



Spiritual emotional freedom technique (SEFT) with lavender aroma therapy toward anxiety, coping mechanism and blood pressure in hypertension patients

Yeni Yulistanti^{1*}, Mardiyono², Sri Endang Pujiastuti³

¹ Nursing Students, Postgraduate Program, Master Applied of Health, Indonesia

^{2,3} Politeknik Kesehatan Kemenkes Semarang, Semarang, Indonesia

Abstract

Background: Hypertension is the most common cause of stroke, heart failure and kidney failure. Hypertension is very common in the community and is often referred to as the "silent killer". The long-term effects of hypertension can cause damage to vital organs that are potentially deadly. Management of hypertension, among others, with pharmacological and non-pharmacological. One of the non-pharmacological management that is recognized as an approach to dealing with problems both physically and psychologically and incorporating spiritual aspects is to treat Spiritual Emotional Freedom Technique (SEFT) and lavender aroma therapy.

Method: This research is a True Examination with Stratified Random Sampling. In the intervention group and the control group each consisted of 32 respondents. The intervention applied is the Spiritual Emotional Freedom Technique (SEFT) with lavender aroma therapy with a duration of 1x30 minutes / day for 14 consecutive days. Data analysis for anxiety and coping mechanisms using design pretest-posttest with paired sample t-test, independent t-test and Repeated Measure ANOVA.

Results: The results showed a decrease in anxiety level to 36.28 (mild anxiety, $p=0.000$), increased coping mechanism to 125.63 (adaptive coping mechanism, $p=0.001$) and a decrease in systolic blood pressure to 137.69 mmHg (normotension, $p=0.000$). There is no statistical effect on diastolic blood pressure but can reduce diastolic blood pressure to the normal category.

Conclusion: SEFT therapy with lavender aromatherapy duration of 1x30 minutes / day for 14 consecutive days can reduce anxiety levels, improve coping mechanisms and reduce systolic blood pressure.

Keywords: Spiritual Emotional Freedom Technique (SEFT), lavender aroma therapy, anxiety, coping mechanisms, blood pressure, hypertension

1. Introduction

Hypertension is a phenomenon of health problems that can cause disability or death. Hypertension is the most common cause of stroke, heart failure and kidney failure ^[1]. Hypertension is very common in the community and is often referred to as the "silent killer" because it does not kill directly. The long-term effects of hypertension can cause damage to vital organs that are potentially deadly. Hypertension is a threat because the morbidity and mortality are very high but the phenomenon is like an iceberg ^[2]. Many individuals do not realize that they are suffering from hypertension so they do not go to a health service. When first experiencing hypertension, complaints are not felt but when blood pressure gets higher for a long period of time, the problems experienced are more severe because of widespread organ damage, complications and deaths such as stroke, heart failure and kidney failure ^[1].

The number of people with hypertension is increasing every year. The World Health Organization (WHO) estimates that by 2025 there will be 1.5 billion people with hypertension and an estimated 9.4 million people will die from hypertension and hypertension complications ^[1]. Apart from the increasing number, uncontrolled hypertension can cause complications such as stroke, kidney failure and cardiovascular disease which is the number one cause of death in the world ^[3].

The World Health Organization or WHO in 2015 obtained

data that there were around 1.13 billion people in the world suffering from hypertension. Especially for the Southeast Asia region there are an estimated 1.5 million people per year who die from hypertension ^[4]. Basic Health Research (Riskesdas) in 2018, showed that in Indonesia there was an increase in the prevalence of hypertension compared to the previous period of 8.3%. The prevalence of hypertension in Indonesia currently reaches 34.1% for the national level where the highest prevalence occurs in South Kalimantan (44.1%) and the lowest in Papua (22.2%) ^[5].

The incidence of hypertension in Central Java Province is based on blood pressure measurements in residents aged ≥ 18 years, the highest percentage is 77.72%, namely in Salatiga City, while the lowest percentage is in Kendal Regency (2.72%). Magelang City as one of the areas in the Central Java region ranks fifth highest for the percentage of patients with hypertension which is equal to 53.92% ^[6].

Hypertension sufferers at the Magelang North Health Center, from January to June 2018 as many as 859 people. Many sufferers do not check regularly for health services because they feel there are no complaints, but people with hypertension will come back if complaints arise such as a tense neck, dizziness and headache.

