

# Nurse Knowledge About Complementary Therapy Lavender Aromatherapy in Hypertension Patients at UPTD Puskesmas Tandang Buhit Balige in 2022

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## ABSTRACT

Hypertension or often known as high blood pressure is a medical condition characterized by increased contraction of the arteries so that there is resistance to blood flow which increases blood pressure against the walls of the blood vessels, then the heart has to work harder to pump blood through the narrow blood vessels. . This study aims to examine the knowledge of nurses who use lavender aromatherapy complementary therapy in hypertensive patients. This type of research is descriptive. The research population consisted of 10 nurses at the UPTD Tandang Buhit Balige Health Center. Sampling with non-probability sampling technique, namely total sampling. Retrieval of data on nurses' knowledge about Lavender aromatherapy complementary therapy in hypertensive patients using a questionnaire sheet with direct interviews. This research resulted that the respondents who had good knowledge were 70%; 30% of respondents who have sufficient knowledge and respondents who have less knowledge do not exist. The conclusion of this study is that the knowledge of some nurses is included in the advice for the UPTD of the Tandang Buhit Balige Health Center to maintain and improve education for nurses about complementary lavender aromatherapy therapy in hypertensive patients and through seminars and trainings. 30% of respondents who have sufficient knowledge and respondents who have less knowledge do not exist. The conclusion of this study is that the knowledge of some nurses is included in the advice for the UPTD of the Tandang Buhit Balige Health Center to maintain and improve education for nurses about complementary lavender aromatherapy therapy in hypertensive patients and through seminars and trainings. 30% of respondents who have sufficient knowledge and respondents who have less knowledge do not exist. The conclusion of this study is that the knowledge of some nurses is included in the advice for the UPTD of the Tandang Buhit Balige Health Center to maintain and improve education for nurses about complementary lavender aromatherapy therapy in hypertensive patients and through seminars and trainings.

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## 1. INTRODUCTION

The cardiovascular system is a system related to the heart and blood vessels. The cardiovascular system functions as a regulatory system performing various mechanisms that vary in response to all activities in the body. The components of the cardiovascular system that affect the stability of vital organs are the heart, blood components and blood vessels. These three components must function properly so that all tissues and organs of the body receive a good supply of oxygen and nutrients. If these three components do not function properly, they will have a negative impact on health resulting in several diseases including atherosclerosis, angina pectoris, myocardial infarction, and hypertension (Udjianti, 2013 in Fadli, 2018).

Hypertension or often known as high blood pressure is a medical condition characterized by increased contraction of the arteries so that there is resistance to blood flow which increases blood pressure against the walls of the blood vessels, then the heart has to work harder to pump blood through

the narrow blood vessels. . Several factors can cause hypertension, namely heredity, age, obesity, unhealthy lifestyle, alcohol, smoking and stress.

Hypertension is not only at high risk of suffering from heart disease, but also suffering from other diseases such as diseases of the nerves, kidneys and blood vessels and the higher the blood pressure, the greater the risk. Hypertension is an increase in systolic blood pressure of at least 140 mmHg or a diastolic pressure of 90 mmHg (Nurarif & Kusuma, 2015).

The prevalence according to the world health agency, the World Health Organization (WHO), the number of adults with high blood pressure has increased from 594 million people in 1975 to 1.13 billion in 2015 (WHO, 2017). This figure is likely to increase to 29.2% in 2025. According to the American Heart Association (AHA), the American population over the age of 20 suffers from hypertension as many as 74.5 million people, but almost 90-95% of cases have no known cause ( Data and Information Center of the Indonesian Ministry of Health, 2014).

Pharmacological and non-pharmacological management is a form of treatment that can be performed on hypertensive patients. Complementary traditional health care or treatment is carried out using skills, ingredients, or a combination by combining skills and ingredients. Complementary therapy, which has recently been developed in Indonesia in the management of hypertension, but not many have reviewed complementary therapy in hypertensive patients.

