Original Article

Increasing the Comfort of Hypertension Sufferers Through Effleurage Back Massage

Dhina Widayati¹, Diana Rachmania¹, Nabila Safitri¹

¹ Bachelor's Degree Program in Nursing, Stikes Karya Husada Kediri, East Java, Indonesia.

ARTICLE INFO	ABSTRACT
Article History Submit : May 25, 2024 Revised : Jun 24, 2024 Accepted : Jun 26, 2024 Keywords: Supportive Educative, Readiness, Anticipatory phase, Primigravida	Background: Comfort is one of the basic needs that is holistic. Hypertension sufferers often feel discomfort due to increased blood pressure, so these basic needs are not appropriately met. Effleurage back massage intervention is one method used to overcome discomfort in hypertension sufferers. The aim of this research was to determine the effect of efflurage back massage on the comfort level of hypertension sufferers Methods: The research design used pre-experiment, involving 32 respondents through purposive sampling from a population of 42 people with hypertension. The comfort variable was measured using the SGCQ questionnaire sheet and the results were analyzed using the Independent T-Test with α 0.05 Results: The research results showed an increase in comfort from almost all (75%) respondents in the very uncomfortable category in the pretest results to almost all (93.7%) respondents in the very comfortable category in the post test. The Wilcoxon results obtained p-value = 0.001 (< α), indicating that effleurage back massage intervention can increase comfort in hypertension sufferers. Conclusion: Giving effleurage back massage can trigger endorphin neurotransmitters in the autonomic nerves which make blood circulation smooth so that the body relaxes. This intervention can be applied as a non-pharmacological therapy in the management of hypertension.
Corresponding Author	: Dhina Widayati
Affiliation	: Bachelor's Degree Program in Nursing, Stikes Karya Husada Kediri, East Java, Indonesia
🖻 Email	: budinawida@gmail.com
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Introduction

Hypertension is a disorder of blood circulation which results in an increase in blood pressure above 140/90 mmHg which can attack various groups regardless of age, social and economic status so it is called a heterogeneous group disease (Lasmadasari et al., 2021). Even though it is often known as the silent killer because the symptoms are difficult to recognize and often show no symptoms or no complaints, hypertension sufferers often experience headaches which can disturb comfort (Siauta et al., 2020). Increased blood pressure in hypertension sufferers is one of the causes of disturbances in comfort that can occur in biological, psychological, social and other aspects spiritual(Rosadi et al., 2023). Based on studies conducted regarding the description of

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discomfort in hypertensive sufferers, it was found that 75.2% of hypertensive sufferers experienced discomfort with details: (80.7% in biological aspects, 67% in psychological aspects, 64.2% in social aspects and 70.6% in spiritual aspect) (Insana, 2018). This uncomfortable condition can worsen the condition of hypertension sufferers (Widayati & Hayati, 2017).

Data from the World Health Organization (WHO) for the period (2015-2020), the world's population suffering from hypertension reached 1.13 billion, meaning that 1 in 3 people in the world are diagnosed with hypertension. In 2018, the number of hypertension sufferers in Indonesia was recorded at 45.3%. The incidence of hypertension in East Java reached 22.7% or 2,360,592 people. Data from Talun Health Center showed that there were 120 hypertensive patients aged over 18 years, with the maximum female gender reaching 75% or 90 people. 40% indicated problems of physical discomfort including headaches, sore neck, fatigue and difficulty sleeping. 20% of them showed discomfort from psychospiritual aspects such as fear of negative death. assumptions about themselves, fear that their illness would get worse, despair that could lead to suicide. 30% due to social aspects including feeling afraid of their role being disrupted, their role as a parent and their role as a wife. 10% of them are from environmental aspects which include weather, climate, air. uncomfortable surroundings. The way to overcome this problem are only focused on pharmacological therapy by antihypertension drugs and analgetic. In fact, in era there the current are many developments related to nonpharmacological therapy but they have not been properly optimized.