The high incidence of hypertension is inseparable from lifestyle changes such as obesity, lack of physical activity, smoking habits, alcohol consumption, high consumption of salt and cholesterol and anxiety. Anxiety is a psychological

problem that often causes hypertension [7]. Anxiety and hypertension have a reciprocal relationship where anxiety can cause an increase in blood pressure and high blood pressure can cause anxiety [8]. Hypertension sufferers are expected to have adaptive coping mechanisms to overcome their health problems. Coping mechanisms will affect anxiety in patients with hypertension, where a good coping mechanism can reduce anxiety due to the disease. A good coping mechanism will influence the interpretation of the causes of the disease or symptoms of chronic diseases and will influence the decision making to seek health services, make prevention of complications and also follow the advice of the health team [9]. Proper decision making can determine the choice of actions that are appropriate for the disease to prevent the severity of the disease [10].

Management of hypertension, among others, is pharmacological and non-pharmacological. Antihypertensive drugs that are often given as beta blockers, ACE inhibitors and ARBs as a single therapy or can be given as a combination therapy of this type. Antihypertensive drugs must be taken within a certain period of time and at certain doses [11].

The role of nursing is very important in dealing with hypertension through efforts to improve health, prevent hypertension and serve patients who are sick. Nursing interventions pay attention to comprehensive biological, psychological, cognitive, social, cultural and spiritual aspects [12]. Nonpharmacological therapies that have been known to reduce blood pressure include the administration of lavender aromatherapy by giving 2 drops of lavender aromatherapy for 3 consecutive days with a duration of 5 minutes proven to reduce systolic and diastolic blood pressure in patients with prehypertension and stage one hypertension. The decrease in the average systolic blood pressure is 8,469 mmHg and the average diastolic pressure is 5.31 mmHg with a value of $p = 0,000$ [13]. In another study, lavender aromatherapy reduced systolic blood pressure from 161.76 mmHg to 149.99 mmHg with a value of $t = 2.40$ and a value of $p = 0.023$ but lavender aromatherapy did not provide a significant change in diastolic blood pressure with a value of $u = 74.50$ and $p = 0.096$ [14].

Therapy that is recognized as an approach to dealing with problems both physically and psychologically and incorporating spiritual aspects is through the therapy of Spiritual Emotional Freedom Technique (SEFT). Rofack's research on SEFT carried out for 1 x 15 minutes a day showed a decrease in the average systolic pressure after treatment of 1.46 mmHg to 157.47 mmHg with a value of $p = 0.000$ and a diastolic pressure decreased by 0.67 mmHg to 88 mmHg with a value of $p = 0,000$. Although it appears to have decreased but its size is very small and is still in the category of hypertension [15]. SEFT therapy, which was examined by Lismayanti, showed a decrease in blood pressure in elderly patients over 65 years of age, namely a decrease in systolic blood pressure from 175 mmHg to 171 mmHg with a value of $p = 0.000$ and a diastolic blood pressure drop from 93.6 mmHg to 92.5 mmHg. Research

that only used one intervention group did not show a change in blood pressure to the normal value of $<140/90$ mmHg [16]. Anxiety as one of the causes of hypertension needs to be treated. One of the actions that has been examined is that giving SEFT therapy for 1 x 15 minutes can reduce anxiety from 15.65 to 8.42 [17]. Lavender Aromatherapy can also reduce anxiety from the value of 19.83 to 11.34 with a significance value of $p = 0.000$ [18].

Based on the description above, the management of hypertensive patients who have been carried out is still not effective or has not shown benefits in reducing blood pressure to normal levels. Combining SEFT therapy with lavender aromatherapy by increasing the dose, duration and intensity of therapy to 30 minutes per day for 14 consecutive days is expected to have an effect on anxiety, coping mechanisms and blood pressure in patients with hypertension.