Complementary therapy is one of the therapeutic models used by nurses in treating patients. For nurses around the world who use complementary therapies to patients can provide holistic quality services. Complementary & Alternative Therapy in nursing can describe how nurses can help patients in their healing. Nurses recognize that the use of complementary therapies can lead to more complex personal understandings and meanings.

The use of complementary therapies is an endeavor in which nurses can be integrally involved. Many nurses have provided leadership in research, education, and practice in the application of this therapy. As consumer demand for the use of complementary therapies continues to increase, it is imperative that nurses gain knowledge about complementary therapies, so that they can select and include patients in practice, and provide patients with information about therapies, be contacted about research and practice guidelines related to complementary therapies. patients are wary of possible contraindications and even incorporate some of these therapies into their self-care.

Therapy in nursing is the concept of self as a healer must be understood and experienced by every nurse to be knowledgeable and skilled in the delivery, direction, or counseling, patients in the use of various therapies. This includes understanding health. This complementary therapy is widely known and has been used for a long time in the world of health. However, in several surveys that have been conducted regarding the use of complementary therapy, the scope of complementary therapy itself is still rather limited.

As Thomas Friedman (2005) said; Currently, the world of health, including nursing practitioners, are still confused about what complementary therapy is. Expanding knowledge of complementary medicine perspectives such as complementary therapy, practiced by people in several cultures around the world, is essential for competent health care.

It is thus very important for health care professionals to carry out a holistic assessment of their patients to determine the broad direction of the healing practices they will pursue. This applies not only to new patients, but to all patients. The use of complementary therapies becomes more complex to the level of personal understanding. Nurses are very important as providers of nursing care, especially in patients with hypertension.

## 2. LITERATURE REVIEWS

### Knowledge

Knowledge is a very important domain in shaping a behavior (Makhfudli, 2015). Thus the formation of behavior due to the knowledge that exists in him, especially that which exists in adults begins in the cognitive domain (Ibrahim, 2014). This knowledge can be obtained through formal education or through non-formal education, such as training and seminars. In addition, knowledge can be obtained from one's work experience (Ibrahim, 2014). Knowledge is something that is known to be related to the learning process. This learning process is influenced by various internal factors, such as

motivation and external factors in the form of available information suggestions, as well as socio-cultural conditions. Knowledge can be obtained by someone naturally or intervened either directly or indirectly (Budiman & Riyanto, 2013).

According to Notoatmodjo (2014) Knowledge included in the cognitive domain has 6 (six) levels, namely:

1. know
2. Understanding (comprehension)
3. Applications
4. Analysis (analysis)
5. Synthesis
6. Evaluation

According to Wawan et al, (2021) Factors that influence knowledge are:

1. age
2. Education
3. Environmental factor
4. Socio-cultural
5. Experience

Knowledge Level Category Arikunto (Budiman & Riyanto, 2013) categorizes a person's level of knowledge into three levels based on percentage values, namely as follows, namely as follows:

1. The level of knowledge is in the Good category if the value is  $\geq 76\%$  - 100%.
2. Level of knowledge category Enough if the value is 56% -74%
3. Less knowledge level category if the value is  $\geq 56\%$ .

## **Nurse**

Nurse (nurse) comes from the Latin word *nutrix* which means to care for or care for. Harley Cit explains the basic understanding of a nurse, namely a person who plays a role in caring for, nurturing, assisting and protecting someone due to illness, injury (injury) and the aging process.

Nurse behavior is influenced by several characteristics, including attitudes and actions (Nursalam, 2017). Nurse characteristics also consist of: knowledge, education, training, and years of service. A nurse is a person who plays a role in caring for or nurturing, helping and protecting someone due to illness, injury and the process of fulfilling and professional care is a nurse who is responsible and authorized to provide nursing services independently and collaborate with other health workers in accordance with their authority (Ministry of Health, 2012) ).

Nurses care for patients continuously, 24 hours a day, helping patients do what they would do for themselves if they could. Nurses pay attention to patients, ensure that they breathe well, get fluids and nutritional coverage, help rest and sleep, ensure that they are comfortable and support patients and their families (Monica, 2014).

