International Journal of Health, Economics, and Social Sciences (IJHESS)
Vol. 8, No. 3, 2026, pp. 1969~1984
DOI: 10.56338/ijhess.v8i3.10038
Website: https://jurnal.unismuhpalu.ac.id/index.php/IJHESS

Analysis of the Application of Autogenic Relaxation to Pain Management in Hypertension Patients at Royal Prima Medan Hospital in 2026

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Article Info

Article history:

Received 17 Mar, 2026
Revised 19 May, 2026
Accepted 28 May, 2026

Keywords:

Hypertension, Autogenic Relaxation, Pain Management, Nursing Care, Acute Pain

ABSTRACT

Hypertension is one of the non-communicable diseases that occurs in the community and can cause various serious complications such as stroke, heart disease, and kidney disorders. One of the complaints that hypertension patients often experience is headache in the nape of the neck due to increased blood pressure. Pain management is not only done pharmacologically, but can also use nonpharmacological therapies such as autogenic relaxation techniques. This study aims to analyze the application of the provision of autogenic relaxation to pain management in hypertension patients at Royal Prima Hospital Medan in 2026.

The results showed a decrease in pain levels and blood pressure after autogenic relaxation therapy. On the first day, the patient's blood pressure was 170/90 mmHg with a pain scale of 5, then decreased on the third day to 130/80 mmHg with a pain scale 2. Patients also appear to be more relaxed, less restless, and able to rest better. Final evaluation showed nursing problems of acute pain, activity intolerance, and anxiety could be resolved.

The conclusions of this study show that autogenic relaxation techniques are effective in helping to lower headaches and blood pressure in hypertensive patients. This technique can be used as a non-pharmacological supportive therapy in providing nursing care to hypertensive patients.

INTRODUCTION

Health is one of the most important human needs, because every human has the right to have health. In fact, not everyone can have an optimal degree of health due to various problems, including a bad environment, low socio-economy, and unhealthy lifestyles ranging from food, habits, and the surrounding environment. (Sufa, Christantyawati, & Jusnita, 2017). An increase in blood pressure over a long period of time can lead to complications such as damage to the kidneys, coronary heart and brain. Complications of hypertension can cause about 9.4% of deaths worldwide each year.

Hypertension causes at least 45% of deaths from heart disease and 51% of deaths from stroke. (Dwie & Yuni, 2018) According to the Ministry of Health. RI, 2019 hypertension or high blood pressure is an increase in

systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg at two measurements with an interval of five minutes in a moderately rested/calm state. *The World Health Organization* (WHO) estimates that the current global prevalence of hypertension is 22% of the world's total population. The prevalence of hypertension is highest in Africa at 27%. Southeast Asia ranks 3rd highest with a prevalence of 25% of the total population (Ministry of Health of the Republic of Indonesia, 2019).

According to the results of the 2018 Basic Health Research (Riskesdas), the prevalence rate of hypertension in the population in Indonesia is 34.1%. The prevalence is obtained by measuring blood pressure, namely if blood pressure is >140/90 mmHg. This prevalence figure is higher than in 2018 which was 26.5%. Aceh Province. North Sumatra has the highest prevalence rate of 29.2%. West Sumatra 25.2%. Riau 29.1%. Jambi 29.0% and followed by South Sumatra at 30.4% and for Bengkulu province 28.1% including the prevalence of the top 7 in the Sumatra region.

The incidence of hypertension at Rejang Lebong Hospital in 2018 was 163 cases, in 2019 there were 108 cases, and in 2020 there were 830 cases. In 2021 there was a decrease in hypertension cases by 30 cases (2023 Rejang Lebong Hospital Medical Sub Record). The impact of increased blood pressure over a long period of time can lead to complications such as damage to the kidneys, coronary heart and brain. Complications of hypertension can cause about 9.4% of deaths worldwide each year. Hypertension causes at least 45% of deaths from heart disease and 51% of deaths from stroke. (Dwie Kuniasih and Yuni Astuti, 2018)

The problems arising from the data above are illustrated that hypertension is a disease that is widely suffered in the community, which can result in quite complex health problems, one of which is the common complaint, the client will experience headaches experienced by the hypertensive client such as dizziness and the neck area feels heavy. (Dwie Kuniasih and Yuni Astuti, 2018) Pain is an unpleasant feeling that is very subjective because the feeling of pain is different for each person in scale or level. The pain results in not being able to do activities and clients feel uncomfortable and not all clients can overcome headache problems independently, so they require professional help from nursing staff.

Medical management that can be provided is in the form of oxygen therapy, hemodynamic monitoring, cardiac monitoring, and hypertension drug options. In people with hypertension, they must take blood pressure-lowering drugs in the long term or for life, the doctor can lower the dose or stop the treatment if the patient's blood pressure is under control through lifestyle changes. Some types of drugs used to treat such as indapamide, amlodipine, nifedipine, captopril. Meanwhile, nursing management that can be given to reduce pain is one of them, autogenic relaxation techniques.