Hypertension which is characterized by increased blood pressure caused by many factors that can be changed are physical factors and psychological factors. Physical factors include obesity, high salt intake, smoking habits and lack of exercise. Meanwhile, psychological factors include emotional stress, anxiety, fear, pain, comfort, anxiety which can increase blood pressure (Lumintang et al., 2023). Meanwhile, factors that cannot be changed include genetics, race, age and gender (Rahmadhani, 2021). Hypertension also occurs due to several risk factors, namely family history, poor living habits, poor diet patterns and poor sleep quantity. Poor sleep quantity will trigger more sympathetic nervous system activity and cause physical and psychological stressors. Lifestyle is an important risk factor for the emergence of hypertension in a person, including adults (Widayati, Girianto, et al., 2022). Unhealthy lifestyles include smoking, lack of exercise, consuming less nutritious food and stress (Afrian et al., 2018). Apart from lifestyle, stress levels are thought to have an effect on increasing blood pressure.

This type of factor that causes hypertension is able to stimulate the blood vessels and adrenal glands by activating the sympathetic nervous system to increase the vasoconstriction process, this is due to the influence of the secretion of the hormones epinephrine and norepinephrine in the adrenal medulla. When vasoconstriction occurs, it can reduce blood flow to the kidneys, causing the release of the enzyme renin, which will convert angiotensin I to angiotensin thereby II, increasing intravascular volume. (Unger et al., 2020). This process can increase blood pressure, causing discomfort in hypertensive patients (Widayati & Hayati, 2017). A person experiences stress, the catecholamines in the body will increase, thus affecting the mechanism of sympathetic nerve activity, and there will be an increase in sympathetic nerves, when sympathetic nerves increase, heart muscle contractility will occur, causing cardiac output to increase, this

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situation tends to be a factor that triggers hypertension (Hidayati, 2022).

According to the theory put forward by Kathrine Kolcaba, comfort includes 4 aspects, there are physical, psychospiritual, social and environmental aspects. The impact from the physical aspect includes disease complications such as kidney failure, diabetes mellitus, stroke, heart disease and gradual weakness of the nervous system. From a psychospiritual aspect, it causes a feeling of despair so that there is a desire to end one's life. One of the impacts on social aspects is the disruption of one's role as a human as usual, causing recurring anxiety and resulting in an increase in blood pressure. From the environmental aspect, it is the weather, climate. surrounding environmental conditions that cause discomfort to sufferers. So in efforts to reduce the negative impact of hypertension, it is necessary for nurses to overcome discomfort in hypertension sufferers in accordance with the principles of hypertension management, namelv reducing blood pressure within normal limits and preventing complications, one of which is by restoring comfort.

Efforts to prevent and control hypertension begin with discomfort which management includes pain management and stress management as a form of integration of nursing care to achieve holistic aspects of comfort including psychospiritual. physical. social and environmental comfort. This is related to Kolcaba's comfort theory which defines the need for health services as a need for comfort. Comfort is more than the absence of problems from physical, psychospiritual, social and environmental aspects. To achieve this need for comfort, it can be achieved by using the intervention model from Kolcaba including Standard Comfort Interventions which are given in the form of maintaining vital signs, administering antipain medication. Coaching is provided in the form of stress management to reduce anxiety, provide health information, listen to patient hopes and help patients to recover. Comfort Food for the Soul is provided in the form of massage, an adaptive environment that creates peace and tranquility so that the highest degree of comfort is achieved according to Kolcaba, namelv transcendence. Bv restoring discomfort, it can be ensured that the patient will also recover. So, to reduce the negative impacts and maintain the comfort of hypertension sufferers, one way is by relaxing as a technique to reduce stress which can trigger high blood pressure (Rosadi et al., 2023). Relaxation is one of comfort management with integration of nursing care to achieve holistic aspects of comfort (physical, psychospiritual, social and environmental aspects). This coaching and comfort food for the soul, which is given in the form of massage, including efflurage back massage. This intervention has almost the same mechanism as anti-hypertension drugs which begins with a relaxation process in the vascular smooth muscle, so reduce the hormones that it can epinephrine and norepinephrine by providing a stimulus to the hypothalamus to suppress the sympathetic nerves which makes the heart work decrease and is followed by a decrease in blood pressure so that can increase comfort for sufferers (Rosadi et al., 2023).