According to RI Law No. 38 of 2014 concerning Nurse Registration and Practice, a nurse is someone who has passed nursing education, both at home and abroad in accordance with the provisions of the applicable laws and regulations. According to Budiono and pertami (2016), the roles of nurses are as follows: Care giver, Client advocate, Counselor, Educator, Collaborator, Coordinator, Change agent, Consultant.

## **Hypertension**

Hypertension is a systolic blood pressure of more than 140 mmHg and a diastolic pressure of more than 90 mmHg. Pressure is the force exerted by blood against the walls of blood vessels due to heart contractions and is influenced by the elasticity of the vessel walls (Tortorra & Derrickson, 2009)

## **Types of Hypertension**

Hypertension is divided into 2 types namely primary hypertension (essential) and secondary hypertension. The difference is (Ramdhani, 2014):

- a. Primary hypertension.  
Primary hypertension is also known as idiopathic hypertension because this hypertension has an unknown cause. The causes that are unclear or unknown are often associated with unhealthy lifestyle factors. Primary hypertension is the most common type of hypertension, which is around 90% of the incidence of hypertension (Bumi, 2017).
- b. Secondary hypertension  
Secondary hypertension is hypertension caused by other diseases such as kidney disease, hormonal disorders, or the use of certain drugs (Bumi, 2017). Other conditions affecting the kidneys, arteries, heart, or endocrine system account for another 5-10% of cases (secondary hypertension). Examples are obesity of the chest and abdomen, glucose intolerance, moon-shaped face, buffalo hump. Thyroid disease and acromegaly can also cause hypertension and have characteristic signs and symptoms. Stomach size may indicate renal artery stenosis (narrowing of the arteries that supply blood to the kidneys) (Ramdhani, 2014).

**Classification of hypertension and symptoms of hypertension**

Classification of hypertension is divided into 4 categories where there are normal, prehypertension, stage 1 hypertension and stage 2 hypertension. Mild or moderate hypertension generally does not cause visible symptoms when high blood pressure is felt to be getting worse or a crisis situation of the blood pressure itself.

Symptoms of hypertension that are getting worse and longer will show symptoms such as: headache, abdominal pain, vomiting, anorexia, anxiety, weight loss, often feeling dizzy which sometimes feels very heavy. As for the increasingly chronic symptoms of hypertension, symptoms such as: Hypertensive encephalopathy, Hemiplegic, Vision and hearing disorders will appear.

Table 1. Hypertension Category

Category	Blood pressure systolic	Blood pressure Diastolic
Normal	< 120 mm Hg	< 80 mm Hg
Pre-Hypertension	120-139 mm Hg	80-89 mm Hg
Stage 1	140-159 mm Hg	90-99 mm Hg
Stage 2	≥ 160mmHg	≥ 100mmHg

(Source: Ramadhani, Magic Potions are Powerful, 2014)

**Hypertension Diagnosis**

The diagnosis of hypertension is established at all ages. Diagnosis of hypertension can depend on the results of measurements and clinical symptoms of complications. In carrying out diagnostic tests for people with high blood pressure, it is generally necessary to pay attention to several things, such as: ensuring that the blood pressure is always high, assessing overall cardiovascular risk, assessing organ damage and accompanying diseases, and finding out possible causes. These elements constitute a single, step-by-step and comprehensive diagnostic process. Three classic methods that can be used are recording the history of the disease, physical examination, and laboratory examination. The process of diagnosis is often challenging because it is difficult to determine how far the examination should be carried out. shallow inspection, not easy to accept because hypertension is a lifelong disease and the therapy chosen can have serious implications for sufferers. Particularly in the elderly, the diagnosis of hypertension must be very careful because there is a possibility of errors caused by several factors such as cuff length may not be sufficient for obese or overweight people or people who are too thin, decreased baroreceptor reflex sensitivity often causes blood pressure fluctuations and postural hypotension (Femmy , 2011).