One of the strategies that nurses can do to overcome pain in a non-pharmacological way is autogenic relaxation therapy (Erika, 2018). Autogenic relaxation techniques are one of the relaxation techniques that come from oneself in the form of short words or sentences or thoughts that can make peace. Autogenic techniques are performed by imagining oneself being in a peaceful and calm state, focusing on the regulation of breath and heart rate. Autogenic relaxation helps individuals to control several bodily functions, including: heart rate, blood flow, and blood pressure (Sariman, 2022). Based on research conducted by Sariman (2022), it was found that there was an effect of autogenic relaxation therapy to reduce blood pressure and headache in hypertension patients carried out at the fish market health center in Bengkulu city.

In 2018, Erika conducted research at the rainbow elderly posyandu prada kali kendal Rt 4 Surabaya who suffers from hypertension, autogenic relaxation techniques faster to provide changes in blood pressure because it puts more pressure on the mental or psychological state in its implementation, bringing respondents to a relaxed mood (Erika, 2018). Based on the results of a survey conducted at Curup hospital, the action of autogenic relaxation techniques to reduce pain levels in hypertensive patients has been done before and can help reduce pain levels in Hypertension patients. Nurses are expected to provide health education to hypertension patients by introducing autogenic relaxation techniques, one of which is to reduce pain levels, so that patients can apply independently at home.

One of the efforts made to handle these cases is by carrying out Nursing Care for hypertensive patients provided comprehensively through the process of nursing approaches in the form of assessment, problem determination, diagnosis, intervention, implementation and evaluation (Nurarif, 2015). Based on the above background, the author is interested in implementing Nursing Care for Hypertensive Patients through the process of study, intervention, implementation, especially the application of autogenic relaxation techniques, and comprehensive evaluation in the Melati Inpatient Room of Rejang Lebong Hospital in 2023.

CASE STUDY
Nursing Assessment
Biodata

a. Patient Identity

Name	: T.N T
Gender	: Male
Age	: 60 Years
Marital Status	: Married
Religion	: Islam
Education	: High School Equivalent
Jobs	: Farmer
Address	: Jalan Pabrik Tenun, Gg Solo No. 02
Hospital Admission Date	: Sunday, May 10, 2026
No Register	: 105576
Room/Room	: 11B Floor (1103)
Blood Type	A Letter to the Editor
Date of Assessment	: Monday, May 11, 2026
Date of Operation	: No Operation action
Medical Diagnostics	: Hypertension

a. Person in Charge

Name	: N.Y. P
Patient Relations	: The Patient's Wife
Jobs	: Housewives
Address	: Jalan Pabrik Tenun, Gg Solo No. 02

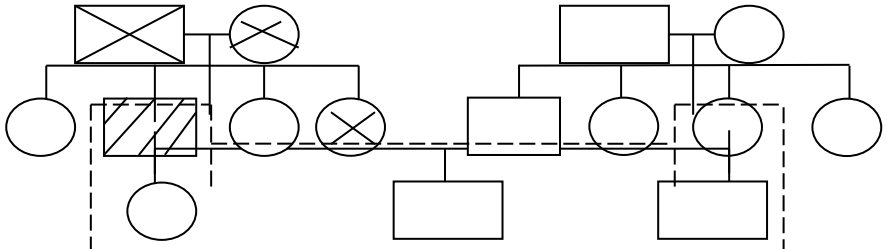
1. **Main Complaints**
The client was escorted to the emergency room at 14.00 WIB with complaints for approximately a week the client had a headache in the back (nape of the neck) the client felt that his body was weak so the client was assisted by his wife, then the client entered the room on the 11B floor at 09.00 WIB

2. **Current Medical History**
At the time of the assessment on May 11, 2026, the client said that currently the client still has a headache in the back (nape of the neck) the pain disappeared, the client said he was worried about the illness he suffered, and his body felt weak, the client looked pale, the client grimaced and looked agitated, the client felt cold.

3. **Chronological Complaints**
Triggering factors: Hypertension
Complaints : 3 days ago
Duration : 3 days
Coping efforts : The client's family said they did not know of any efforts to overcome it so the client was taken to Royal Prima Medan Hospital

4. **Past medical history**
1). History of allergies : None
2). Accident history : None
3). History of treatment : None
4). Operation history : None
5). History of drug use: The client's family said they usually take hypertension medication but not regularly
6). Smoking history: the client used to be a smoker but has been smoking for 3 years

1. Family Health History (Genogram and Description)



Description:

Male Male = Marriage Line

= Women = Lineage

= Clients = Household Line

= Died

2. Illness that has been suffered : Hypertension for approximately 2 years

3. Psychosocial and Spiritual History

a. Communication patterns : Clients say interact well with family and others
b. Decision making : Clients and families deliberate with each other in decision-making
c. Community activities : Clients socialize with people around them
d. Impact of the patient's disease : Client cannot perform activities as usual
e. Patient's perception of his disease
   a). Very thoughtful thing: The client is worried about the illness he is suffering from
   b). Hope to have undergone : Client hopes to recover quickly and return home quickly
f. Belief system: Clients often pray 5 times clients and family always pray and trust in Allah swt that her husband's illness will be cured
   1. Values Embraced : Islam
   2. Religious Activities : Prayer and reciting

