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CATROKIES MEDIA: AN EDUCATIONAL INTERVENTION TO ENHANCE THE INDEPENDENCE OF STROKE PATIENTS

Media Catrokies: Intervensi Edukatif untuk Peningkatan Kemandirian Pasien Stroke

Donna Aprilia [1*], Fretika Utami Dewi[1], Maulida Fitri[1]
[1]Poltekkes Kemenkes Palangka Raya, Palangka Raya, Indonesia
Email: donnaapr7@gmail.com / Phone: 089636342896

ABSTRACT

Stroke is a leading cause of disability and death, demanding long-term management to prevent recurrence and enhance patient independence. Although effective nutrition education is essential, conventional educational media are often unengaging. This study therefore examined the effectiveness of the Catrokies educational medium on patients knowledge, skills, blood pressure, nutrient intake (SFA, PUFA, cholesterol, soluble fiber, sodium), and independence in daily activities. A pre-experimental, one-group pre-test–post-test design and observational was used with 13 purposively selected participants. Most respondents were 50–69 years old, male, unemployed, had low educational attainment, had experienced stroke for less than one year, and had diabetes mellitus as a comorbidity. Significant improvements were found in knowledge ($p = 0.002$) and skills ($p = 0.001$), along with a significant reduction in systolic blood pressure ($p = 0.003$). Intakes of cholesterol, PUFA, SFA, soluble fiber and sodium also improved markedly ($p < 0.05$), and patients Activities of Daily Living (ADL) scores increased significantly ($p = 0.004$). In conclusion, nutrition education delivered through the Catrokies medium proved effective in improving knowledge, skills, blood pressure, nutrient intake, and ADL among stroke patients.

Keyword: *blood pressure; daily living independence; knowledge; nutrition intake; skills*

ABSTRAK

Stroke merupakan penyebab utama kecacatan dan kematian yang memerlukan pengelolaan jangka panjang untuk mencegah kekambuhan dan meningkatkan kemandirian pasien. Edukasi gizi yang efektif sangat penting, namun media edukasi konvensional sering kurang menarik. Penelitian ini bertujuan menganalisis efektivitas media edukasi Catrokies terhadap pengetahuan, keterampilan, tekanan darah, asupan zat gizi (SFA, PUFA, kolesterol, serat larut air, natrium) dan kemandirian aktivitas harian pasien *stroke*. Desain *pre-eksperimental* menggunakan *one group pre-test post-test design* dan observasional dengan sampel secara *purposive sampling* berjumlah 13 orang. Hasil menunjukkan responden terbanyak berusia 50-69 tahun, berjenis kelamin laki-laki, tidak bekerja, berpendidikan rendah, menderita *stroke* $\leq$ 1 tahun dengan komplikasi DM. Peningkatan signifikan pada pengetahuan (p=0,002), keterampilan (p=0,001), dan penurunan tekanan darah sistolik (p=0,003). Asupan kolesterol, PUFA, SFA, serat larut air dan natrium menunjukkan perbaikan bermakna (p<0,05), begitu pula skor *Activities of Daily Living* (ADL) pasien yang meningkat signifikan (p=0,004). Media Catrokies terbukti efektif terhadap perubahan pengetahuan, keterampilan, tekanan darah, asupan zat gizi, dan ADL pada pasien *stroke.*

Kata Kunci: asupan zat gizi; kemandirian; keterampilan; pengetahuan; tekanan darah

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INTRODUCTION

Stroke is a global health problem and a leading cause of disability and death (Riondi et al., 2024). The WHO (2019) reported 15 million stroke cases annually, with 5 million deaths and 5 million people experiencing permanent disability. In Indonesia, stroke prevalence increased from 7% in 2013 to 10.9% in recent years, with Central Kalimantan reaching 12.7% (Riskesdas, 2018). RSUD dr. Doris Sylvanus recorded 851 stroke cases in 2020, with 85 deaths (Dewi & Agustina, 2023). Stroke results from disruptions in blood flow to the brain, causing neurological damage that affects patients' physical abilities and independence in daily activities (Wijaya et al., 2024). If not properly managed, complications such as recurrent stroke may occur, which are often more severe than the first attack (Sapang et al., 2021). Low awareness among patients and their families regarding secondary prevention—such as dietary management, routine check-ups, and a healthy lifestyle—worsens this condition (Dewi et al., 2022).