2. Methods

This type of research used research True Experiment with a approach to randomized pre-post test with controle group design. The researchers compiled two groups, namely the intervention group given combination therapy of Spiritual Emotional Freedom Technique (SEFT) with lavender aroma therapy and the control group that was only given anti-hypertensive drug therapy. The combination therapy of Spiritual Emotional Freedom Technique (SEFT) with lavender aroma therapy is given with a duration of 1x30 minutes per day on 14 consecutive days. Blood pressure measurement can be done using the spigmo digital manometer instrument, anxiety assessment using the Zung Self Rating Anxiety Scale (ZSAS) questionnaire and the instrument Jaloweic Coping Scale (JCS) questionnaire for the assessment of respondent coping mechanisms. Blood pressure measurements, anxiety assessments and coping mechanisms of respondents who have hypertension are carried out before and after the therapeutic action (day 15). The population in this study were hypertensive patients in the work area of North Magelang Health Center during April to June 2019. Determination of the minimum number of samples using probability sampling techniques with method stratified random sampling and based on inclusion and exclusion criteria as many as 64 respondents divided into two groups with each 32 respondents in the intervention group (a combination of Spiritual Emotional Freedom Technique (SEFT) and lavender aroma therapy) and 32 respondents in the control group (anti-hypertensive drug therapy).

In this study researchers conducted data collection by observing, identifying, interviewing and filling out the questionnaire. The collected data was analyzed through the IBM SPSS program version 24.0, and continued with a different test namely parametric test (Paired t test, Independent t test and Repeated Measure ANOVA). The processed data is used as the basis for discussing problem statements, which are then presented in table form so conclusions can be drawn.

3. Results

Table 4.1: Frequency distribution respondents from age, sex, education, occupation, body mass index and anti-hypertensive drugs based on demographic data

Characteristics Respondents		Intervention Group (N = 32)			Control Group (N = 32)			p
		f	%	mean±SD	f	%	mean±SD	
Age	Mean±SD	56.72±5.555			57.75±6.436			0.495
	Min-max	47-69			46-66			
Gender	Male	8	25		11	34.4	8	25
	Female	24	75		21	65.6	24	75
Education	Elementary School	10	31.3		6	18.8	10	31.3
	Junior High School	7	21.9		5	15.6	7	21.9
	High School	11	34.4		17	53.1	11	34.4
	College	4	12.5		4	12.5	4	12.5
Work	ASN / TNI / Police	5	15.6		2	6.3	5	15.6
	Private Employees	6	18.8		10	31.3	6	18.8
	Entrepreneurship	7	21.9		5	15.6	7	21.9
	House wife	9	28.1		11	34.4	9	28.1
	No Work / Pension	5	15.6		4	12.5	5	15.6
Body Mass Index	Mean±SD	27.58±1.638			27.42±1.636			0.698
	Min-Max	24.7 – 29.9			25.0-29.8			
Anti-hypertensive Drug	Amlodipine 5 mg	16	50		16	50	16	50
	Amlodipine 10 mg	16	50		16	50	16	50

*Homogeneous Tests

Based on the table above the data shows that the mean age at intervention group 56.72 years with a minimum age of 47 years and age 69 years maximum. While in the control group, the average age was 57.75 years with a minimum age of 46 years and a maximum age of 66 years. Respondents in both groups were in the age range of the elderly. In the intervention group 8 (25%) respondents were male and 24 (75%) were female. While in the control group there were 11 (34.4%) respondents and female respondents as many as 21 (65.6%). In the intervention group the most respondents had high school education which was 11 (34.4%)

respondents while the control group also had the highest number of respondents at the high school education level which was 17 (53.1%). Occupations as housewives occupy the highest number in the intervention group, namely 9 (28.1%) respondents and in the control group as many as 11 (34.4%) respondents. Body mass index in the intervention group and the control group were in the range of level I obesity. Respondents who used antihypertensive drugs in the form of amlodipine 5 mg for grade 1 hypertension were 16 (50%) respondents and amlodipin 10 mg for second degree hypertension 16 (50%) respondents in each group.

Table 4.2: Differences in average value of anxiety in the intervention group and control group

Anxiety	Intervention Group			Control Group		
	Mean±SD	Δ mean	p	Mean±SD	Δ Mean	P
pre-test	49.59±2.513	13.313	0.000	49.72±3.175	0.72	0.298
post-test	36.28±7.489			50.44±4.079		

*Paired t test

Table above shows that in the intervention group the average value of anxiety before the intervention and after intervention the average value of anxiety decreased with an average difference of 13.313. In the control group the average value of anxiety before and after the intervention increased with an average difference of 0.72. In the control

group there was no significant difference between the value of anxiety before and after the intervention with a value of p = 0.298. In the intervention group the value of p=0.000 so that it can be concluded that SEFT therapy with lavender aroma therapy can reduce the level of anxiety from the anxiety category to be significantly mild anxiety.