Table 1. Patterns of Daily Habits

Yes	What is studied	Before illness	When sick
1.	Nutritional patterns: 1. Frequency of meals 3x/day 2. Appetite good/not 3. Portion of meals consumed	3 Times (rice and side dishes) Good 1 serving	1 (Rice and Side dishes) are not good 1/4 serving

	4. Undesirable foods 5. Foods that make you allergic 6. Taboo foods 7. Use of medications before meals 8. Use of assistive devices	None None None None None None	None No Foods Low Salt Low Cholesterol High Fiber None None
2.	BAK elimination pattern a) Frequency b) Color c) use of bowel movements a) Frequency b) Time c) Consistency	4 times Clear Yellow None 1 time in the morning Soft	2 x Clear Yellow None Client has not defected
3.	Personal hygiene 1. Shower a. Frequency b. Time 2. Oral hygiene	2 times in the morning and evening	Client's body and face cleaned by family Morning
	a. Frequency b. Time 3. Hair washing a. Frequency b. Time	2 times Morning and evening 2 Morning and Evening Times	1 time in the morning Client does not wash hair

4.	Rest and sleep patterns 1. Long nap 2. long night's sleep 3. Habits before bed	 1-2 a.m. 6-8 hours Watching tv	 None 4-6 hours None
5.	Habits that affect health 1. Smoking 2. liquor	No smoking No	None None

Pain assessment

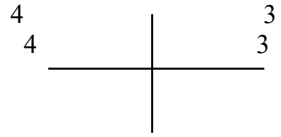
P : the presence of high blood pressure
Q : As pressed
R : head back (nape of the neck)
S 5
T : Lost arises

9. Physical Examination

1. General physical examination
   a. General conditions : Client complains of weakness
   b. Level of awareness : composmentis
   c. Glasgow Coma Scale :15
   d. Weight : 68 kg
   e. Height : 167 cm
   f. Blood pressure : 170/100 mmHg
   g. Pulse : 115x/min
   h. Frequency of breaths : 22x/min
   i. Body temperature : 36.5 °C
2. Vision system
   a. Eye position : Symmetrical eyes between left and right
   b. Eyelids : There is no edema on the eyelids
   c. Eyeball movement : Good
   d. Conjunctiva : Anemis
   e. Sclera : Anikterik
   f. Pupil : Isokor
   g. Vision function : Client says his vision has started to run away
   h. Wearing glasses : Patient wears glasses
   i. Contact lens wear: None
3. Auditory system
   a. Ears./Earlobes : Symmetrical, no lesions
   b. Middle ear condition : Clean ears, and no infection
   c. Fluid from the ear : No fluid from the ear
   d. Hearing function : Good
   e. Balance disorder : No balance disorder
   f. Wearing aids : No hearing aids
4. Respiratory system
   a. Breath path : No secretion or sputum
   b. Use of auxiliary muscles : None
   c. Frequency : 22 x/m
   d. Rhythm : Regular

e. Cough : No cough
f. Sputum : No sputum
g. There is blood : No blood
h. Breath sound : Vesicles

5. Cardiovascular system
   a. Venus jungularis : There is an elevation of the jugular vein
   b. Skin tone : A Variety of Genres
   c. Edema : No edema
   d. Capillary Refill Time : ≥ 3 seconds
6. Digestive system
   a. Oral condition : Clean teeth, no use of dentures
   b. Lip mucosa : Humid
   c. Abdomen : No surgical wounds
7. Central nervous system
   Headache complaint: The family said the client had a headache on a pain scale 5, it had been gone for about a week and was aggravating 2 days ago
   P : presence of high blood pressure
   Q : As pressed
   R : rear chart head (nape)
   S: 5
   T : lost arises
   a. Level of awareness : Compsmentis
8. Integument system
   a. Turgor skin : Elastic, left side
   b. Skin tone : A Variety of Genres
   c. Akral : Cold Brewing
9. Musculoskeletal system
   a. Difficulties in movement : Client can't run
   b. Muscle tone state : value
   c. Muscle strength



10. Extremities
    Top : Attached IV line on the right side with Nacl 20ptm fluid Bottom : No edema
11. Supporting data

Table 2 Laboratory test results

12.