Effleurage back massage is a gentle massage therapy on the tissue which aims to have a physiological effect, especially on the muscular, vascular, and nervous systems of the body and functions to improve blood circulation and provide a comfort effect so that the body will feel relaxed, thereby helping to provide a comfort effect. The physical effect will be changes in tissues or organs which will

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cause increased blood flow to the muscles. increased blood circulation to the skin, parasympathetic increased activity. increased relaxation hormones and decreased stress hormones. The psychospiritual effect will increase the relationship between body and soul which will cause increased relaxation, reduced and increased comfort anxietv in hypertension sufferers. In the social environmental effect, there will be an increase in endorphin hormones which stimulate the production of the hormones dopamine and serotonin. Increased levels of the dopamine hormone cause reduced anxiety, while increased levels of the serotonin hormone can reduce sleep disturbances which causes patients to relax and indirectly distract and reduce discomfort in their environment.(Widayati, Hayati, et al., 2022). The aim of this research was to determine the effect of efflurage back massage on the comfort level of hypertension sufferers.

Methods

This research uses a pre-experimental design. The sample size ware 32 respondents by purposive sampling with the inclusion criteria: (1) sufferers of grade 2 hypertension with blood pressure of 160-179 mmHg, (2) aged 45-55 years, (3) not taking medication, (4) have never perform or receive efflurage back massage therapy. The independent variable is Efflurage Back Massage given for 4 times once a day with a duration of 15 minutes. The dependent variable is comfort level which is measured the General Comfort using Short Questionnaire (SGCQ) containing 20 questions with comfort components in the form of physical comfort, psychospiritual comfort, environmental comfort and social comfort. This research has gone through an ethical testing process and was declared ethically worthy with number 021/EC/LPPM/STIKES/KH/I/2024

Results

Identify the comfort level before and after the efflurage back massage intervention for hypertension sufferers.

a .	Efflurage Back Massage			
Category	Pre Test		Post Test	
	F	%	F	%
 Very Uncomfortable (20-36) 	24	75	0	0
 Uncomfortable (36-52) 	8	25	0	0
 Comfortable (52-68) 	0	0	0	0
4. Very Convenient (68-84)	0	0	2	6,3

Table 1 Frequency Distribution of Comfort Levels Before and After Efflurage Back Massage Intervention for Hypertension Patients

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5. Very comfortable	0	0	30	93,7	
(84-100)					
Total	32	100	32	100	
Mean	3.	35,1		89,7	

Based on table 1, it shows that the comfort level of hypertension sufferers before being given the effleurage back massage intervention, most respondents (75%) had a comfort level in the very uncomfortable category. However, after being given the efflurage back massage intervention, the comfort level of respondents had a very significant change, namely almost all respondents (93.7%) were in the very comfortable category. The mean comfort level on the pretest was 35.1 and on the posttest was 89.7. Has an increase of 54.6.

Discussion

Identify the comfort level before carrying out the efflurage back massage intervention for hypertension sufferers.

Based on the research results obtained before the efflurage back massage intervention was carried out on hypertension sufferers in Jajar Village, Talun Bitar District, it showed that the majority (75%) of respondents had a comfort level in the very uncomfortable category and the rest (25%) had a comfort level in the uncomfortable category. The average comfort level in the pre test was 35.1.

According to Kolcaba, comfort is a condition where basic individual and holistic human needs have been fulfilled from all aspects of the associated physical, psychospiritual, environmental and social dimensions. Comfort is the experience a person receives from an intervention. This is also in line with what Widayati, 2027, wrote that a person's comfort is a direct and comprehensive experience when physical, psychospiritual, social and environmental needs are met and this also agrees that one of the factors that influences a person's comfort is illness. The concept of comfort theory includes comfort needs, comfort interventions. intervention variables. comfort enhancement. health seeking behavior and institutional integrity (Widayati & Hayati, 2017).

