursing*, 1(2), 396–405. <https://doi.org/https://doi.org/10.31539/joting.v1i2.924> TERAPI