Yes	Types of inspections	Results Examination	Units	Reference Value
1.	Hemoglobin	7,3	g/dl	W:11.7 – 15.5 L: 13.2 – 17.3
2.	Number of leukocytes	14.200	uL	W:3,600-11,000 L:3,800-10.600
3.	Number of erythrocytes	2,48	million/uL	W; 3.8 – 5.2 L: 4.4 – 5.9
4.	Platelet count	308.000	Ul	150.000 – 440.000
5.	Hemaktoritis	21	%	W: 35-47 L: 40 - 52
6.	LED	43	%	W: 0 – 20 l : 0 - 10
7.	CV	87	Fl	80 - 100

8.	CH	29	Pg	26 – 34
9.	CHC	34	g/dl	32 - 36

Management Therapy

Table 3 Management therapy

Yes	Drug name	Dosage	Drug function
1.	Candesartan	1x16 mg	Drugs to lower blood pressure in hypertension
2.	Amlodipine	1x18mg	Calcium channel blocker drugs that used to treat high blood pressure
3.	Omeprazole	1x1	This drug is to treat diseases Stomach acid
4.	Methotrexate	2x1500mg	To overcome vitamin deficiency B12
5.	Aspilet	1x1	Medication Thinner blood Nencegah clots in the blood vessels
6.	Paracetamol	3x500mg	Pain relievers

Data Analysis

Yes	Data	Etiology	Masalah/ Problem
1	**DS** : - Client says pain in the back of the head (nape of the neck) **DO** : - Presence of high blood pressure - Such as pressing on the back of the head (nape of the neck) and a feeling of loss arises - The patient appears weak - The patient appears to be grimacing - The patient seems agitated TTV : TD: 170/90mmHg RR : 22 x/m RH : 118 x/m S: 36.6 ^{oC} SPO2 : 98%	Vascular damage of blood vessels ↓ Blockage of blood vessels ↓ Pain ↓ Acute pain	Acute pain
2	**DS** : -The client said that his body was weak, the back headache (neck of the neck) the client said it was difficult to do activities **DO** : -Client seems restless and difficult to move, client's activities are assisted by family TV:	Imbalance between oxygen supply and demand ↓ Disadvantages ↓	Activity Intolerance

	TD : 170/90mmHg RR : 22 x/m RH : 118 x/m S : 36,6 ^{oC} SPO2 : 98	Immobility ↓ Monotonous lifestyle	
3	**DS** : -Client said worried about his current situation **DO** :- Client looks restless client looks anxious client looks weak TTV: TD : 170/90mmHg RR : 27X/min HR : 115x/min S : 36,5 ^{oC} SPO2: 90%	Unmet needs ↓ Threats to self-concept ↓ Hereditary factors (temperament easily agitated from birth) ↓ Less exposure to information	Anxiety

Formulation of Nursing Diagnoses Based on Priority Scales

1. Acute pain associated with physiological sensory agents
2. Activity intolerance related to Weakness
3. Anxiety is related to lack of exposure to information

Nursing Intervention

Yes	Nursing Diagnosis	Indonesian Nursing Output Standards (SLKI)	Indonesian Nursing Standards (SIKI)
1	Acute Pain **(D.0077)**	**Decreased Pain Levels (l.08066)** After nursing treatment for 3 x 24 hours, the pain is reduced with the following outcome criteria: 1. Decreased pain complaints 2. Grimaces decrease 3. Decreased restlessness 4. Decreased sleep difficulties 5. Improved breathing patterns 6. Blood pressure improves	**Pain Management (I.08238)** **Observations** 1. Identification of the location, characteristics, duration, frequency, quality, intensity of pain 2. Identification of pain scale 3. Identification of nonverbal pain responses 4. Identify factors that aggravate and reduce pain 5. Identify knowledge and beliefs about pain 6. Identify cultural influences on pain response 7. Identify the effect of pain on quality of life 8. Monitor the success of complementary therapies that have been given 9. Monitor the side effects of analgesic use **Therapeutics** 1. Provide non-pharmacological techniques to reduce pain (Autogenic relaxation techniques) 2. Control of environments that aggravate pain (e.g. Room temperature, lighting, noise) 3. Rest and sleeping facilities 4. Consider the type and source of pain in choosing a pain relief strategy **Education** 1. Describe the causes, periods, and triggers of pain 2. Explain pain relief strategies 3. Recommend self-monitoring of pain 4. Recommend using analgesics appropriately 5. Teach non-pharmacological techniques to reduce pain **Collaboration**

