International Journal of Nursing and Health Services (IJNHS)
http://ijnhs.net/index.php/ijnhs/home
Volume 3 Issue 3, June 20th 2020, pp 402-410
e-ISSN: 2654-6310

Spiritual Emotional Freedom Technique (SEFT) Intervention on Blood Pressure among Pregnancy with Hypertension

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Article info

***Article history*:**
Received; July 15th, 2019
Revised: August 12th, 2019
Accepted: September 20th, 2019

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DOI:
10.35654/ijnhs.v3i3.233

Abstract. Pregnant women with hypertension are the most dominant cause of maternal and neonatal mortality in midwifery services. Spiritual Emotional Freedom Technique (SEFT) is a relaxation technique that can provide a relaxed feeling to overcome improve blood flow and reduce blood pressure. The study aimed to examine the effectiveness of giving SEFT to decrease blood pressure in the class of pregnant women with hypertension. A quasi-experimental, pre-test, and post-test with an equivalent control group was applied in this study. We selected 15 respondents using purposive sampling. The SEFT intervention was carried out at 12 points on the body for 1x / day with a duration of 30 minutes for 14 days. The results showed that patients in the experimental group have systolic blood pressure reduction of about 12 mmHg with p-value 0,00. The experimental group has diastolic blood pressure reduction about 12.8 mmHg with p-value 0.00. SEFT given at 12 body points 1x / day with 30 minutes' duration for 14 days proved effective in reducing blood pressure in the class of pregnant women with hypertension. Further research needs to examine SEFT so that other variables related to hypertensive pregnant women can be added by adding a biomarker examination such as Nitric Oxide (NO).

Keyword: spiritual, emotional freedom technique, blood pressure, pregnancy, hypertension

INTRODUCTION

World Health Organization (WHO) in 2015 estimated that around 14% of 289,000 maternal deaths were caused by pregnancy hypertension (1). A tenth of maternal deaths in Asia and Africa are also caused by hypertension in pregnancy. In Indonesia, when Maternal Mortality (MMR) deteriorated by 359 2012 to 305 in 2015, pregnancy hypertension became

one of the causes of maternal death in Indonesia (2). The maternal mortality rate in Central Java in 2017 was 475 cases (32.97%) of maternal deaths caused by hypertension in security (3). Grobogan Regency in 2017 maternal deaths were 18 cases and increased in 2018 as many as 31 cases, which were caused by hypertension in pregnancy as many as 10 cases (4)

As much as one-tenth of maternal deaths in Asia and Africa are also caused by hypertension in pregnancy, Central Java Province, 27.08% of maternal deaths are caused by hypertension in pregnancy. Grobogan Regency in 2017, maternal deaths were 18 cases and increased in 2018 as many as 31 cases caused by hypertension in pregnancy as many as 10 cases (4).

Pregnant women experience physical and psychological changes during pregnancy, one of which is related to anxiety problems (5). The form of the body's response increases adrenaline, CRH, and cortisol, which is significant at 28-30 weeks gestation, so it affects emotional changes. Anxiety experienced by pregnant women can increase blood pressure on average by 30 mmHg (5,6). To maintain the mother and fetus's health, one of them is by participating in the class of pregnant women. Its efforts have not been maximal in dealing with anxiety and hypertension in pregnancy.

Techniques SEFT can provide a feeling of relaxation, improve blood flow, and reduce blood pressure in pregnant women (7,8). "Spiritual Emotional Freedom Technique (SEFT)" includes mind-body relaxation therapy, which works using beats at specific body points. Tapping stimulation at the point of the body causes the production of endorphin, adrenaline, cortisol, which regulates anxiety/stress and psychological stress so that it can lower blood pressure (9-11). Based on this background, the study aims to analyze the effectiveness of the "Spiritual Emotional Freedom Technique (SEFT)" for reducing blood pressure in the class of pregnant women with hypertension

OBJECTIVE

The study aimed to analyze the effectiveness of the Spiritual Emotional Freedom Technique (SEFT) on reducing blood pressure in pregnant hypertension.

METHOD

We conduct a quasi-experimental, pre-test, and post-test with control group design. The variable that will be the object of this study is *the Spiritual Emotional Freedom Technique* (SEFT), which is the independent variable and blood pressure, which is the dependent variable.

Samples in this study were hypertensive pregnant women. Thirty total was allocated in the experimental and control groups. The method of sampling in this study used purposive sampling. This study was divided into two groups. Group one was given SEFT intervention; the second group was a woman pregnant with hypertension class.

The research instruments were used in this study as follows: 1) Observation sheet consisted of respondent's research, date of research, respondent's code, age, gravida, education, employment, physical activity, and LILA, observation sheet of blood pressure 2) Standard Operating Procedures SEFT and physical activity questionnaire.

This research was registered at the Health Research Ethics Commission Faculty of Dentistry Sultan Agung Islamic University, Semarang Number. 054/B.1-KEPK/SA-FKG/IV/2019.

Descriptive analysis is used to describe each variable's characteristics in the percentage, frequency of age, gravida, education, employment, physical activity, and LILA.

