

## Article

# Philosophy of Science Base Theory Orem Self Care of Stroke Patients

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**Abstract:** (1) Background: High blood pressure is one of the symptoms of stroke, the Self Care Deficit theory by Dorothea Orem focuses on a person's ability to care for himself independently so that the ability to maintain his health and well-being is achieved. There are currently 600 million hypertensive patients worldwide, of which 3 million die every year. Uncontrolled high blood pressure can lead to a 7-fold increase in the chances of stroke. The existence of this condition can be minimized in patients through several innovative interventions, one of which is foot massage. This study aims to determine the effectiveness of stretching and foot massage with lavender oil in stabilizing high blood pressure in stroke patients. (2) Methods: The method used in this research is descriptive. The subjects of this case study were selected according to the inclusion and exclusion criteria of the journal Evidence-Based. Subjects included intervention patients and control patients. Foot massage therapy with lavender oil is done 2 times a day for 10-15 minutes using the effleurage technique after showering in the morning and evening. Stretching is done 2 times a day every 10-15 minutes. (3) Results: The results of the analysis showed that there was a change in blood pressure after the application of stretching and foot massage with lavender oil. From the initial examination, the results showed that the blood pressure of 170/100 mmHg decreased to 140/90 mmHg and the pain scale decreased from 4 to 0.

**Keywords:** Stretching; Foot Massage; Lavender Oil; High blood pressure; Stoke; Orem

## 1. Introduction

High blood pressure is one of the symptoms of a stroke. Stroke is a condition in which the brain experiences insufficient or stopped blood supply, which causes nerve cells to die and eventually damages brain tissue. Stroke itself can be triggered by various factors, one of which is high blood pressure (Irwan, 2022).

WHO and the International Society of Hypertension (ISH), currently there are 600 million hypertensive patients worldwide, of which 3 million die every year. WHO estimates that 7 out of 10 patients do not receive adequate treatment and NCDs will cause 73% of deaths and 60% of morbidity globally by 2020 (World Health Organization, 2020). The results of the 2018 Rikesdas show that the prevalence of hypertension in Indonesia itself is 33.7% in rural communities, almost the same as in urban areas of 34.4%. In 2018, the prevalence in East Kalimantan was around 39.30%, especially in Balikpapan, which was around 37.16% (Rikesdas, 2020).

The effects of high blood pressure are a warning to patients, as several studies report that uncontrolled high blood pressure can lead to a 7-fold increase in the chances of stroke, a 6-fold increase in the chances of congestive heart failure, and a 3-fold increase in the chances of a heart attack (Harahap et al., 2022).

The existence of this condition is actually a condition that can be minimized in hypertensive patients through several innovative interventions, one of which is foot massage. Foot massage is the act of applying pressure to the limbs, especially the skin, muscles and blood vessels, using certain techniques or methods. This method is considered to provide taste, increase circulation, reduce anxiety and lower blood pressure. The oil or lotion used usually contains several benefits depending on one's needs, and among the many oils in this innovative intervention, the focus is more on lavender oil.

This Self Care Deficit theory reveals the client's inability, in this case the elderly, to take care of themselves. In cases of dependence or inability or limitation in performing effective self-care, nursing care will be provided. In this theory, Orem revealed that there are five methods that can be used to help self-care, namely: (1) Actions to or do for others, (2) Provide guidance and direction, (3) Provide physical and psychological support, (4) Provide and maintain an environment that supports personal development, (5) Education (Yip, 2021).

From the results of a journal study conducted by (Ashar 2018) it can be concluded that the effect of lowering blood pressure is better in the rose aromatherapy intervention group (*Rosa Centifolia*) and the lavender aromatherapy intervention group (*Lavendula Augustfolia*). And lavender (*Lavendula Augustfolia*) aromatherapy has higher blood pressure lowering effect, bigger effect. blood pressure. Lowers blood pressure more effectively. Aromatherapy mainly contains linalool and linalool acetate, the content is about 30-60% of the total weight of essential oils, of which linalool is the main active ingredient, which has a relaxing effect and lowers blood pressure.

The content of lavender oil or lavender essential oil is bright yellow, with a lavender odor, specific gravity 0.876-0.892, and refractive index 1.458-1.464. Lavender essential oil contains linalyl acetate (40.76%), linalool (24.60%), cis-beta basilene (4.85%), -caryophyllene (4.40%), lavender acetate (3.83%), trans-basilene (3.64%), terpinene-4-ol (3.57%), 1.8 cineole (0.71), lavender (0.71%) and camphor (0.30%) (Lansida, 2017).