			1. Collaborative administration of analgesics, if necessary
2	Activity intolerance **(0.0056)**	**Activity Tolerance (L.05047)** After nursing action for 3 x 24 hours, the tolerance of activities increased with the following outcome criteria: 1. Fatigue complaints decrease 2. Dyspnea when activity decreases 3. Dyspnea after decreased activity 4. Pulse frequency improves	**Energy Management (I.05178)** **Observations** 1. Identification Distractions Function body that results in fatigue 2. Monitor physical and emotional fatigue 3. Monitor sleep patterns and hours 4. Monitor location and discomfort during activities **Therapeutics** 1. Provide a comfortable environment and low stimulus (e.g. Light, sound, and visitation) 2. Perform passive or active range of motion exercises 3. Provide a calming distraction activity 4. Bedside sit-down facilitation **Education** 1. Encourage Bedtime 2. Encourage gradual activities 3. Recommend contacting a nurse if signs and symptoms of fatigue do not decrease 4. Teach profit coping strategies to reduce fatigue **Collaboration** 1. Collaboration with nutritionists on how to increase food intake
3	Ansietas **(D.0080)**	**Anxiety Level (L.09093)** After nursing action for 3 x 24 hours, anxiety decreased with the following outcome criteria: The level of Verbalization Anxiety is worried due to the conditions faced are decreasing 1. Disturbing behavior decreases 2. Decreased tense behavior 3. Decreased breathing frequency 4. Decreased pulse frequency 5. Decreased blood pressure	**Relaxation Therapy (L.09326)** **Observations** 1. Identify a decrease in energy levels, inability to concentrate, or other symptoms that interfere with cognitive abilities 2. Identify Relaxation Techniques that have been effective 3. Identify the willingness, ability, and use of prior techniques 4. Check muscle tension, pulse rate, blood pressure, and temperature before and after exercise 5. Monitor response to relaxation therapy **Therapeutics** 1. Create a quiet, undisturbed environment with comfortable lighting and room temperatures, where possible 2. Provide written information about the preparation and procedure of relaxation techniques (Autogenic) 3. Use loose clothing 4. Use soft tones with slow and rhythmic beats 5. Use relaxation as a strategic support with analgesics or other medical measures, if appropriate **Education**

			1. Describe the purpose, benefits, limitations and type of relaxation used (Autogenic Relaxation Technique) 2. Describe in detail autogenic relational interventions 3. Advocate taking a comfortable position 4. Encourage relaxation and feel the sensation of autogenic relaxation 5. Encourage frequent repetition or practice autogenic relaxation techniques 6. Demonstrate and practice autogenic relaxation techniques (e.g., deep breathing, stretching, and guided imagination).

Nursing Implementation and Evaluation

<table>
<tr><th>Day/ Date</th><th>Nursing Diagnosis</th><th>Beat</th><th>Implementation</th><th>Evaluation</th></tr>
<tr>
<td>Monday, May 11, 2026</td>
<td>Acute pain b.d. physiological inhibitory agent</td>
<td>09.00

11.20

14.20</td>
<td>- Identifying the location, characteristics, duration, frequency, quality, intensity of pain
- Identifying the scale of pain
- Identifying nonverbal pain responses
- Identify factors that aggravate and reduce pain
- Identifying knowledge and beliefs about pain
- Identifying the influence of culture on pain response
- Identifying the effects of pain on quality of life
- Monitor the success of complementary therapies that have been given
- Monitoring the side effects of analgesic use
- Provide non-pharmacological techniques to reduce pain (Autogenic relaxation techniques)
- Control environments that aggravate pain (e.g. Room temperature, lighting, noise)
- Facilitates rest and sleep
- Consider the type and source of pain in the</td>
<td>S :
- The client said that the pain in the back of the head (nape of the neck) felt heavy and his body felt weak
O: Client looks weak, grimacing and restless:
- the presence of high blood pressure
- as pressed on the back of the head (nape of the neck) S: 5
-missing embossed Client looks weak and lying on the bed
- Clients grimacing and fidgeting
- TD : 170/90mmHg
- RR : 22X/M
- HR : 118X/M
- S: 36.6 C
- SPO2: 98%
A : Unresolved problem
<table>
<tr><td>Yes</td><td>Outcome Criteria</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>1.</td><td>Pain complaints</td><td></td><td>✓</td><td></td><td></td><td></td></tr>
<tr><td>2.</td><td>Grimming</td><td></td><td></td><td>✓</td><td></td><td></td></tr>
<tr><td>3.</td><td>Restless</td><td></td><td></td><td>✓</td><td></td><td></td></tr>
<tr><td>4.</td><td>Blood pressure</td><td></td><td>✓</td><td></td><td></td><td></td></tr>
</table>
P : Intervention continued</td>
</tr>
</table>

<table>
<tr><td></td><td></td><td></td><td>selection of pain relief strategies
- Explain the causes, periods, and triggers of pain
- Explain pain relief strategies</td><td></td></tr>
<tr><td>Tuesday, 12 May 2026</td><td>Activity intolerance b.d Weakness</td><td>09.10