Nutritional education plays an important role in preventing recurrence, particularly concerning intake of saturated fats, polyunsaturated fatty acids (PUFAs), cholesterol, sodium, and soluble fiber (Jauhardin et al., 2020), as well as blood pressure management (Puspitasari, 2020). Blood pressure reduction following educational interventions has been demonstrated by Dotulong & Karouw (2022). However, educational media such as leaflets are considered unappealing and easily damaged (Suryawan et al., 2023), highlighting the need for interactive and communicative media innovations (Citerawati & Widiastuti, 2021). The Pergizi Pangan nutrition disc has been proven effective in improving patient understanding (Rahmayanti et al., 2023). Based on this concept, the visual media **Catrokies**—an acronym for *Cakram Anti Kekambuhan Stroke* (Stroke Recurrence Prevention Disc)—was developed to be more communicative and appealing, particularly for older adults. Research by Afridon & Gumanti (2022) shows that knowledge and skills influence the prevention of recurrent stroke, supported by family involvement (Tunik, 2023).

Therefore, this study aims to analyze the influence and effectiveness of education using the Catrokies media on stroke patients'

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knowledge and dietary skills, blood pressure, nutrient intake (SFA, PUFA, cholesterol, soluble fiber, sodium), and independence in daily activities at RSUD dr. Doris Sylvanus Palangka Raya. RSUD dr. Doris Sylvanus Palangka Raya is the main referral hospital in Central Kalimantan Province, equipped with a stroke unit (stroke center) to provide comprehensive inpatient stroke care.

METHODS

Design, Setting, and Time

This study used a pre-experimental design (one-group pretest-posttest) to assess the effect of the Catrokies media on knowledge, skills, and blood pressure, as well as an observational approach to evaluate its effectiveness on nutrient intake and independence in activities of daily living (ADL). The study was conducted in the Nusa Indah Ward at RSUD dr. Doris Sylvanus Palangka Raya from February to March 2025.

Number of Subjects and Sampling Method / Research Instruments and Materials

Respondents were selected using purposive sampling with the following inclusion criteria: fully conscious patients, able to communicate, willing to participate in the entire series of interventions, and possessing functional ability to perform basic activities of daily living. A total of 13 respondents were selected.

Type and Method of Data Collection / Research Procedures

Data were collected directly at the research site from February to March 2025. The data included respondent characteristics (age, gender, education, occupation, duration of stroke, comorbidities, and medication therapy), obtained through structured interviews and verification of medical records. The educational intervention was conducted once, immediately before the patients were discharged from inpatient care.

Knowledge was measured using 10 multiple-choice questions, both before and after the education. Skills were assessed using an observation sheet with the Guttman scale, both before and seven days after the education. Systolic blood pressure was measured by nurses before the education and three times per week afterward, with the results averaged. Nutrient intake (SFA, PUFA, cholesterol, sodium, soluble fiber) was recorded using the food record method conducted three times after the education,

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assisted by the Local Food Household Measurement Book, and analyzed using Nutrisurvey. The level of activities of daily living (ADL) was assessed using the Barthel Index on the fifth, tenth, and fifteenth days after the Catrokies educational intervention, which was administered just before the patients' discharge from inpatient care.

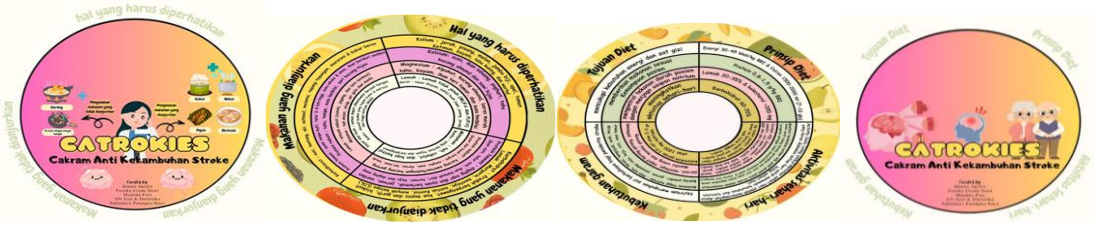

Figure 1. Catrokies Media

Data Analysis

Normality tests were first conducted using the Shapiro-Wilk test. The results showed that systolic blood pressure was normally distributed, so the paired sample t-test was used, whereas knowledge and skills variables, which were not normally distributed, were analyzed using the Wilcoxon test. For cholesterol intake, sodium intake, and ADL, which were normally distributed, Repeated Measures ANOVA was used, while PUFA, SFA, and soluble fiber intake, which were not normally distributed, were analyzed using the Friedman test. Data analysis was performed using SPSS version 25.0, with a significance level set at $p < 0.05$.