In nursing, Orem's Theory of Self-Care is widely used to provide care as well as guide practice and build knowledge of self-care through research. Orem describes self-care as an ongoing action required and performed by adults to maintain life, health and well-being (Khatiban et al., 2018). So it is hoped that it can be applied to post-stroke patients in this nursing home.

Based on the analysis of the situation at the Bhakti Abadi Nursing Home in Balikpapan, there are 20 beds for 15 elderly people. There are 3 elderly with total care needs, 3 elderly with partial care care, and 9 elderly with minimal care care. 4 out of 15 seniors have a stroke, either the first or the second, 2 of them have hypertension. This study aims to determine the effectiveness of stretching and foot massage with lavender oil in stabilizing high blood pressure in stroke patients.

## 2. Materials and Methods

The method used in this research is descriptive. A descriptive approach to explaining the nursing process, focusing on a key issue in nursing, high blood pressure in stroke patients. The subjects of this case study were two stroke patients who were selected according to the inclusion and exclusion criteria from the journal Evidence-Based Nursing. The inclusion criteria for this case study were post-stroke patients with a history of hypertension. The exclusion criteria was the presence of instability in reducing hypertension.

The case study was conducted at the Bhakti Abadi Nursing Home in Balikpapan from June 1 to June 3, 2022. The subjects included intervention patients and control patients. Intervention patients received innovative intervention treatment, lavender oil foot massage and physical exercise fulfillment while control patients did not receive treatment. Foot massage therapy with lavender oil is done 2 times a day for 10-15 minutes using the effleurage technique after showering in the morning and evening. Physical exercise is done 2 times a day every 10-15 minutes, to get the expected results.

### 3. Results

The implementation of the innovative intervention took place from June 1 to June 3, 2022. Researchers conducted an innovative intervention in the form of “massage therapy” in interventional patients as a therapy to fulfill activity needs and control to stabilize blood pressure. Researchers conducted an innovative intervention in the form of foot massage using lavender oil on intervention patients to control and stabilize blood pressure, in accordance with the theory of self-care independently, namely self-care from Orem.

**Table 1.** Evaluation Results of Foot Massage Innovation Intervention with Lavender Oil.

Date	Patient Intervention		Control Patient	
	Before	After	Before	After
1 June 2022	<ul style="list-style-type: none"> <li>- Pain scale 4</li> <li>- Continuous pain</li> <li>- Pain like spinning</li> <li>- On examination of vital signs, the results are obtained</li> <li>-TD: 170/100mmHg,</li> <li>- Pulse: 81x/minute,</li> <li>- RR: 21x/minute,</li> <li>- S: 36.7°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain is still on a 4 scale</li> <li>- Pain is still continuous</li> <li>- Pain is still spinning</li> <li>-On examination of vital signs, results are obtained</li> <li>-TD: 170/100mmHg,</li> <li>- Pulse: 80x/minute,</li> <li>- RR: 20x/minute,</li> <li>- S: 36.3°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain scale 4 - Continuous pain, Pain like spinning</li> <li>- On examination of vital signs, the result is BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain scale 4 - Continuous pain, Pain like spinning</li> <li>- On examination of vital signs, the result is BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.</li> </ul>
2 June 2022	<ul style="list-style-type: none"> <li>- Pain scale 4</li> <li>- Continuous pain</li> <li>- Pain like spinning</li> <li>- On examination of vital signs, the results are obtained</li> <li>-TD: 170/100mmHg,</li> <li>- Pulse: 81x/minute,</li> <li>- RR: 21x/minute,</li> <li>- S: 36.7°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain has scaled 2</li> <li>- Continuous pain is quite reduced</li> <li>- Pain like spinning is quite reduced</li> <li>- on tv inspection results get</li> <li>-TD: 160/100mmHg,</li> <li>- Pulse: 79x/minute,</li> <li>- RR: 20x/minute,</li> <li>- S: 36.5°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain scale 4 - Continuous pain, Pain like spinning</li> <li>- On examination of vital signs, the result is BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain scale 4 - Continuous pain, Pain like spinning</li> <li>- On examination of vital signs, blood pressure: 160/100mmHg, pulse: 80x/minute, RR: 19x/minute, S: 36.2°C.</li> </ul>
3 June 2022	<ul style="list-style-type: none"> <li>- Pain has scaled 2</li> <li>- Continuous pain is quite reduced</li> <li>- Pain like spinning is quite reduced</li> <li>- On examination of vital signs, the results are obtained</li> <li>-TD: 160/100mmHg,</li> <li>- Pulse: 79x/minute,</li> <li>- RR: 20x/minute,</li> <li>- S: 36.5°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain has been scaled 0</li> <li>- Continuous pain decreases</li> <li>- Pain like spinning is reduced</li> <li>- On examination of vital signs, the results are obtained</li> <li>-TD: 150/90mmHg,</li> <li>- Pulse: 97x/minute,</li> <li>- RR: 21x/minute,</li> <li>- S: 36.1°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain scale 4 - Continuous pain, Pain like spinning</li> <li>- On examination of vital signs, the result is BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.</li> </ul>	<ul style="list-style-type: none"> <li>- Pain is still on a scale of 3</li> <li>- Continuous pain, Pain like spinning</li> <li>- On examination of vital signs, blood pressure: 150/100mmHg, pulse: 80 x/minute, RR: 22x/minute, S: 36.4°C.</li> </ul>