Table 4.3: Effectiveness SEFT with Lavender Aroma therapy Against Anxiety between the intervention group and control group

Anxiety	Intervention Group	Control Group	Δ Mean	t	P
	Mean ± SD	Mean ± SD			
Pre-test	49.59±2.513	49.72±3.175	0.125	0.175	0.862
Post-test	36.28±7.489	50.44±4.079	14.156	9.391	0.000

*Independent t test

Based on the table above shows the difference in the average value of anxiety after the intervention between the intervention group and the control group was 14.156 with a value of p=0.000. This shows a significant difference between the intervention group and the control group. Hypothesis testing to determine the effect of the

intervention can be seen in the value of t after the intervention that is equal to 9.391 (greater than t table = 1998). Based on the results of the t test it can be concluded that the administration of SEFT combination therapy with lavender aromatherapy with a duration of 1x30 minutes / day for 14 consecutive days can reduce the value of anxiety

from anxiety being mild anxiety.

Table 4.4: Difference in mean value of coping mechanism in intervention group with control group

Coping Mechanism	Intervention Group			Control Group		
	Mean±SD	Δ Mean	p	Mean±SD	Δ Mean	p
Pre-test	115.88±6.666	9.75	0.000	116.06±6.796	3.97	0.000
Post-test	125.63±6.950			120.03±5.337		

*Paired t test

Based on the table above shows the average value of the coping mechanism before intervention in the two groups is in the range of the value of the maladaptive coping mechanism. After the intervention, the value of the coping mechanism in the intervention group increased by 9.75 from 115.88 to an average of 125.63 (p=0.000) which included an

adaptive coping mechanism, whereas in the control group the average coping mechanism increased 3.97 to 120.03 (p=0.000) which includes maladaptive coping mechanisms. Judging from the significance value, both in the intervention group and the control group experienced a significant increase in the coping mechanism with p=0.000.

Table 4.5: Effectiveness SEFT with Lavender Aroma therapy Against Coping Mechanism between intervention group and control group

Coping Mechanism	Intervention Group	Control Group	Δ Mean	t	P
	Mean±SD	Mean±SD			
Pre-test	115.88±6.666	116.06±6.796	0.188	0.111	0.912
Post-test	125.63±6.950	120.03±5.337	5.594	3.611	0.001

*Independent t test

Based on the table above shows that the difference in the average value of the coping mechanism after intervention between the intervention group and the control group was 5.594 with a value of p = 0.001. This shows a significant difference between the intervention group and the control group. Hypothesis testing to determine the effect of the intervention can be seen in the value of t after the

intervention that is equal to 3.611 (greater than t table = 1998). Based on the results of the t test it can be concluded that the administration of combination SEFT therapy with lavender aroma therapy with duration of 1x30 minutes / day for 14 consecutive days can increase the value of maladaptive coping mechanisms to adaptive coping mechanisms.

Table 4.6: Comparison of changes in the average value of systolic blood pressure and diastolic between the intervention and control groups

Variable		Intervention Group	Control Group	Δ Mean	t	p
		Mean±SD	Mean±SD			
Systolic blood pressure	Pre-test	158.91±8.255	158.72±8.448	0.188	0.090	0.929
	Post-test 5th day	148.53±6.768	149.19±8.910	-0.656	-0.332	0.741
	Post-test 10th day	137.47±5.530	144.88±8.717	-7.406	-4.059	0.000
	Post-test 15th day	137.69±4.928	145.78±8.676	-8.094	-4.589	0.000
Diastolic blood pressure	Pre-test	86.16±4.049	86.28±3.944	-0.125	-0.124	0.901
	Post-test 5th day	84.88±3.424	85.28±3.576	-0.406	-0.464	0.644
	Post-test 10th day	82.78±2.196	83.75±3.767	-0.969	-1.257	0.214
	Post-test 15th day	83.38±2.550	83.75±4.318	-0.375	-0.423	0.674

*Independent t test

Based on the table above shows that the average systolic blood pressure starts to show a significant difference on the 10th day at 7.406 with a value of p = 0.000 and on the 15th day at 8.094 with value of p = 0,000. Meanwhile, the average diastolic blood pressure began to show no significant difference with a significance p value >0.05.