**Hypertension Pathophysiology**

The mechanism that controls the constriction and relaxation of blood vessels lies in the vasomotor center in the medulla of the brain. From this vasomotor originate a pathway of sympathetic nerves that continue down the spinal cord and out of the spinal cord columns to the sympathetic ganglia in the

thorax and abdomen. Vasomotor center stimulation is delivered in the form of impulses that move downward through the sympathetic nervous system to the sympathetic ganglia. At this point, the preganglionic neurons release acetylcholine which will stimulate the postganglionic nerve fibers to the blood vessels. With the release of norepinephrine will result in constriction of blood vessels. Various factors such as anxiety and fear can affect the response of blood vessels to vasoconstrictor stimuli (Ramdhani, 2014).

A person with hypertension is very sensitive to norepinephrine. At the same time that the sympathetic nervous system stimulates the blood vessels in response to emotional stimuli, the adrenal glands are also stimulated resulting in additional vasoconstrictive activity. The adrenal medulla secretes epinephrine which causes vasoconstriction. The adrenal cortex secretes cortisol and other steroids, which can enhance the vascular vasoconstrictor response. Vasoconstriction which results in decreased blood flow to the kidneys causes the release of renin.

Renin stimulates the formation of angiotensin I which is then converted to angiotensin II which makes it a potent vasoconstrictor. This stimulates aldosterone secretion by the adrenal cortex. This hormone causes retention of sodium and water by the kidney tubules which results in intravascular volume. All these factors tend to cause hypertension. In the elderly, changes in structure and function in the peripheral vascular system are responsible for changes in blood pressure that occur. These changes include atherosclerosis, loss of elasticity of the connective tissue and decreased relaxation of vascular smooth muscle which will reduce the ability to distension the tensile strength of blood vessels.

### **Hypertension Risk Factors**

The risk factors for hypertension consist of (Bumi, 2017):

- a. Age
- b. Obesity
- c. Smoke
- d. Blood Cholesterol
- e. Descendants
- f. Gender

### **Complementary Therapy**

#### **Definition of Complementary Therapy**

According to the WHO (World Health Organization), complementary medicine is non-conventional medicine that does not come from the country concerned. So for Indonesia, herbal medicine, for example, is not a complementary medicine but is a traditional medicine. Traditional medicine in question is medicine that has been used from ancient times and passed down from generation to generation in a country.

But in the Philippines, for example, Indonesian herbal medicine can be categorized as complementary medicine. Complementary therapy is a method of disease management that is carried out as a support to conventional medical treatment or as a treatment of other options outside of conventional medical treatment. Based on data sourced from the World Health Organization in 2005, there were 75 – 80% of the world's population who had undergone unconventional treatment. In Indonesia alone, the popularity of non-conventional medicine, including this complementary medicine, can be estimated from the mushrooming of advertisements for non-conventional therapies in various media.

### **Types of Complementary Therapy**

1. Traditional healing practices such as ayurveda and acupuncture.
2. Physical therapy such as chiropractic, massage, and yoga.
3. Homeopathy or herbal medicine.
4. Utilization of energy such as polarity therapy or reiki
5. Relaxation techniques, including meditation and visualization.
6. Dietary supplements, such as vitamins and minerals

### **Complementary Therapy Focus**

1. Patients with heart disease.
2. Patients with autism and hyperactivity
3. Cancer patient

### **Aromatherapy Complementary Therapy**

#### **Aromatherapy definition**

Aromatherapy comes from the word "aroma", which means an attractive smell that comes from plants (essential oils) or spices, and comes from the word "therapy", which means a treatment designed for treatment. Various remains of art and paintings from the ancient cultures of Egypt, China and Persia show that the essences or essences of plants were widely used and considered very valuable by religious leaders, doctors and healers.