RESULTS AND DISCUSSION

Stroke cannot be completely cured and carries a risk of recurrence if not properly managed. Recurrent strokes are generally more severe, potentially causing disability, cognitive impairment, and even death due to more extensive brain damage (Sapang et al., 2021). This condition often occurs after patients are discharged from the hospital because they believe they have fully recovered, leading them to neglect follow-up examinations, diet, and lifestyle changes (Dewi et al., 2022). A lack of knowledge and skills, particularly in controlling blood pressure, can slow recovery and trigger recurrence. Preventing recurrent stroke requires long-term care and improved

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independence in activities of daily living (ADL) (Sahrani et al., 2023). Nutrient intake, especially sodium, soluble fiber, PUFA, and cholesterol, also plays an important role in reducing the risk of recurrence. This study involved 13 inpatient stroke patients in the Nusa Indah Ward at RSUD dr. Doris Sylvanus who were about to be discharged.

Table 1. Respondent Characteristics

Characteristics	n	%
Age		
30 – 49 years	2	15.4%
50 – 59 years	5	38.5%
60 – 69 years	5	38.5%
70 – 79 years	-	0
80 – 89 years	1	7.6%
Total	**13**	**100%**
Gender		
Male	8	61.5%
Female	5	38.5%
Total	**13**	**100%**
Education		
Low (Elementary–Junior High School)	7	53.8%
Medium (Senior High School)	4	30.8%
High (Higher Education/University)	2	15.4%
Total	**13**	**100%**
Occupation		
Unemployed	9	69.2%
Employed	4	30.8%
Total	**13**	**100%**
Duration of Illness		
< 1 Year	11	84.6%
> 1 Year	2	15.4%
Total	**13**	**100%**

Based on the analysis in Table 1, the majority of respondents were in the 50–59 years and 60–69 years age groups (77%). This finding aligns with Hutagalung (2019), who stated that the risk of stroke increases with age, due to atherosclerosis or the accumulation of fatty plaques in the blood vessel walls. The distribution by gender showed that most respondents were male (61.5%). Males are known to have a higher susceptibility to stroke compared to females, who generally have healthier lifestyles and dietary habits (Hutagalung, 2019).

Regarding education, respondents with low education levels (Elementary–Junior High School) constituted the largest group (53.8%). Low education levels can affect an individual's ability to understand

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and accept health information, limiting access to disease prevention efforts (Darsini et al., 2019). Furthermore, most respondents in this study were unemployed (69.2%). Inactivity in the workforce can limit access to information and experiences that contribute to improved health literacy (Darsini et al., 2019).

Regarding the characteristics based on the duration of stroke, 84.6% of respondents had experienced a stroke within less than one year, or it was their first attack. Hutagalung (2019) stated that individuals who have recently experienced a stroke have a high risk of recurrence within the first year. This is supported by findings from Sabila et al. (2022), which showed that the longer an individual has had the disease, the better their skills in managing their health condition, including improved adherence to therapy and the implementation of a healthy lifestyle.

Regarding comorbidities, 5 respondents (38.5%) had no comorbid conditions or only had stroke. Among respondents with comorbidities or stroke accompanied by other complications, the most common medical diagnosis was stroke with complications of Diabetes Mellitus (DM), accounting for 3 respondents (23%). Comorbidities such as DM are known to play a role in stroke pathogenesis through the mechanism of thickening of the cerebral arterial walls, which impedes blood flow to the brain (Hutagalung, 2019).

Additionally, heart disease, particularly hypertension with heart complications (HHD), can cause cerebral embolism due to the release of blood clots into cerebral circulation. Hypokalemia also increases the risk of stroke by predisposing individuals to ventricular fibrillation (Rodo and Susanti, 2021). Renal insufficiency, which is generally a complication of chronic hypertension in stroke patients, contributes to nephrosclerosis through inflammatory mechanisms and intrarenal angiotensin II activation (Gultom and Sudaryo, 2023).

The most commonly used medication among respondents was antihypertensive drugs, taken by 10 respondents (23.1%). Antihypertensive drugs function to lower blood pressure, which is a major trigger for stroke (Muhlis and Muslimah, 2021). The types of antihypertensive medications prescribed by doctors for respondents included Candesartan, Amlodipine, Ramipril, Nimotop, and Herbesser.