Based on the analysis of the application of the innovation intervention for 3 days which was obtained after the application of the innovation intervention of stretching and foot massage using lavender oil in the intervention patients, it was found that the results of a significant decrease in blood pressure from the initial blood pressure of 170/100mmhg after the application of the intervention to 150/90mmhg , with several accompanying complaints such as dizziness, blurred eyes, difficulty focusing, irregular heartbeat, pale skin, all complaints improved after the implementation of the 3rd day with the application of the innovation intervention that had been given. the innovative intervention of stretching and foot massage using lavender oil in interventional patients resulted in a significant

decrease in blood pressure from the initial blood pressure of 170/100mmhg after the application of the intervention to 150/90mmhg, with some accompanying complaints such as dizziness, blurred vision, ur difficult to focus, irregular heartbeat, pale skin, all complaints improved after the 3rd day of implementation with the application of the innovation intervention that had been given.

Table 2. Comparison of the results of the innovation intervention in managed patients with the fulfillment of the need for stretching physical exercise

Date	Patient Intervention		Control Patient	
	Before	After	Before	After
1 June 2022	-TD: 170/100mmHg, -Nadi: 81x/menit, -RR:21x/menit, - S: 36,7°C.	-TD: 170/100mmHg, -Nadi:81x/menit, -RR:21x/menit, - S: 36,7°C.	On examination of vital signs, the result was BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.	On examination of vital signs, the result was BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.
2 June 2022	-TD: 170/100mmHg, - Nadi: 81x/menit, - RR: 21x/menit, - S: 36,7°C.	-TD: 160/100mmHg, -Nadi: 79x/menit, - RR: 20x/menit, - S: 36,5°C.	On examination of vital signs, the results were BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.	On examination of vital signs, the result is BP: 160/100mmHg, pulse: 80x/minute, RR: 19x/minute, S: 36.2°C.
3 June 2022	-TD: 160/100mmHg, - Nadi: 79x/menit, - RR: 20x/menit, - S: 36,5°C.	TD: 150/90mmHg, -Nadi: 97x/menit, - RR: 21x/menit, - S: 36,1°C.	On examination of vital signs, the result was BP: 160/100mmHg, pulse: 81x/minute, RR: 21x/minute, S: 36.0°C.	On examination of vital signs, the results were BP: 150/100mmHg, pulse: 97 x/minute, RR: 20x/minute, S: 36.1°C.

From the results of the application of the usual intervention in control patients, the results were very slight changes from the results of blood pressure 160/100mmhg after the usual intervention got results that were not much different from before, namely 155/100mmhg, with some accompanying complaints that did not change. Repeated for 30 seconds for the next 6 weeks, this exercise elicited physical responses including an increase in VO<sub>2</sub>max, endothelial function, cardiorespiratory function, metabolism, and lipoproteins. According to research conducted (Bahmanbeglou et al., 2019) High Intensity Interval Training (HIIT) as an effective exercise, this type of exercise not only improves cardiorespiratory fitness but also prevents and improves lifestyle related diseases such as coronary heart disease, arterial disease, obesity and high blood pressure.

From the results of research conducted in Hong Kong on asthmatic patients, the results obtained from the application of this self-care theory where individuals can follow directions from nurses for first aid in self-care even though they cannot completely escape from the nurses (Knekta et al., 2019). The results of research conducted in Iran show that the application of self-care based on Orem's theory in hypertensive patients shows a very good effect (Khademian et al., 2020).