Physiologically, comfort was influenced by 4 aspects of comfort characteristics by Colcaba. For example, for real respondents, the physical discomfort they experienced included headaches, sore necks, nausea and difficulty sleeping, which prevented them from working as they usually do. Meanwhile, in the social aspect, if work is not carried out well it will have an impact on finances, the economy will suffer and the sufferer's quality of life will be low because in social life essentially humans cannot live alone so they need help from other people in carrying out certain activities related to surrounding communities such as invitations, thanksgiving and community service. Environmental aspects include uncertain weather, an environment that is too noisy, room temperatures that are too hot or cold, causing sufferers to be unable to rest comfortably. Meanwhile. the psychospiritual aspect is influenced by perception. Factors that can influence perceptions include employment, income, education and length of suffering.

Based on job characteristics, it was found that almost all respondents (37.5%) worked as farmers. The psychological burden on farmers, in certain positions, is thinking about the costs of opening rice fields, buying seeds, plowing fields and paying laborers. The highest distribution of

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income is in the nominal range of IDR 1,000,000 to IDR 2,000,000, which is almost half (37.5%) of all respondents. Meanwhile, farmers' income is approximately once every 3-4 months and there are no continuous expenses, so this affects their psychological atmosphere and causes an increase in blood pressure which will affect the condition of discomfort. If this condition cannot be compensated, it will affect social aspects and cause social responses towards the husband, social responses towards children are not good so that it affects contribution to the environment or stimulus to the environment will affect discomfort. This is reinforced by the employment factor and supported by a person's income.

The distribution of data on education level showed that the majority of the data (56.3%)was at the junior high school/equivalent level. Based on these facts, the respondent's education influences a person's knowledge and length of suffering. The results of this research show that the majority of respondents have junior high school/equivalent education, so based on facts in the field the higher the level of education, the broader and better their knowledge, it could be that they have long experience in managing hypertension so they have been exposed to information for quite a long time in dealing with their illness. The length of time you suffer from hypertension also affects a person's ability to adapt to the disease and carry out hypertension management. Respondents do not have much information and knowledge about strategies to increase comfort, all they know is traditional medicine and the use of toga plants such as drinking celery juice, boiling avocado leaves. But this is a treatment to reduce blood pressure, not reduce discomfort. The higher the level of education, the easier it is to receive health information. On the other hand, the lower the level of education, the more difficult it will be to receive health information, resulting in reduced patient behavior in treating the disease, resulting in the risk of discomfort and complications for the sufferer. (Dhirisma & Moerdhanti, 2022).

Based on experience or duration of suffering from hypertension, the majority (75%) had a history of suffering from hypertension for less than 5 years. Suffering from hypertension for a long time affects the elasticity of blood vessels. The blood vessels and adrenal glands work by activating the sympathetic nervous system to increase the vasoconstriction process, this is due to the influence of the secretion epinephrine of the hormones and norepinephrine in the adrenal medulla. When vasoconstriction occurs, it can reduce blood flow to the kidneys, causing the release of the enzyme renin, which will convert angiotensin I to angiotensin II, thereby increasing intravascular volume(Rahmawati & Kasih, 2023). This process can increase blood pressure, causing discomfort in hypertensive patients (Rosadi et al., 2023). A person experiencing stress, the catecholamines in the body will increase, thus affecting the mechanism of sympathetic nerve activity, and there will be an increase in sympathetic nerves, when sympathetic nerves increase, heart muscle contractility will occur, causing cardiac output to increase, this situation tends to be a trigger factor for hypertension which causes discomfort in hypertensive sufferers (Hidayati, 2022).

Identify the level of comfort after efflurage back massage intervention for hypertension sufferers

After the efflurage back massage intervention was carried out on hypertension sufferers in Jajar Village, Talun Bitar District, it showed that all (100%) of the respondents experienced an

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increase in comfort, being in the very comfortable category. The average comfort level on the post test was 89.7. There was an increase in average comfort of 54.6.