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According to Murgiati and Alim (2024), Candesartan is an Angiotensin Receptor Blocker (ARB) that prevents angiotensin II from binding to its receptor, ultimately causing vasodilation and lowering blood pressure. This drug is an alternative for patients who are intolerant to the side effects of Angiotensin-Converting Enzyme Inhibitors (ACEIs), such as dry cough, and is effective in preventing and aiding recovery from ischemic stroke.

Amlodipine, Nimotop, and Herbesser belong to the Calcium Channel Blocker (CCB) class, which has been shown to be more effective in preventing stroke compared to other antihypertensive classes. Their mechanism of action is to inhibit calcium ion flow into the central nervous system, thereby reducing ischemic injury and neuronal damage. Nimotop, in particular, is used to prevent seizures in stroke patients. Meanwhile, Ramipril is an ACEI that works by inhibiting the conversion of angiotensin I to angiotensin II, thus preventing vasoconstriction (Muhlis and Muslimah, 2021).

Table 2. Distribution of Changes in Knowledge Before and After Education Using Catrokies Media

No	Knowledge Question	Correct Responses (n=13)		Note
		Pre-test	*Post-test*	
1.	Purpose of stroke diet	8	11 (84.6%)	Increased by 3 respondents
2.	Recommendation for drinking water	3	10 (76.9%)	Increased by 7 respondents
3.	Recommended sodium intake	4	10 (76.9%0	Increased by 6 respondents
4.	Improvement in stroke patient condition	6	11 (84.6%)	Increased by 5 respondents
5.	Sources of fat not recommended	11	12 (92.3%)	Increased by 1 respondents
6.	Restricted seasonings	12	13 (100%)	Increased by 1 respondents
7.	Recommended sources of carbohydrates	11	12 (92.3%)	Increased by 1 respondents
8.	Proper food processing methods	12	13 (100%)	Increased by 1 respondents
9.	Foods high in magnesium	9	11 (84.6%)	Increased by 2 respondents
10.	Foods high in calcium	8	10 (76.9%)	Increased by 2 respondents

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Table 3. Distribution of Changes in Skills Before and After Education Using Catrokies Media

No	Skill Question	Correct Responses (n=13)		Note
		Pre-test	***Post-test***	
1.	Do you consume foods with a form suitable for your chewing ability?	13	13 (100%)	Unchanged
2.	Do you still consume sources of fat more than 20–35% per day?	2	11 (84.6%)	Increased by 9 people
3.	Do you always perform daily activities without assistance from others?	4	6 (46.2%)	Increased by 2 people
4.	In performing daily activities, are you unable to be independent and require help from others?	4	6 (46.2%)	Increased by 2 people
5.	Do you still sneak in consuming salt and seasonings more than 3 grams or ½ tsp per day?	1	12 (92.3%)	Increased by 11 people
6.	Do you limit consumption of savory and salty foods such as salted fish, wadi, tempoyak, and salt?	4	12 (92.3%)	Increased by 8 people
7.	Do you still consume more than 3–4 chicken eggs per week?	1	13 (100%)	Increased by 12 people
8.	Do you often use strong-flavored seasonings or consume foods prepared with strong-flavored seasonings such as chili, pepper, and vinegar?	1	13 (100%)	Increased by 12 people
9.	Do you consume foods prepared only with mild seasonings such as shallots, garlic, and non-spicy herbs?	1	13 (100%)	Increased by 12 people
10.	Have you consistently consumed foods high in potassium, magnesium, calcium, and fiber, and low in sodium and fat?	2	13 (100%)	Increased by 11 people

Table 4. Average Scores of Knowledge, Skills, and Systolic Blood Pressure Before and After Education Using Catrokies Media

Variable	n	Mean	p-Value
Knowledge			
Pre-Test	13	64.5	0.002
Post-Test	13	86.9	
Skills			0.001
Pre-Test	13	20.0	
Post-Test	13	85.3	
Systolic Blood Pressure			0.003
Pre-Test	13	153.2	
Post-Test	13	134.8	

Based on Tables 2 and 3, changes in the improvement of knowledge and skills before and after education using Catrokies media can be observed, while Table 4 shows that the respondents' average knowledge score before education was 64.5, which

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increased to 86.9 after the intervention. The Wilcoxon test results showed a p-value of 0.002, indicating a statistically significant difference between before and after education using Catrokies media. These findings suggest that Catrokies media is effective in improving stroke patients' knowledge. This result is consistent with the studies by Sulviani et al. (2022) and Agustin et al. (2022), which reported significant knowledge improvement through the use of nutrition disc media.