#### 4. Discussion

There are three self-care that Orem put forward, namely universal, developmental, and health deviations. Self-care is applied to all human beings and is associated with life processes and their general well-being (Orem, 1991, p. 125). Orem focuses nursing on identifying self-care needs, designing methods and actions to meet needs, and "the totality of needs for self-care measures" (Orem, 1985, p. 88). Self-care givers, whether self or others, are called "self-care agents". It is an entity that is influenced by several factors and genetic, cultural, and experiential backgrounds, and in terms of adequacy. The latter can be evaluated by considering self-care abilities and needs (Orem, 1987).

Self-care needs are needed in accordance with the problem conditions that are often found in patients in nursing homes. For example, problems with stroke, malnutrition, self-

care deficit, and pain. Nurses need to find the source of the problem and try to solve the cause to overcome the problem (Younas & Quennell, 2019).

Stroke is a condition that occurs when the blood supply to the brain is interrupted or reduced due to a blockage (ischemic stroke) or rupture of a blood vessel (hemorrhagic stroke). Without blood, the brain cannot get oxygen and nutrients, so cells in certain areas of the brain die. This condition causes the body parts controlled by the damaged area of the brain to not function properly. Most stroke patients experience high blood pressure for the first time. High blood pressure can damage arteries throughout the body, creating conditions that make them more likely to burst or become blocked. Weakened arteries in the brain caused by high blood pressure can put a person at a higher risk of stroke. This is why controlling high blood pressure is so important to reduce the chances of stroke (Harahap et al., 2022).

Acute pain is a top priority, judging from the results of the assessment of subjective and objective data obtained, subjective data of intervention patients who say frequent dizziness, back pain, throbbing pain, confusion, tiredness, pale skin, excessive sweating, strong but irregular pulse, anxiety, The client also reports blurry eyes, grade 4 pain based on the client's objective data, persistent pain, spinning pain, blood pressure when checking vital signs: 170/100 mmHg, pulse: 81x/minute, RR: 21x/min, S: 36.7° C.

In the evaluation of the control patients, subjective data were obtained, with the client reporting back and neck pain, dizziness, and the patient reporting weakness in the left hand and leg. The client said he did weak activity. The client also said that the eyes were blurry, and the objective data obtained were BP: 160/90 mmHg.

This can be adapted from research conducted (Afrianti, 2021) entitled "Foot Reflexology Aromatherapy in Lowering Blood Pressure in Hypertensive Elderly". The results showed that the application of aromatherapy foot reflexology showed a change/decrease in blood pressure in both subjects, from 158/90mmHg to 140/88mmHg in Subject I and from 140/88mmHg in Subject II. 140/100mmHg reduced to 138/100mmHg.

Backed by research (Resmiari et al., 2021) entitled "Therapeutic Foot Massage Procedure Using Lavender Essential Oil for Hypertensive Patients" and the results obtained with foot massage with essential oils also support this claim. Lavender 15-20 minutes 2 x 1 day. Even though the nursing problem is the same, the end result is different. After 3 days of intervention, Mr. D From 150/90mmHg to 120/80mmHg, pain scale from 4 to 0. Whereas in Mr.S from 170/100mmHg to 150/90mmHg, the pain rating is 5 to 1. Mr.D experienced a more optimal decrease in blood pressure than Mr. . S due to conventional treatment.

## 5. Conclusions

Orem views humans in two categories, namely those who need self-care (patients in nursing homes) and agents who provide self-care. Nursing agents are not only limited to nurses, but also families or other people who can provide health care for the elderly. Healthy conditions can be achieved if the needs of self-care for the elderly are met. To fulfill this, a strategy is needed considering the unique condition of the elderly, the many needs for self-care, and the lack of a support system for the elderly, especially those in nursing homes. Murray's research (1996, in Stone, 2002) shows that the majority of the elderly are unable to protect themselves. They are also frustrated by negative reactions from other people. This reflects the need for nurses who provide holistic care and are sensitive to their needs in a competent manner.

Clinically this study showed good results in intervention patients, innovative interventions for acute pain treatment problems caused by hypertension, can be controlled with innovative intervention therapy stretching and foot massage with lavender oil, given 3 days of treatment, the results are as expected, pressure test results decreased blood pres-



sure and exercise needs were met in hypertensive patients. This shows that there is effectiveness in the innovative intervention of stretching and foot massage with lavender oil in stabilizing blood pressure in stroke patients.