11.00

14.10</td><td>- Identify impaired bodily functions that result in fatigue
- Monitor physical and emotional fatigue
- Monitor sleep patterns and hours
- Monitor location and discomfort during activities
- Provide a comfortable and low-stimulus environment (e.g. Light, sound, and visitation)
- Performing passive or active range exercises
- Provide a calming distraction activity
- Facilitates bedside sitting
- Encourage lying down
- Encourage gradual activities
- Recommend contacting a nurse if signs and symptoms of fatigue do not decrease
- Teaching profit coping strategies to reduce fatigue
- Collaborating with nutritionists on how to increase food intake</td><td>S :
- The client said that he still had pain in the back of the head (nape of the neck), his body felt weak
O :
- Clients appear weak, grimacing and restless
- Presence of high blood pressure
- As in the back of the head (nape of the neck) S:3
- Missing embossed, the client looked weak and lay on the bed
- Clients grimacing and fidgeting
- TD:160/95mHg
RR : 21x/m
HR : 95X/m
S: 36.3 oC
SPO2: 98%
A : Unresolved problem
<table><tr><td>Yes</td><td>Outcome Criteria</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>1.</td><td>Pain complaints</td><td></td><td></td><td>✓</td><td></td><td></td></tr><tr><td>2.</td><td>Grimming</td><td></td><td></td><td>✓</td><td></td><td></td></tr><tr><td>3.</td><td>Restless</td><td></td><td></td><td>✓</td><td></td><td></td></tr><tr><td>4.</td><td>Blood pressure</td><td></td><td></td><td>✓</td><td></td><td></td></tr></table>P : Intervention continued</td></tr>
<tr><td>Wednesday, 13 May 2026</td><td>Anxiety b.D. is not exposed to information</td><td>09.15

11.30</td><td>- Identify a decrease in energy levels, inability to concentrate, or other symptoms that interfere with cognitive abilities
- Identifying Relaxation Techniques That Have Been Effective
- Identify the willingness, ability, and use of prior techniques
- Monitor response to relaxation therapy
- Create a quiet, fussy environment with comfortable lighting</td><td>S :
- The client said that the back headache (neck pain) was gone, the pain had disappeared and was no longer weak
O : - The client seems happy to have recovered
- Clients seem relaxed
- Pain scale 2
- The client has normal blood pressure which is:
TD:130/85mmHg
RR:22X/m
HR:80x/m
S: 36.0 oc
SPO2:99%
A : The problem has been resolved</td></tr>
</table>

		14.30	and room temperatures, where possible - Provide written information about the preparation and procedure of relaxation techniques (Autogenic) - Using loose clothing - Using soft tones with slow and rhythmic rhythms - Using relaxation as a strategic support with analgesics or other medical measures, if appropriate - Explain the purpose, benefits, limitations and type of relaxation used (Autogenic Relaxation Technique) - Describe in detail autogenic relational interventions - Advocate taking a comfortable position - Advocates relaxation and feels the sensation of autogenic relaxation - Advocate frequent repetition or practice autogenic relaxation techniques - Demonstrate and practice autogenic relaxation techniques - Encourage families to stay with patients	Yes / Outcome Criteria / 1 / 2 / 3 / 4 / 5 1. Pain complaints ✓ 2. Grimming ✓ 3. Restless ✓ 4. Blood pressure ✓ **P :** Intervention stopped

DISCUSSION

Assessment

The assessment of Mr. T's client who suffers from hypertension was carried out on May 11, 2026 at 09.00 WIB using observation and interview methods, which include the client's identity and head-to-head physical examination, because it is considered more systematic and accurate. Although clients found it difficult to communicate, the study found no significant barriers to communicating with the client's wife and family. Treatment records, medical records, and laboratory supporting test results support the research.

These results complement the data the authors need to investigate the client's family. Since the client is not well, the physical examination is done carefully. The results of the examination showed that the general state of the client was still weak and the client's level of awareness when examined by the composer. Clients say they often experience headaches, with a score of 5 on a scale of 1-10. Headache. It disappeared gradually over the course of about a week and has increased in the last two days. In addition, the client's vital signs were measured during the study. The results showed high blood pressure of 170/100 mmHg, respiratory rate (RR) 22 times a day, heart rate (HR) 115 times a day, and blood oxygen level (SPO2) 98%.

This data helps the author make nursing diagnoses that are appropriate to the client's situation and condition. In addition, to support the analysis of the client's hypertensive disease, laboratory results such as hemoglobin, leukocytes, platelets, hematocrit, blood sugar (GDS), and cholesterol are taken. The results of Mr. K's examination on June 8, 2023 were as follows: hemoglobin level 7.3 g/dl, number of leukocytes 14,200 ul, number of platelets 308,000 ul, hematocrit 21%, cholesterol 143 mg/dl, and GDS (Blood Glucose Current) of 112 mg/dl.

Nursing Diagnosis

According to the theory in carrying out the determination of diagnoses that may appear in patients with high blood pressure, which is described in (SDKI DPP PPNI 2017):

Acute pain related to cerebellar and ischemic vesicular pressure

Hypervolemia is associated with disruption of regulatory mechanisms.

Activity intolerance related to Weakness

Anxiety is related to lack of exposure to information

Knowledge deficit is related to lack of exposure to information

Three nursing diagnoses that may appear in hypertensive patients (SDKI DPP PPNI 2017) are in accordance with the theory and according to the client's circumstances. For the condition of the client treated by the author in the field, the following diagnoses can be applied:

Acute pain is related to physical injury agents, the author because the client complains of headaches in the back (nape of the neck) aggravating 2 days, disappearing arises, the client looks grimacing and restless

Activity intolerance is related to Weakness, the author says that because clients complain that blood pressure increases during activity and clients seem restless and have difficulty doing activities, client activities are assisted by family.