Improvements were also observed in respondents' skills, with the average score before education being 20.0 and increasing to 85.3 after education. The Wilcoxon test yielded a p-value of 0.001, showing a significant difference between before and after education. This finding aligns with the study by Rahayu et al. (2022), which demonstrated a positive effect of educational media on improving respondents' skills.

Before the intervention, most respondents did not understand stroke diet management, including diet principles, recommended and avoided foods, salt intake regulation, and daily activities. After education, there was a significant increase in patients' understanding and skills in applying these aspects. This finding is supported by Rusdi and Rahmy (2021), who stated that nutrition education can encourage behavioral change through the enhancement of practical skills. The use of educational media is proven to be more effective compared to delivering information without media, as it facilitates comprehension of the material (Ramadhanty et al., 2024). Visual media, such as Catrokies, can convey information in a concise, clear, and easily understandable way, thereby supporting the effectiveness of education (Agustin et al., 2023).

Based on Table 4, the respondents' average systolic blood pressure before education was recorded at 153.14 mmHg and decreased to 135.19 mmHg after education. The paired sample t-test showed a p-value of 0.002, indicating a significant difference between before and after education using Catrokies media. This demonstrates that nutrition education through this media is effective in reducing blood pressure in stroke patients.

These findings are in line with the study by Damayanti et al. (2022), which reported the effect of education on blood pressure reduction ($p = 0.023$), and are supported by studies by Moonti et al. (2024) and Dotulong

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& Karouw (2022), which each reported significant reductions post-education (p = 0.000 and on the 7th day of intervention, respectively).

Physiologically, blood pressure is influenced by the volume of blood pumped by the heart and the elasticity of blood vessels (Mardiana et al., 2021). Systolic pressure plays an important role in the risk of heart disease and stroke (Dewi & Agustina, 2023), which are also affected by genetic factors, age, sex, lifestyle, and smoking habits (Tambunan et al., 2021). In addition to education, the use of antihypertensive therapies such as Candesartan, Amlodipine, and Ramipril also contributes to blood pressure reduction when supported by lifestyle and dietary changes according to recommendations (Muslih & Muslimah, 2021).

Table 5. Analysis of the Effectiveness of Education Using Catrokies on Nutrient Intake and ADL of Stroke Patients at RSUD dr. Doris Sylvanus Using ANOVA

Source	Type III Sum of Squares	df	Mean square	f	p-*Value*
Cholesterol (grams) Greenhouse_Geiseer	5454.431	1.24	4395.49	6.316	0.019
Sodium (milligrams) Greenhouse_Geiseer	969413.045	1.29	748964.8	15.799	0.000
ADL (score) Greenhouse_Geiseer	2343.590	1.105	1945.66	10.65	0.004

The Friedman test results showed that nutrition education using Catrokies was effective in improving the quality of PUFA intake (p = 0.000), SFA intake (p = 0.000), and soluble fiber intake (p = 0.000). Catrokies is an interactive visual educational media designed to be engaging, making it easier for patients and their families to understand nutritional information. This visual approach has been proven to help enhance comprehension and the implementation of healthy eating patterns during the recovery process.

These findings are in line with Pratama and Putra (2022), who reported that visual media increases patient engagement in nutrition education programs and adherence to healthy eating patterns. Moreover, visual education encourages patients to be more selective in choosing nutritious foods such as proteins, healthy fats, and fiber, while limiting sodium and saturated fat intake. The success of this media is also influenced by its attractive and easy-to-understand design. Sari et al. (2023) stated that interactive visual educational media can enhance patients'

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motivation to follow nutritional recommendations. Overall, Catrokies-based education is effective in supporting the improvement of nutrient intake quality and helps accelerate the recovery process in stroke patients.

Changes in nutrient intake showed varied results after education. SFA intake tended to increase (Week I: 6.69 g; Week II: 10.38 g; Week III: 14.27 g), possibly because respondents still had difficulty avoiding high-fat foods such as fried foods and coconut milk (Santriwati et al., 2020). Conversely, PUFA intake increased (Week I: 3.29 g; Week II: 3.99 g; Week III: 5.59 g), likely due to increased consumption of fish, nuts, or the use of appropriate cooking techniques (Nurmainah & Zulfita, 2021).