Based on the results of the statistical tests above, it can be proved that the combination therapy of Spiritual Emotional Freedom Technique (SEFT) with lavender aromatherapy with a duration of 1x30 minutes per day for 14 consecutive days can significantly reduce systolic blood pressure compared with no diastolic blood pressure.

Table 4.7: Analysis Differences in Systolic Blood Pressure Drops a Time in the intervention group and control group

(I) Time	(J) Time	Intervention Group		Control Group	
		Mean Difference (I-J)	p	Mean Difference (I-J)	p
Pre-test	Post-test 15th day	21.219	0.000	12.938	0.000
Pre-test	Post-test 5th day	10.375	0.000	9.531	0.000
Pre-test	Post-test 10th day	21.438	0.000	13.844	0.000
Post-test 5th day	Post-test 10th day	11.063	0.000	4.313	0.004
Post-test 10th day	Post-tes 15th day	-0.219	1.000	-0.906	1.000

*Post Hoc Test Pairwise Comparisons

Based on the table above shows changes in systolic blood pressure in the intervention and control groups from pretest

to post-test on the 15th day both decreased significantly with a value of p = 0.000. However, in the control group

systolic blood pressure again increased on the 15th day by 0.906 mmHg with a non-significant increase (p = 1,000).

Table 4.8: Analysis Difference in Diastolic Blood Pressure Between Time in the Intervention Group and Control Group

(I) Time	(J) Time	Intervention Group		Control Group	
		Mean difference (I-J)	p	Mean difference (I-J)	p
Pre-test	Post-test 15th day	2.781	0.000	2.531	0.005
Pre-test	Post-test 5th day	1.281	0.141	1.000	1.000
Pre-test	Post-test 10th day	3.375	0.000	2.531	0.001
Post-test 5th day	Post-test 10th day	2.094	0.015	1.531	0.074
Post-test 10th day	Post-test 15th day	-0.594	1.000	0.000	1.000

**Post Hoc Test Pairwise Comparisons*

Based on the table above shows changes in diastolic blood pressure in the intervention and control groups from pretest to post-test on the 15th day experienced a significant decrease in the value of p = <0.05. The biggest decrease in blood pressure in the intervention group occurred in measurements between pretest to day = 10 of 3.375 mmHg with a value of p=0.000 and a control group of 2.531 mmHg (p=0.074).

5. Discussion

5.1 The Effect Combination SEFT Therapy with Lavender Aroma Therapy on Anxiety

The results of statistical tests that have been carried out indicate that the combination spiritual emotional freedom technique (SEFT) with lavender aromatherapy with duration of 1x30 minutes per day for 14 consecutive days can reduce anxiety from anxiety to anxiety mild in patients with hypertension. Before SEFT combination intervention with lavender aromatherapy the average value of anxiety of respondents was 49.78 which was included in the middle anxiety range and after intervention the average value of anxiety was 36.28 which was included in the range of mild anxiety. The value of t calculated on the results of the paired sample t-test for the intervention group is 10.745 (greater than t table) with a significance degree of p = 0.000. This means that there was a significant decrease in the value of anxiety after an intervention in the form of SEFT combination therapy with lavender aromatherapy.

Based on the results of this study, the combination of SEFT therapy with lavender aromatherapy with a duration of 1x30 minutes per day for 14 consecutive days can be used in health services. This therapy can be used in patients with hypertension to reduce their anxiety level.

Anxiety is an emotional response to an assessment that describes a state of worry, anxiety, fear, not calm or fear of reality or the perception of the threat of an actual source that is unknown or known accompanied by various physical complaints. Anxiety can occur due to various life problems or due to a particular disease [19]. Not all people who experience a psychosocial stressor will suffer from anxiety disorders, this depends on the personality structure [20]. Anxiety is influenced by various factors such as the influence of the id, ego and superego, previous life experiences, family support which is where individuals develop and biological factors associated with hormonal activities and the nervous system [19, 21, 22].