Anxiety is related to lack of exposure to information, the author said that the client is worried about his current situation, the client seems anxious, the client looks weak, the client looks pale.

Nursing Intervention

After the review, data analysis, and creation of nursing diagnoses, the next step is to implement the treatment. When planning and implementing the nursing care to be carried out, this stage is very important. The authors of the preliminary report do not raise all nursing plans in nursing care. It is made according to the client's condition and in accordance with the Hospital's policy and takes into account the student's limitations.

Nursing Implementation

The room head, room nurse, doctor on duty, clients, and their families contribute to the creation and execution of nursing plans. Before performing daily nursing actions, the author observes the client's progress through the client's progress record and room notes and talks to the nurse on duty. The authors worked closely with the family to identify the client's pain with the PQRST method, monitor the success of additional therapies, and identify environmental factors that cause the pain, such as a comfortable environment and good bedding. In addition, the author teaches clients autogenic relaxation techniques and prescribes prescribed oral medications to help them cope with the pain.

Based on the study, patients with moderate hypertension with systolic blood pressure between 160 to 179 mmHg and diastolic between 100 to 109 mmHg experienced changes in headache levels after applying autogenic relaxation technique therapy. Before undergoing therapy, the average level of headache of the respondents was on a scale of 5-6 (moderate pain). After applying the autogenic relaxation technique, the average level of headache of the respondents decreased to a scale of 2-3 (mild pain), this was observed from the observation results. Therefore, it can be concluded that the administration of autogenic relaxation technique therapy has an effect on reducing headaches in hypertensive patients.

Before autogenic relaxation technique therapy was performed on the first day, the client's blood pressure was 170/90mmHg with a pain level of 5. After undergoing autogenic relaxation technique therapy, there was a decrease in blood pressure to 165/95 mmHg and the pain level dropped to 4. On the second day of therapy, the client's blood pressure was 160/85 mmHg with pain level 4 before therapy, and after undergoing autogenic relaxation techniques, blood pressure became 130/90 mmHg with pain level 3. Therapy was continued on the third day with the client's blood pressure remaining at 130/90 mmHg and pain level 3 before therapy, but after undergoing autogenic relaxation technique therapy, blood pressure became 130/80 mmHg with pain level 2.

During the three days of autogenic relaxation technique therapy, there was an effect in lowering blood pressure and headache levels in hypertensive patients. The vasomotor center, located in the brain's medulla oblongata, serves to control the contraction and relaxation of blood vessels. Stimuli are sent to the sympathetic ganglia in the thorax and abdomen through the sympathetic nervous system. The sympathetic nerve pathway begins at the vasomotor center and continues down to the spinal cord. At this time, pre-ganglion neurons release the neurotransmitter acetylcholine, which stimulates post-ganglion nerve fibers to the blood vessels. At the same time, the neurotransmitter norepinephrine is released, which causes constriction of blood vessels. The response of blood vessels to vasoconstrictor stimuli can be affected by a number of variables, such as anxiety and fear.

According to Nixson (2018), hypertensive patients are very sensitive to norepinephrine. However, the exact reason why this happens is unknown. When an emotional stimulus triggers the sympathetic nervous system, the blood vessels will respond in the same way at the same time. This causes the adrenal glands to be stimulated as well. As a result, there is an increase in vasoconstriction activity. The adrenal medulla releases epinephrine, which is responsible for such vasoconstriction. On the other hand, the adrenal cortex releases cortisol and other steroids, which can increase the vasoconstrictor response in blood vessels. This vasoconstrictive effect leads to a reduction

in blood flow to the kidneys and leads to the release of renin.

Autogenic relaxation can have a positive impact on reducing blood pressure and pain levels in hypertensive patients. The response to this relaxation technique can stimulate the functioning of the cortex in cognitive and emotional aspects. With positive cognitive and emotional perception results, the coping response becomes more positive. By creating a feeling of calm and relaxation, stress can be reduced. A decrease in stress hormones such as cortisol and catecholamines will also reduce the production of plasma renin in the blood, resulting in a reduced formation of angiotensin II in the blood. This reduction in angiotensin II will cause blood vessels to dilate (vasodilation) and decrease blood volume, which can ultimately reduce blood pressure and pain levels in hypertensive patients (Aspiani, 2016).

Mental and physical relaxation are two types of autogenic relaxation. Relaxation is basically a technique to reduce muscle tension and improve breathing, blood pressure, and pulse. The belief behind this technique is that the body responds to pain or illness with a thought response that causes anxiety. A person in a state of relaxation remains conscious but in a relaxed, calm, and relaxed state, with relaxed thoughts and muscles, eyes closed, and regular breathing (Luh et al., 2018).