Cholesterol intake decreased (Week I: 85.8 mg; Week II: 74.69 mg; Week III: 57.12 mg), reflecting adherence to a low-cholesterol diet, such as choosing healthier protein sources like lean meat, fish, and legumes (Sari et al., 2021). Soluble fiber intake also increased (Week I: 0.21 g; Week II: 0.52 g; Week III: 0.79 g), indicating success in encouraging consumption of high-fiber foods such as fruits and oats (Sinulingga, 2020).

Sodium intake increased (Week I: 620.1 mg; Week II: 770.49 mg; Week III: 1003.36 mg) but remained within a safe limit. Overall, the increases in SFA and sodium have not shown harmful effects, as they are balanced by increased fiber and reduced cholesterol. PUFA and soluble fiber are known to help maintain vascular health and reduce cholesterol levels (Pratiwi & Lestari, 2022). However, education needs to be repeated and supported by family involvement as well as the provision of healthy menu options to ensure that dietary changes can be maintained in the long term.

The ANOVA results in Table 5 showed a significant difference in ADL scores across the three measurements ($p = 0.004$), indicating the effectiveness of nutrition education using Catrokies media in improving the daily activities of stroke patients. The study demonstrated an increase in the independence of stroke patients after education, as reflected by the rise in average ADL scores from 51.54 to 69.23. This means that respondents' ability to perform daily activities such as eating, dressing, and walking improved. Some respondents were even able to sit and walk independently.

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This improvement was supported by education using Catrokies, which was easily understood by both respondents and their families. Education helped enhance understanding of the importance of nutrition and care during recovery. This aligns with the findings of Pusparini and Hidayati (2023), who stated that structured education can increase patients' motivation in rehabilitation. Each patient's success was influenced by initial physical condition, stroke severity, and family support (Rizkina et al., 2024).

The increase in ADL scores reflects improved patient independence during care. This positive change was supported by better nutrient intake, targeted physical exercises, and family support. Adequate nutrition plays an important role in muscle function recovery (Safitri & Nuraini, 2023), while simple mobilization exercises enhance patients' physical and motor strength (Rahmatiah, 2022). Overall, the improvement in ADL is the result of a comprehensive approach combining nutrition education, physical exercise, and family support, which effectively accelerates stroke patient recovery.

CONCLUSION

Nutrition education using Catrokies media was proven effective (significant) in improving knowledge, skills, blood pressure, nutrient intake, and independence in stroke patients in the Nusa Indah Ward at RSUD dr. Doris Sylvanus.

BIBLIOGRAPHY

Afridon, Gumanti FP. 2022. Hubungan Pengetahuan Dan Sikap Penderita Stroke Dengan Upaya Pencegahan Stroke Berulang Di Poli Neurologi RSUD M.Natsir Solok. *Ensiklopedia of Journal*. 4(2):169–174.

Agustin LR, Simanjuntak BY, Wahyudi A. 2023. Edukasi gizi menggunakan media cakram dalam meningkatkan pengetahuan ibu balita tentang kunjungan ke Posyandu. *Jurnal SAGO Gizi dan Kesehatan*. 5(1):253–258.doi:10.30867/gikes.v5i1.1458.

Citerawati D, Widiastuti D. 2021. Pengembangan Media Edukasi Interaktif untuk Peningkatan Pengetahuan Gizi. *Jurnal Inovasi Pendidikan*, 11(1): 55–63.

Damayanti D, Harahap L, Supriyadi R. 2022. Pengaruh Edukasi terhadap Penurunan Tekanan Darah pada Lansia Hipertensi. *Jurnal Keperawatan Indonesia*, 10(2): 44–52.

DOI 10.20884/1.jgipas.2025.9.2.16794

Darsini, Fahrurrozi, Cahyono EK. 2019. Pengetahuan. *Jurnal Keperawatan*. 12(1):13.

Darsini, Fahrurrozi, Cahyono EK. 2019. Pengetahuan. Jurnal Keperawatan, 12(1): 13.

Dewi FU, Agustina R. 2023. Pengaruh Pemberian "Strokhies" Terhadap Perubahan Tekanan Darah Pasien Stroke Selama Perawatan Di Ruang Nusa Indah RSUD dr. Doris Sylvanus Palangka Raya. *Jurnal Riset Ilmiah*. 2(11):4734–4744.

Dewi NLPT, Wati NMN, Lisnawati K, Mirayanti NKA. 2022. Gambaran Tingkat Atensi Pasien Stroke Pasca Mengalami Serangan Berulang. *Jurnal Ilmiah Keperawatan Stikes Hang Tuah Surabaya*. 17(2):72–76.