The factors that influence a person's comfort are more than the absence of problems from physical, psychospiritual, social and environmental aspects and also freedom from pain, depression and guilt. To achieve this need for comfort, it can be achieved by using the intervention model from Kolcaba including Standard Comfort Interventions which are given in the form of maintaining vital signs, administering antipain medication. Coaching is provided in the form of stress management to reduce anxiety, provide health information, listen to patient hopes and help patients to recover. Comfort Food for the Soul is provided in the form of massage, an adaptive environment that creates peace and tranquility so that the highest degree of comfort is achieved according to Kolcaba, namelv transcendence. Bv restoring discomfort, it can be ensured that the patient will also recover. So, to reduce the negative impacts and maintain the comfort of hypertension sufferers, one way is by relaxing as a technique to reduce stress which can trigger high blood pressure. (Rahmadhani, 2021).

One way to maintain patient comfort is by practicing relaxation as a technique to reduce factors that can trigger high blood pressure (Falo et al., 2023). This happens because in the efflurage back massage intervention the patient is taught how to carry out manipulation therapy with gentle massage on the tissue of the back area for \pm 15 minutes so that it aims to have a physiological effect by reducing the hormones epinephrine and norepinephrine. Provide a stimulus to the hypothalamus to suppress the sympathetic nerves which makes decrease of blood pressure. This vasodilator effect on the blood vessels will also have an impact on the body so that it relaxes so that the patient's comfort will be maintained (Hidayati, 2022).

The aim of nursing care with efflurage back massage is not only to provide comfort during the care process, but also to reduce blood pressure. The physical effect will be changes in tissues or organs which will cause increased blood flow to the muscles, increased blood circulation to the skin, parasympathetic increased activity, relaxation hormones increased and decreased stress hormones. The psychospiritual effect will increase the relationship between body and soul which will lead to increased relaxation, reduced increased anxietv and comfort in hypertension sufferers. The social environmental effect that will occur is increasing the vasodilator function of blood vessels, thereby making blood circulation smooth, which ultimately has an impact on increasing comfort for sufferers. If sufferers experience increased comfort, this will cause their role as parents, as wives and as members of society to improve so that sufferers feel relaxed in their bodies and indirectly distract and reduce discomfort in their environment and social life. (Rosadi et al., 2023). Apart from that, there are demographic factors that also influence it, including employment, income, education and length of suffering.

After treatment or post test results, there is an increase comfort of 54.6. This is because efflurage back massage has a mechanism to increase the vasodilator function of blood vessels, thereby making blood circulation smooth and followed by a decrease in blood pressure and causing the release of endorphine hormones which stimulate the production of the hormones dopamine and serotonin. The increasing levels of the dopamine hormone cause reduced anxiety, while the increasing

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serotonin hormone can reduce stress which causes the patient to relax and indirectly distracts and increases the patient's comfort and decreases pain. The results of data analysis after treatment on special data showed an increase in comfort scores compared to the pre-intervention results, which means that this intervention was able to increase comfort in accordance with Kolcaba's comfort aspects which include physical, psychospiritual, environmental and social comfort.

Information sources are anything that acts as an intermediary in conveying information and influencing someone's knowledge. The increase in score after being given the efflurage back massage intervention is related to patterns and behavior to overcome the discomfort they experience. This is useful for lowering blood pressure and increasing comfort in accordance with the highest level of comfort according to Kolcaba, namely transcendence and still paying attention to aspects of physical, psychospiritual, comfort. environmental and social.

Based on the facts and theory above, there is an increase in comfort scores within normal criteria, caused by the health interventions that respondents have received regarding the efflurage back massage intervention. This intervention greatly influences the comfort of hypertension sufferers from the very uncomfortable to very comfortable category because the researchers directly carried out the intervention according to Standard Operating Procedures with the pressure and depth that had been measured.

Conclusion

Efflurage back massage can increase comfort in hypertension sufferers. This intervention can be used as an intervention in hypertension management to reduce blood pressure so that the comfort of hypertension sufferers can increase.

Authors Contributions

The process of research and manuscript was carried out with good cooperation from the writing team. The person who responsible for the process of collecting data and writing articles for publication is the first author who also serves as correspondence. The data analysis process was assisted by second author. The role of the third author is to assist the data collection

Conflicts of Interest

In this project, all of components can coordinate and communicate well so that everything well done and there are no conflicts of interest

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