Anxiety can be overcome by providing SEFT therapy which works on a principle similar to acupuncture and acupressure therapy. SEFT includes relaxation techniques which are one form of mind-body therapy from complementary and alternative therapies in nursing. The working principle of SEFT resembles the working principle

of acupuncture and acupressure therapy, namely by providing a stimulus to the acupuncture points on the surface of the body to cure a disease [23].

The mechanism of SEFT in reducing anxiety is by tapping at meridian points that will increase endorphins which are substances or neurotransmitters produced by the body naturally by periaqueductal gray matter. Endorphins that are at the synapse of nerve cells will cause a relaxed condition throughout the body. This relaxed condition will provide comfort and reduce anxiety [24]. Tapping can stimulate the hypothalamus pituitary to produce releasing factors that will stimulate the release of neurotransmitter inhibitors, especially β endorphins, norepinephrine, enkephalin, and serotonin. These hormones are then released into the systemic circulation and reduce the hormone cortisol which causes anxiety so that the body will feel calmer, more comfortable and relaxed [25].

Aromatherapy is an alternative action for relaxation in individuals who experience anxiety. Aromatherapy can increase lymphocytes in peripheral blood vessels and improve the immune system to reduce anxiety. Lavender aromatherapy not only affects the physical but also the emotions. The mechanism of action of the aromatic stamp begins with the olfactory organ where the aroma entering the nose is received by cilia and free nerve receptors on the inside surface of the nose. This free nerve receptor will continue the aroma molecule into an electrochemical message that continues into the olfactory nerve and is transmitted to the limbic system so that it will affect mood and reduce anxiety [26].

A decrease in anxiety after SEFT combination therapy with lavender aromatherapy can be associated with a decrease in the activity of the hypothalamic pituitary adrenal (HPA) axis. Someone who experiences anxiety will show some symptoms associated with the musculoskeletal system in the form of muscle tension, the sympathetic nervous system in the form of increased heart rate, increased blood pressure, increased breathing and activation of the hypothalamic pituitary adrenal (HPA) axis [27].

When molecules from aromatherapy lavender oil enter the nose immediately stimulate free receptors in the cilia that are inside the nose. The molecules of aromatherapy are immediately transmitted in the form of an electrochemical message through the olfactory system into the limbic system which the body responds to feeling calm [28].

The results of this study support previous studies conducted which state that SEFT can reduce anxiety levels in CHF patients. The average value of anxiety before intervention was 123.60 and after the intervention it was 86.10 with p value =0.001. SEFT carried out for three consecutive days can significantly reduce anxiety levels [24]. This study also supports the results of previous studies which proved that

lavender aromatherapy administration can reduce anxiety levels with p value 0.000 (α 0.05). Inhalation of lavender aromatherapy can affect an individual's psychological condition through stimulation of the olfactory nerve endings that deliver to the central nervous system to create a calm feeling^[29].

5.2 The Effect Combination SEFT Therapy with Lavender Aroma Therapy on Coping Mechanism

Coping Mechanism Coping mechanisms are visible and hidden behavioral abilities that are performed by someone to reduce or eliminate psychological tension in stressful conditions^[30]. The results of this study prove that the administration of a combination of spiritual emotional freedom technique (SEFT) with lavender aromatherapy with duration of 1x30 minutes per day for 14 consecutive days can increase the average value of coping mechanisms. Before the intervention the value of the coping mechanism was 115.88 which was included in the range of maladaptive coping mechanisms and the value of the coping mechanism after the intervention was 125.63 which included a range of adaptive coping mechanisms. The difference in the average value of the coping mechanism after intervention between the intervention group and the control group was 5.594 with a value of $p = 0.001$. This shows a significant difference between the intervention group and the control group. Hypothesis testing to determine the effect of the intervention can be seen in the value of t after the intervention that is equal to 3.611 (greater than t table = 1998). So it can be concluded that SEFT intervention with lavender aromatherapy can increase the value of coping mechanisms from maladaptive coping mechanisms to adaptive coping mechanisms.

Koping is a process that an individual goes through in resolving a stressful situation which is an individual response to a situation that threatens both physical and psychological^[31]. Koping is a cognitive effort and behavior used by individuals to resolve demands that occur due to the relationship between humans and their stressful environment^[32].