Aromatherapy is an ancient healing process that uses pure aromatherapy plant essences for the purpose of promoting the health and well-being of body, mind and spirit. Some of the essential oils that are commonly used in aromatherapy because of their versatility are clary Langon, eucalyptus, geranium, lavender, lemon, peppermint, petigrain, rosemary, tea tree, and ylang-ylang. Aromatherapy has a positive effect because it is known that fresh and fragrant aromas can stimulate sensory receptors in the nose and then provide further information to areas in the brain that control emotion and memory and provide information to the hypothalamus. The hypothalamus is a regulator of the body's internal systems, including the sexuality system, body temperature, and reactions to stress (Koensoemardiyah, 2009).

#### **Aromatherapy Applications**

1. As a perfume
2. inhaled
3. Evaporation
4. Mixture of bath water
5. Massage oil mix
6. Air freshener
7. Oral use
8. Rosemary Aromatherapy
9. Lavender Aromatherapy
10. Aromatherapy cananga
11. Sandalwood Aromatherapy
12. Lemons

### **3. METHODS**

This study used a descriptive research method that aims to describe the knowledge of nurses about Lavender aromatherapy complementary therapy in hypertensive patients at the UPTD Puskesmas Tandang Buhi Balige in 2022, with a cross-sectional research design, namely conducting research in one observation at the same time. The population in this study were ten (10) nurses at the UPTD Puskesmas Tandang Buhit Balige in 2022.

The sample in this study was taken using a total sampling technique of 10 people.

The data obtained by the researchers themselves by measuring, observing, surveying, interviewing respondents using a questionnaire prepared based on written concepts and others. Data obtained from other parties, agencies/agencies that routinely collect data. Data obtained from other people/agencies/agencies/others that have been published/compiled from other parties in the form of tables, graphs, research reports.

In this study, the factors of nurses' knowledge about Lavender Aromatherapy Complementary Therapy in Hypertension patients at the UPTD Puskesmas Tandang Buhit Balige in 2022:

1. Education
2. Profession
3. Age

The research concept framework is a relationship or link between one concept to another concept of the problem you want to examine. (Setiawan et al, 2015). The conceptual framework in this study aims to identify nurses' knowledge about lavender aromatherapy complementary therapy in hypertensive patients.

#### Independent variable

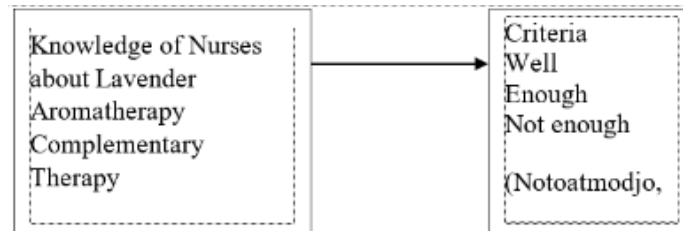


Figure 1. Concept framework

Information :

Variables studied:

## 4. RESULTS AND DISCUSSION

### General data

Table 2 Frequency Distribution of Respondents Based on Age Regarding Knowledge of Nurses Complementary Therapy with Lavender Aromatherapy at UPTD Puskesmas Tandang Buhit Balige in Hypertension Patients Period May - June 2022

No	Age (Years)	Frequency (F)	Percentage (%)
1	28-30	5	50
2	31-32	4	40
3	52	1	10
<b>Total</b>		<b>10</b>	<b>100%</b>

From the table above it can be seen that of the 10 respondents the majority were aged 28-30 years as many as 5 respondents (50%) and a minority aged 52 years as many as 1 respondent (10%).

Table 3 Frequency Distribution of Respondents Based on Education About Knowledge of Nurses Complementary Therapy with Lavender Aromatherapy at UPTD Puskesmas Tandang Buhit Balige in Hypertension Patients Period May -June 2022

No	Education	Frequency (F)	Percentage (%)
1	SPK	1	10
2	D3 NURSING	7	70
3	S1 NURSING	2	20
<b>Total</b>		<b>10</b>	<b>100%</b>

From the table above it can be seen that the majority of respondents who have the latest education are D3 Nursing as many as 7 respondents (70%), and the minority who have completed Bachelor of Nursing is 1 respondent (10%).