Dotulong FX, Karouw BM. 2022. Pengaruh Edukasi Self-Care Management Terhadap Tekanan Darah Pasien Hipertensi. *Watson Journal of Nursing*. 1(1):22–29.

Gultom MD, Sudaryo MK. 2023. Hubungan Hipertensi dengan Kejadian Gagal Ginjal Kronik di RSUD DR. Djasamen Saragih Kota Pematang Siantar Tahun 2020. *Jurnal Epidemiologi Kesehatan Komunitas*. 8(1):40–47.

Hutagalung MH. 2019. *Panduan Lengkap Stroke: Mencegah, Mengobati, dan Menyembuhkan*. Bandung: Penerbit Nusa Media.

Mahmudah U, Sari PS. 2020. Pengaruh Penggunaan Media Cakram Gizi Terhadap Pengetahuan Remaja Mengenai Konsumsi Buah dan Sayur. *Ilmu Gizi Indonesia*. 3(2):155–162.

Mardiana SS, Hidayah N, Asiyah N, Noviani R. 2021. Hubungan Frekuensi Stroke Dan Tekanan Darah Dengan Keparahan Stroke Pada Pasien Stroke Non Hemoragik. Di dalam: *UREC*. hlm. 960–978.

Moonti MA, Heryanto ML, Puspanegara A, Nugraha MD, Alfiani SN. 2024. Pengaruh Edukasi Diet DASH terhadap Penurunan Tekanan Darah pada Penderita Hipertensi. *Journal of Midwifery Care*, 4(2): 96–101.

Muhlis M, Muslimah LI. 2021. Hubungan Kerasionalan Peresepan Obat Antihipertensi Dengan Outcome Klinis Pada Pasien Stroke Iskemik Rawat Inap RSUD Dr. Soegiri Lamongan. *Pharmacon:Jurnal Farmasi Indonesia*. 18(1):47–59.

Murgiati SR, Alim MDM. 2024. Profil Penggunaan Antihipertensi Pada Pasien Stroke Di Rumah Sakit Samarinda Medika Citra. *Pharmamedica Journal*. 9(2):195–202.

Murgiati SR, Alim MDM. 2024. Profil Penggunaan Antihipertensi pada Pasien Stroke. Pharmamedica Journal, 9(2): 195–202.

Pratama R, Putra A. 2022. Efektivitas Media Edukasi Visual terhadap Kepatuhan Pola Makan Sehat pada Pasien Stroke. Jurnal Promosi Kesehatan, 10(1): 57–63.

Pratiwi D, Lestari W. 2022. Asupan Lemak dan Risiko Penyakit Kardiovaskular:

DOI 10.20884/1.jgipas.2025.9.2.16794

Tinjauan Literatur. Jurnal Kesehatan Masyarakat Universitas Muhammadiyah, 10(2): 112–120.

Pusparini M, Hidayati R. 2023. Pengaruh Edukasi terhadap Kemandirian Pasien Stroke. Jurnal Keperawatan Neurologi, 6(2): 144–152.

Puspitasari PN. 2020. Hubungan Hipertensi Terhadap Kejadian Stroke. *Jurnal Ilmiah Kesehatan Sandi Husada*. 12(2):922–926.doi:10.35816/jiskh.v10i2.435.

Rahayu SD, Elvandari M, Fikri AM. 2022. Pengaruh Edukasi Menggunakan Cakram Terhadap Pengetahuan dan Keterampilan Penilaian Status Gizi Oleh Kader. *Jurnal Mutiara Kesehatan Masyarakat*. 7(1):26–32.doi:10.51544/jmkm.v7i1.2931.

Rahmatiah L. 2022. Efektivitas Latihan Mobilisasi Terhadap Fungsi Motorik Pasien Stroke. Jurnal Rehabilitasi Medik, 4(1): 38–45.

Rahmayanti A, Sulastri N, Widyaningsih R. 2023. Efektivitas Media Edukasi Cakram Gizi dalam Meningkatkan Pengetahuan Lansia. Jurnal Gizi dan Pangan Sehat, 5(2): 78–85.

Riondi MA, Kristanti E, The F. 2024. Hubungan Faktor Risiko Dengan Luaran Pasien Stroke Iskemik Di RSUD Dr. H. Chasan Boesoirie. *Cerdika: Jurnal Ilmiah Indonesia*. 4(1):30–38.doi:10.59141/cerdika.v4i1.698.