Hypertension sufferers often feel sadness and feel disappointed. Patients increasingly increase awareness of the symptoms of the disease faced. The condition of chronic diseases experienced makes hypertension sufferers increasingly trying to find out how to actively care for, getting happier in doing hobbies as a diversion and spiritual approach to God so as to foster a feeling of calm^[22].

Spiritual Emotional Freedom Technique (SEFT) is a branch of psychological therapy which is a combination of spiritual power and energy psychology. Addition of the element "S" that is spiritual where the spiritual element is one of the human traits as God's creatures will be able to increase self-acceptance and can support decision making^[33].

Individuals who carry out SEFT therapy can improve their feelings of sincerity, be sincere and surrender to the problems experienced at this time. This condition will increase spiritual awareness. Prayer sentences that are spoken and lived and a positive attitude towards the problems faced are steps to improve individual coping skills. By giving permission and surrender to God, the flow of energy that has been hampered can return to normal and balanced walking^[34].

SEFT combination therapy with lavender aromatherapy together can reduce cortisol hormone levels so that it can

reduce anxiety. Individuals who experience mild anxiety, still have broad perceptions so that they can still develop adaptive coping mechanisms. The better the condition of individual anxiety will increase their coping ability^[35].

SEFT combination therapy with lavender aromatherapy can be carried out in a simple way with the guidelines provided to improve coping mechanisms for people with hypertension. When an individual has an adaptive coping mechanism it will show a positive emotional attitude.

5.3 The Effect Combination SEFT Therapy with Lavender Aroma Therapy on Blood Pressure

The results of this study explain that there was a significant decrease in the average systolic blood pressure in the intervention group with a significance value of $p = 0.000$. The average systolic blood pressure before the intervention of 158.91 mmHg included in the 1st grade hypertension category decreased by 21,219 mmHg ($p = 0,000$) to 137.69 mmHg which was included in the normotension category in the 15th day intervention measure. The measurement of systolic blood pressure on the 10th day decreased by 21,438 mmHg to 137.69 mmHg which was included in the normotensive category. The difference in average systolic blood pressure began to show a significant difference on the 10th day of 7.406 with a value of $p = 0.000$ and on the 15th day amounting to 8.094 with a value of $p = 0.000$. Based on the results of the statistical tests above, it can be proved that the combination therapy of *Spiritual Emotional Freedom Technique (SEFT)* with lavender aromatherapy with a duration of 1x30 minutes per day for 14 consecutive days can significantly reduce systolic blood pressure.

Changes in diastolic blood pressure in the intervention group from the pretest to the *post-test* day 15 experienced a significant decrease of 2,781 mmHg with a value of $p = 0,000$. The biggest decrease in blood pressure occurred in measurements between *pretest* to day to 10 = 3.375 mmHg with a p value=0.000. However, blood pressure on day 15 experienced a non-significant increase of -0.594 mmHg compared to measurements on the 10th day ($p = 1.000$).

The change in mean diastolic blood pressure began to show no significant difference with a significance value > 0.05 . Based on the results of the statistical tests above, it can be proved that the combination therapy of *Spiritual Emotional Freedom Technique (SEFT)* with lavender aromatherapy with a duration of 1x30 minutes per day for 14 consecutive days can not reduce diastolic blood pressure.

Blood pressure is the power used by blood against each unit of the blood vessel wall. Blood pressure is the result of cardiac output and resistance to blood flow that occurs in blood vessels, especially arteries. Blood pressure is measured in millimeters of mercury (mmHg) because mercury manometers have been used as a standard for measuring blood pressure^[36].

The mechanism of the occurrence of essential hypertension is multifactorial. In general, the pathogenesis of hypertension includes the angiotensin-aldosterone renine system, the sympathetic nervous system, the endothelin system, the vascular system, renal hemodynamics and autoimmunity. The RAAS system plays a role in regulating intracellular and extracellular fluid balance. The RAAS system affects blood vessel activity and sympathetic nerves^[37].