Table 4 Frequency Distribution of Respondents Based on Occupation Regarding Nurse Knowledge Complementary Therapy with Lavender Aromatherapy at UPTD Puskesmas Tandang Buhit Balige in Hypertension Patients May -June 2022 Period

No.	Profession	Frequency (f)	Percentage (%)
1.	civil servant	8	80
2.	Honorary	2	20
<b>Total</b>		<b>10</b>	<b>100</b>

From the table above it can be seen that of the 10 respondents, the majority worked as civil servants as many as 8 respondents (80%) and the minority worked as honorary as many as 2 respondents (20%).

Table 5 Frequency Distribution of Respondents Based on Sources of Information About Nurse Knowledge Complementary Therapy with Lavender Aromatherapy at UPTD Puskesmas Tandang Buhit Balige in Hypertension Patients May -June 2022 Period

No	Resources	Frequency (F)	Percentage (%)
1	Health workers	2	20
2	Print media	3	30
3	electronic media	5	50
4	Family	-	-
<b>Total</b>		<b>10</b>	<b>100</b>

From the table above, the majority of respondents obtained information sources from electronic media as many as 5 respondents (50%), and a minority of health workers 2 respondents (20%).

#### Custom Data

Table 6 Frequency Distribution of Respondents Based on Mother's Knowledge of Nurses' Knowledge of Complementary Therapy with Lavender Aromatherapy at the UPTD Puskesmas Tandang Buhit Balige in Hypertension Patients in the Period May - June 2022

No	Knowledge	Frequency (F)	Percentage (%)
1	Well	7	70
2	Enough	3	30
3	Not enough	-	-
<b>Total</b>		<b>10</b>	<b>100</b>

From the table above, it can be seen that the knowledge level of the majority of respondents is good, 7 respondents (70%), and a minority with sufficient knowledge, 3 respondents (30%).

#### Discussion

##### Knowledge of Complementary Therapy Nurses With Lavender Aromatherapy at the UPTD of Tandang Buhit Balige Health Center in Hypertension Patients May -June 2022 Period

It shows that out of 10 respondents, it shows that the knowledge of nurses about complementary therapy with lavender aromatherapy at the age of 28-30 years is quite good, where 5 respondents (50%). This can be seen based on the level of education of respondents who have the last education D3 Nursing as many as 7 respondents (70%), who completed Bachelor of Nursing as many as 2 respondents (20%), who completed D3 Nursing as many as 1 respondent (10%) according to Notoadmojo theory, (2007) that education affects knowledge, the higher a person's education the easier it is for that person to receive information, based on the age of respondents aged 28-30 years as many as 5 people (50%), while respondents aged 31-32 years were 4 people (40%), respondents aged 52 years as many as 1 person (19%), increasing age will also develop responsiveness and mindset, so that the knowledge obtained is getting better, and based on sources of information obtained from electronic media there are 5 respondents (50%), from print media there are 3 respondents (30%), and from health workers 2 respondents (20.%) and the more information that comes in the more knowledge one gets about health. Assuming the author's Knowledge of Nurses About Complementary Therapy with Lavender Aromatherapy in Hypertension Patients in this study the authors found that as many as 7 respondents had good knowledge. and from health workers 2 respondents (20.%) and the more information that comes in the more knowledge one gets about health. Assuming the author's Knowledge of Nurses About Complementary Therapy with Lavender Aromatherapy in Hypertension Patients in this study the authors found that as many as 7 respondents had good knowledge. and from health workers 2 respondents (20.%) and the more information that comes in the more knowledge one gets about health. Assuming the author's Knowledge of Nurses About Complementary Therapy with Lavender



Aromatherapy in Hypertension Patients in this study the authors found that as many as 7 respondents had good knowledge.

## 5. CONCLUSION

Based on knowledge, the majority of respondents had good knowledge of 7 respondents (70%) and a minority with the Enough category 3 respondents (30%) the observation section can be seen from the knowledge of nurses at the UPTD Puskesmas Tandang Buhit Balige

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