Rizkina I, Andriani S, Putra W. 2024. Efektivitas Edukasi Visual terhadap Perubahan Perilaku Diet Pasien Stroke. Jurnal Nutrisi Indonesia, 15(1): 22–30.

Rodo C, Susanti D. 2021. Asuhan Keperawatan Stroke Iskemik Dengan Faktor Komplikasi Hipokalemia Di Ruang Cempaka RS Swasta Bekasi Barat Selama Pandemi Covid-19. *Jurnal Mitra Kesehatan*. 4(1):20–23.doi:10.47522/jmk.v4i1.99.

Rusdi FY, Rahmy H. 2021. Pengaruh Edukasi Gizi Menggunakan Instagram Terhadap Perubahan Perilaku Gizi Seimbang Untuk Pencegahan Anemia Pada Remaja Putri Di SMAN 2 Padang. *Journal Of Nutrition College*. 10(2):31–38.

Sabila A, Ahyana, Safuni N. 2022. Gambaran Self-Management Pada Pasien Post Stroke Di Rumah Sakit Provinsi Aceh. *Idea Nursing Journal*. 13(3):38–43.

Safitri NA, Nuraini M. 2023. Hubungan Asupan Gizi dengan Pemulihan Fungsi Otot Pasien Stroke. Jurnal Ilmu Gizi Klinis, 7(1): 55–61.

Sahrani AS, Sukmaningtyas W, Khasanah S. 2023. Asuhan Keperawatan Gangguan Mobilitas Fisik dengan Stroke Non Hemoragik di Wilayah Puskesmas Sumbang Banyumas. *Journal Of Management Nursing*. 2(2):211–215.

Santriwati S, Wahyuni T, Hasibuan N. 2020. Pengaruh Minyak Goreng Berulang terhadap Kadar Lemak Jenuh. Jurnal Gizi & Dietetik Indonesia, 8(1): 12–18.

DOI 10.20884/1.jgipas.2025.9.2.16794

Sapang FAER, Carolina Y, Sampe A, Ganut F. 2021. Efektivitas Perilaku CERDIK dan PATUH Cegah Stroke Berulang. *Jurnal Ilmu Keperawatan Medikal Bedah*. 4(1):1–12.

Sari D, Putri W, Anggraini M. 2023. Efektivitas Media Edukasi Visual Interaktif terhadap Kepatuhan Asupan Gizi pada Pasien Stroke. Jurnal Promosi Kesehatan Indonesia, 9(3): 212–220.

Sinulingga I. 2020. Pengaruh Konsumsi Serat Larut Air terhadap Profil Lipid. Jurnal Gizi Klinik Indonesia, 9(1): 33–41.

Sulistiani RP, Addina RF, Dewi L. 2021. Pengaruh Edukasi Pencegahan Anemia Dengan Metode Kombinasi Ceramah Dan Team Game Tournament Pada Remaja Putri. *Sport and Nutrition Journal*. 3:39–47.

Sulviani S, Kurniasari R, Elvandari M. 2022. Pengaruh Edukasi Gizi Menggunakan Media Cakram Gizi Terhadap Pengetahuan dan Perilaku Konsumsi Buah dan Sayur Pada Remaja. *Jurnal Ilmiah Wahana Pendidikan*. 8(14):308–316.doi:10.5281/zenodo.6994855.

Suryawan B, Dewi N, Lestari H. 2023. Pengaruh Dukungan Keluarga terhadap Kepatuhan Diet Pasien Stroke. Jurnal Keperawatan Medikal Bedah, 11(1): 51–58.

Tambunan FF, Nurmayni, Rahayu PR, Sari P, Sari SI. 2021. *Hipertesi (Si Pembunuh Senyap)*. Harahap RA, editor. Medan: CV. Pusdikra Mitra Jaya.

Tunik. 2023. Kepatuhan Penderita Stroke Yang Mengalami Imobilisasi Terhadap Caregiver DN Tatalaksana Stroke Di Rumah. *Jurnal Inovasi Ris233et Ilmu Kesehatan*. 2(2):134–143.

Wijaya RFH, Wardoyo E, Sugiarto. 2024. AsuhanKeperawatan Pasien Stroke Non Hemoragik (SNH) Dengan Penerapan Latihan Rom Pasif Di RSUDJenderal Ahmad Yani Metro Tahun 2023. *Jurnal Kesehatan Republik Indonesia*. 1(2):32–35.

DOI 10.20884/1.jgipas.2025.9.2.16794