Involvement of the central nervous system and autonomic nerves which includes the sympathetic nerves and the

parasympathetic nerves. A number of receptors can increase or inhibit the release of neurotransmitters in the form of norepinephrine (NE). NE is known as a vasoconstrictor agent because all its receptors can spur increased contractions^[37]. Sympathetic stimulation greatly increases heart activity, increases the frequency of the heart and increases the strength of the heart pump. While parasympathetic stimuli will cause a decrease in heart frequency and a decrease in contractility^[36].

Stimulation in the SEFT method uses light (*tappingtapping*) at a certain point to give an effect on the stimulation site or at a place far from the excitation site through the neural, humoral and meridian mechanism pathways. Knocking is done gently at the meridian points. The combination of the three techniques, namely *spiritual power* and *energy psychology* and techniques *tapping* in the energy pathway, is believed to have a good influence on the health of the body^[23].

SEFT can reduce blood pressure because SEFT can reduce sympathetic nerve activity and improve the work of the parasympathetic nerves, so that the body responds in the form of decreased heart rate, decreasing stroke content, vasodilation, and decreased peripheral resistance which causes a decrease in blood pressure^[15].

Giving inhaled aromatherapy using a *diffuser* can break down lavender aromatherapy into small molecules and enter the nose. The nose is moistened and warmed. Small molecules from aromatherapy substances then enter the room of the upper nose which contains fine cilia which are the ends of receptor cells. This fine cilia are enveloped by the mucosa which will capture small molecules. After that it will proceed to the olfactory nerve which will send a scent signal to the limbic system. The limbic system will then activate the hypothalamus which will provide a stimulus to the pituitary gland to secrete hormones related to feeling and regulating blood pressure. Besides passing through the hypothalamus pathway, the limbic system is also passed on to the cortex which will reduce sympathetic nerve activity and modulation of the parasympathetic nerves^[37, 38].

Previous studies on SEFT have been conducted on 30 people with hypertension who have found that there is a decrease in systolic and diastolic blood pressure. The average systolic blood pressure before SEFT was 154 mmHg and after SEFT action it decreased to 138 mmHg. Diastolic blood pressure also decreases on average from 93 mmHg to 88 mmHg. In addition to changes in blood pressure, respondents feel positive changes in the body and feeling like the body feels warm, breathing feels relieved, the body feels lighter and the feeling of calm experienced after SEFT therapy^[39].

Research on the combination of deep breathing with lavender aromatherapy has been shown to reduce systolic blood pressure from before treatment by 148.38 mmHg to 145.51 mmHg and diastolic blood pressure by 92 mmHg to 90.54 mmHg with *p value* = 0.000. Separately, lavender aromatherapy can help individuals reduce anxiety levels, high blood pressure, reduce stress levels, increase the production of the hormone melatonin and serotonin. Giving lavender aromatherapy works by utilizing the olfactory organ. The content of substances in aromatherapy will stimulate olfactory nerve cells and activate the limbic system so that individuals experience relaxation which can reduce blood pressure. Relaxation will trigger the formation of *nitric oxide* (NO) which will cause vasodilation of blood

vessels and lower blood pressure.

6. Conclusion

Based on the results of the research and discussion outlined in the previous chapter, the researcher can conclude that the combination therapy of *Spiritual Emotional Freedom Technique* (SEFT) with lavender aromatherapy is carried out 1x30 per / day for 14 consecutive days, namely:

- 1) Reducing the level of anxiety where the anxiety value before the intervention amounted to 49.78 including the anxiety category was decreased by 13.55 to 36.28 which included the category of mild anxiety with a value of $p = 0.000 (<0.05)$.
- 2) Improving coping mechanisms where the coping value before intervention is 115.88 which includes the maladaptive coping category has increased by 9.75 to 125.63 which belongs to the adaptive coping category with a value of $p = 0.001 (<0.05)$.
- 3) Reducing systolic blood pressure which initially had hypertension with an average systolic blood pressure of 158.91 mmHg decreased by 21,219 mmHg in the measurement of the 15th day of the intervention to a normal blood pressure of 137.69 mmHg with a value of $p = 0.000 (<0.05)$.
- 4) There was no effect of the combination therapy of *Spiritual Emotional Freedom Technique* (SEFT) with lavender aromatherapy on a statistically significant decrease in diastolic blood pressure with a p value = 0.901 (> 0.05). But clinically there is a decrease in diastolic blood pressure to a normal level with an average of 83.38 mmHg.

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