By using autogenic relaxation therapy, nurses can treat pain in a non-pharmacological manner (Erika, 2018). This technique comes from oneself, using words, short sentences, or calming thoughts. During doing so, one thinks about being in a calm and peaceful state and concentrates on regulating the breath and heart rate. Heart rate, blood flow, and blood pressure are controlled with this autogenic relaxation therapy (Sariman, 2022).

The results of a study conducted by Sariman (2022) concluded that the application of autogenic relaxation therapy in hypertensive patients at the fish market health center in Bengkulu city can reduce blood pressure and headaches. Previously, in 2018, Erika conducted a similar study on the elderly suffering from hypertension at the rainbow elderly posyandu prada kali kendal Rt 4 Surabaya. The results of the study showed that autogenic relaxation techniques were more effective in lowering blood pressure because they focused more on mental or psychological conditions, thus making respondents feel more relaxed (Erika, 2018).

Autogenic relaxation techniques are used in accordance with current standard operating procedures (SOPs). The method is almost similar to the deep breathing relaxation technique commonly used in hospitals. The goal is to create a contract that describes the objectives and procedures to be performed to the client, maintains the client's privacy, and greets and introduces oneself to the client. In addition, the environment is arranged so that clients feel safe and comfortable. The client is then directed to sit or sleep in a relaxed position.

If he chooses to sit, he is assisted in a semi-fowler position by placing one hand on his stomach and the other hand on the middle of his chest to feel the movement of his abdomen and chest as he breathes. Clients were taught to inhale for four seconds, hold their breaths for two seconds, and exhale slowly through their mouths for eight seconds. If the pain reappears during three days of treatment, the procedure can be repeated up to three times, and performed for five to ten minutes each time. The results of the evaluation after two days showed that the client's headache was reduced. As long as this procedure is performed, no obstacles are encountered.

Nursing Evaluation

The SOAP method or Subjective, Objective, Analysis, and Planning has shown that there is no difference between theory and practice in the evaluation process. Nursing measures have been performed during the planned three days of treatment. Clients report that they no longer experience pain after receiving autogenic relaxation technique therapy to reduce their pain. This shows that this therapy is in accordance with the journal by Dian Wardanil Parasanti Andrian (2018) on the Application of Autogenic Relaxation Technique Therapy to Reduce Acute Pain Levels in Patients with Hypertension. On June 10, 2023, Mr. K has successfully overcome his problems with a diagnosis of acute pain, anxiety, and activity intolerance after receiving nursing.

CONCLUSION

The results of the assessment obtained from the case, namely the assessment of the client was carried out on May 11, 2026 at 09.00 WIB, showing signs and symptoms, namely headache, dizziness in the neck and restlessness.

In the enforcement of nursing diagnoses, nursing diagnoses were found including acute pain, activity intolerance, and anxiety. In theory, there are 5 nursing diagnoses, but what is taken with theory is 3 nursing diagnoses.

The results obtained from interventions carried out by researchers, both interventions carried out independently and collaboratively, such as identifying the location, characteristics of pain, duration, frequency, intensity of pain, providing non-pharmacological techniques to reduce pain, identifying factors that can increase and decrease motivation for clean and healthy living behaviors.

The implementation of nursing is carried out based on the planning of nursing diagnoses made such as studying pain, teaching autogenic relaxation techniques, measuring blood pressure and temperature of patients, calculating pulse and breathing, advising patients to increase their rest time.

The evaluation was conducted by the researcher on the client during 3 days of hospital treatment on May 11-13, 2026 by the researcher and was made in the form of SOAP. The results of the evaluation conducted by the

researcher on the client showed that Autogenic relaxation therapy was effective in hypertension, this showed that the problem experienced by the client was resolved so that the level of pain decreased

ADVICE

It is hoped that the client will be cooperative in undergoing the nursing care process given, the client will be able to apply the Autogenic relaxation technique independently at home and it is expected that hypertensive patients regularly control blood pressure so as to minimize the possibility of complications that can occur.

The role of the family is very important in improving the client's health status, in the management of hypertension, the family strongly supports autogenic relaxation therapy to be applied if the pain recurs, and plays a role in monitoring activities during the diet process, controlling food according to the doctor's recommendations, implementing a healthy lifestyle and regularly checking the patient's blood pressure at health facilities.

The results of this scientific paper are expected to be an illustration in an effort to provide nursing care to hypertensive clients appropriately, the next researcher is expected to master the theoretical concept of hypertension disease. In addition, the researcher must also conduct an appropriate and accurate assessment so that nursing care can be achieved in accordance with the problems found in the client.

Likewise, to enforce nursing diagnoses, researchers must be more thorough in analyzing major and minor data, both subjective data and objective data, in order to meet the diagnosis validation contained in the Indonesian Nursing Diagnostic Standards (SDKI). In nursing interventions, it is expected to formulate outcome criteria in accordance with the Indonesian Nursing Output Standards (SLKI) guidebook.

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