As with other problems, the most ideal intervention is primary prevention, in this case the elderly. A long-term goal should still be directed toward providing the elderly with tools to become self-motivated and self-sufficient in maintaining their health and protection. Prevention is the most efficient way to help the elderly and the focus should be on correcting the cause. Community nurses have a significant role in the elderly, especially in nursing homes. Through partnership mobilization and community planning and political activities, community nurses help the elderly and their families in nursing homes achieve self-sufficiency. Collaborative efforts between multidisciplinary health teams and communities that assist the elderly in developing population-specific interventions (Tok Yildiz & Kaşıkçı, 2020).

## References

- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).
- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No TitleHipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).
- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. *NEM*.
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.
- Mengenal Konsep Teori Self Care Dari Orem – Gustinerz.com. (n.d.). Retrieved September 27, 2022, from <https://gustinerz.com/mengenal-konsep-teori-self-care-dari-orem/>
- Resmiari, R., Handayani, N., Violita, V., & Suciyatiningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).
- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No TitleHipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).
- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. *NEM*.
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.
- Resmiari, R., Handayani, N., Violita, V., & Suciyatiningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Yip, J. Y. C. (2021). Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory. *SAGE Open Nursing*, 7, 23779608211011990. <https://doi.org/10.1177/23779608211011993>
- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).
- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No TitleHipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).

- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. NEM.
- Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. *CBE Life Sciences Education*, 18(1). <https://doi.org/10.1187/CBE.18-04-0064>
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.
- Resmiari, R., Handayani, N., Violita, V., & Suciyatiningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Yip, J. Y. C. (2021). Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory. *SAGE Open Nursing*, 7, 23779608211011990. <https://doi.org/10.1177/23779608211011993>
- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).
- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No TitleHipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).
- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. NEM.
- Khademian, Z., Kazemi Ara, F., & Gholamzadeh, S. (2020). The effect of self care education based on orem's nursing theory on quality of life and self-efficacy in patients with hypertension: A quasi-experimental study. *International Journal of Community Based Nursing and Midwifery*, 8(2), 140–149. <https://doi.org/10.30476/IJCBNM.2020.81690.0>
- Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. *CBE Life Sciences Education*, 18(1). <https://doi.org/10.1187/CBE.18-04-0064>
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.
- Resmiari, R., Handayani, N., Violita, V., & Suciyatiningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Yip, J. Y. C. (2021). Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory. *SAGE Open Nursing*, 7, 23779608211011990. <https://doi.org/10.1177/23779608211011993>
- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).
- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No TitleHipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).
- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. NEM.
- Khademian, Z., Kazemi Ara, F., & Gholamzadeh, S. (2020). The effect of self care education based on orem's nursing theory on quality of life and self-efficacy in patients with hypertension: A quasi-experimental study. *International Journal of Community Based Nursing and Midwifery*, 8(2), 140–149. <https://doi.org/10.30476/IJCBNM.2020.81690.0>
- Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. *CBE Life Sciences Education*, 18(1). <https://doi.org/10.1187/CBE.18-04-0064>
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.
- Resmiari, R., Handayani, N., Violita, V., & Suciyatiningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Yip, J. Y. C. (2021). Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory. *SAGE Open Nursing*, 7, 23779608211011990. <https://doi.org/10.1177/23779608211011993>
- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).

- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No Title Hipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).
- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. *NEM*.
- Khademian, Z., Kazemi Ara, F., & Gholamzadeh, S. (2020). The effect of self care education based on orem's nursing theory on quality of life and self-efficacy in patients with hypertension: A quasi-experimental study. *International Journal of Community Based Nursing and Midwifery*, 8(2), 140–149. <https://doi.org/10.30476/IJCBNM.2020.81690.0>
- Khatiban, M., Shirani, F., Oshvandi, K., Soltanian, A. R., & Ebrahimian, R. (2018). Orem's Self-Care Model With Trauma Patients: A Quasi-Experimental Study. *Nursing Science Quarterly*, 31(3), 272–278. <https://doi.org/10.1177/0894318418774876>
- Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. *CBE Life Sciences Education*, 18(1). <https://doi.org/10.1187/CBE.18-04-0064>
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.
- Resmiari, R., Handayani, N., Violita, V., & Suciyaningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Yip, J. Y. C. (2021). Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory. *SAGE Open Nursing*, 7, 23779608211011990. <https://doi.org/10.1177/23779608211011993>
- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).
- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No Title Hipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).
- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. *NEM*.
- Khademian, Z., Kazemi Ara, F., & Gholamzadeh, S. (2020). The effect of self care education based on orem's nursing theory on quality of life and self-efficacy in patients with hypertension: A quasi-experimental study. *International Journal of Community Based Nursing and Midwifery*, 8(2), 140–149. <https://doi.org/10.30476/IJCBNM.2020.81690.0>
- Khatiban, M., Shirani, F., Oshvandi, K., Soltanian, A. R., & Ebrahimian, R. (2018). Orem's Self-Care Model With Trauma Patients: A Quasi-Experimental Study. *Nursing Science Quarterly*, 31(3), 272–278. <https://doi.org/10.1177/0894318418774876>
- Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. *CBE Life Sciences Education*, 18(1). <https://doi.org/10.1187/CBE.18-04-0064>
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.
- Resmiari, R., Handayani, N., Violita, V., & Suciyaningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Yip, J. Y. C. (2021). Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory. *SAGE Open Nursing*, 7, 23779608211011990. <https://doi.org/10.1177/23779608211011993>
- Younas, A., & Quennell, S. (2019). Usefulness of nursing theory-guided practice: an integrative review. *Scandinavian Journal of Caring Sciences*, 33(3), 540–555. <https://doi.org/10.1111/scs.12670>
- Afrianti, N. (2021). PENERAPAN PIJAT REFLEKSI AROMATERAPI DALAM MENURUNKAN TEKANAN DARAH PADA LANSIA DENGAN HIPERTENSI. *Jurnal Keperawatan AKIMBA*, 5(2).
- Bahmanbeglou, A., Neda, Ebrahim, K., Maleki, M., Nikpajouh, A., & Ahmadizad, S. (2019). Short-Duration High-Intensity Interval Exercise Training Is More Effective Than Long Duration for Blood Pressure and Arterial Stiffness but Not for Inflammatory Markers and Lipid Profiles in Patients with Stage 1 Hypertension. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1).
- Harahap, H. S., Hunaifi, I., Gunawan, S. E., Putri, S. A., Susilawati, N. N. A., & Kholida, B. H. (2022). No Title Hipertensi Sebagai Determinan Utama untuk Peningkatan Risiko Stroke pada Populasi Penduduk di Daerah Pesisir. *Jurnal Kedokteran*, 11(1).
- Irwan, M. (2022). Partisipasi Keluarga dalam Perawatan Pasien Stroke. *NEM*.
- Khademian, Z., Kazemi Ara, F., & Gholamzadeh, S. (2020). The effect of self care education based on orem's nursing theory on quality of life and self-efficacy in patients with hypertension: A quasi-experimental study. *International Journal of Community Based Nursing and Midwifery*, 8(2), 140–149. <https://doi.org/10.30476/IJCBNM.2020.81690.0>
- Khatiban, M., Shirani, F., Oshvandi, K., Soltanian, A. R., & Ebrahimian, R. (2018). Orem's Self-Care Model With Trauma Patients: A Quasi-Experimental Study. *Nursing Science Quarterly*, 31(3), 272–278. <https://doi.org/10.1177/0894318418774876>
- Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. *CBE Life Sciences Education*, 18(1). <https://doi.org/10.1187/CBE.18-04-0064>
- Lansida. (2017). Certificate of Analysis Lavender Essential Oil.



- 
- Resmiari, R., Handayani, N., Violita, V., & Suciyaningrum, R. (2021). Application of Foot Massage Therapy Procedures Using Lavender Essential Oil on Clients With Hypertension in RT 001 RW 01 Baru Village, Pasar Rebo District, East Jakarta. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 11(03).
- Riskesdas. (2020). Infodatin stroke dont be the one. Pusdatin Kemkes.
- Tok Yildiz, F., & Kaşıkçı, M. (2020). Impact of Training Based on Orem's Theory on Self-Care Agency and Quality of Life in Patients with Coronary Artery Disease. *Journal of Nursing Research*, 28(6). <https://doi.org/10.1097/JNR.0000000000000406>
- Yip, J. Y. C. (2021). Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory. *SAGE Open Nursing*, 7, 23779608211011990. <https://doi.org/10.1177/23779608211011993>
- Younas, A., & Quennell, S. (2019). Usefulness of nursing theory-guided practice: an integrative review. *Scandinavian Journal of Caring Sciences*, 33(3), 540–555. <https://doi.org/10.1111/scs.12670>