Data normality test as a bivariate parameter monitor using the Shapiro Wilk test. Analyzing the blood pressure pre-test and post-test between the experimental groups compared with the control group using the dependent t-test. The Independent t-test was performed to determine the effect of the intervention on blood pressure in the experiment and control group

RESULTS

Characteristic of respondents

Table 1 showed that most of the intervention group's intervention group were multigravida (53.33%). Most of the respondents in the control group were primigravida (66.66%). Respondents in the intervention group had the majority of junior secondary education (46.66%), while in the control group, most of the respondents had upper secondary education (66.6%). The physical activity of respondents in both groups was mostly of moderate intensity. The majority of respondents in the two groups did not work (IRT). The LILA average in the intervention group was 26.3 cm, and the control group was 28.1 cm, with a mean of 1.8 cm. The average age in the intervention group was 31.0 kg, and the control group was 30.0 kg, with a 1 kg difference. One Way Anova Test Results for homogeneity showed p <α (0.05), means the population variance between intervention and control groups are homogeneous or equivalent

Karakteristik Responden	Intervention		Control		P-value*
	n	%	n	%	
Paritas					
Primipara	7	46.66	10	66.66	0.188
Multipara	8	53.33	5	33.33	
Education					
primary school	3	20	2	13.33	0.767
junior high school	7	46.66	3	20	
Senior High School	5	33.33	10	66.66	
Physical Activity					
Light	1	6.66	2	13.33	
Middle	10	66.66	8	53.33	0.769
Weight	4	26.66	5	33.33	
Work					
Entrepreneur	3	20	4	26.66	0.408
Housewife	12	80	11	73.33	
	Mean±SD				
LILA	26.3 ± 2.09		28.1 ± 3.04		0.108
Age	31.0±7.34		30.0±5.45		0.293

The mean difference of systolic blood pressure before and after receiving the SEFT among the intervention group and the control group

Table 2 showed the systole blood pressure in the intervention group, and the control group was normally distributed so that the Bivariate test data used the Dependent T-Test. The difference in the decrease in the intervention group's systole blood pressure was more significant than the control group. The value of the intervention group p-value <0.05 so that there are differences in systolic blood pressure before and after treatment. The value of the control group p value> 0.05 so that there

was no difference in systolic blood pressure in the control group before and after treatment

Table 2. The mean difference of systolic blood pressure before and after receiving the SEFT among the intervention group and the control group

Systole	Before Mean±SD	After Mean±SD	Delta	p-value
Intervention	146.07± 6.48	134.07± 7.02	-12.0	0.00
Kontrol	147.07± 7.65	144.80± 5.64	-2.27	0.57

The mean difference of diastolic blood pressure before and after receiving the SEFT among the intervention group and the control group

Table 3 showed the diastolic blood pressure in the intervention group, and the control group is usually distributed so that the Bivariate test data use the Dependent T-Test. The difference in the decrease in diastolic blood pressure in the intervention group was more significant than the control group. The value of the intervention group p-value and control group <0.05 so that there are differences in systolic blood pressure before and after treatment

Table 3. The mean difference of diastolic blood pressure before and after receiving the SEFT among the intervention group and the control group

Diastole	Before Mean±SD	After Mean±SD	Delta	p-value
Intervention	93.93± 4.30	81.13± 5.98	-12.8	0.00
Control	91.93± 5.13	88.60± 2.97	-3.33	0.02

The mean difference of blood pressure before receiving the SEFT between the intervention group and the control group

Table 4 the difference in mean difference between the intervention group and the control group using the Man-Whitney test because the data distribution is not normal. The value of the intervention group and the control group p-value <0.05. Therefore, there were differences in the mean differences in anxiety levels, systolic blood pressure, and diastolic blood pressure between the intervention group and the control group.

Table 4. The mean difference of blood pressure before receiving the SEFT between the intervention group and the control group

Variable	Intervention group Mean Rank	Control Mean Rank	p-value
Systole	22.80	8.20	0.00
Diastole	22.30	8.70	0.00

The mean difference of blood pressure after receiving the SEFT between the intervention group and the control group

Table 5 systole blood pressure in the intervention group decreased more than the control group. After receiving the intervention, the mean difference of systolic blood pressure between the intervention group and the control group was significant.

Diastolic blood pressure in the intervention group decreased more than the control group. The value of the p-value of the intervention group and the control group after treatment <0.05. Therefore, there were differences in systolic blood pressure between the intervention group and the control group

Variable	Intervention group Mean Rank	Control group Mean Rank	p-value
Systole	134.07	144.80	0.00
Diastole	9.93	21.07	0.00

DISCUSSION

Effect of SEFT on Decreasing Sistole Blood Pressure

SEFT is a relaxation technique that combines body system techniques and spiritual therapy, which is done by emphasizing certain points on the body. SEFT helps individuals free themselves from emotional stress (negative energy), causing increased blood pressure. Lipsky et al. in 2008 stated that high blood pressure could be reduced through lifestyle changes, including doing relaxation techniques (12). Relaxation is one of the self-processing methods based on the workings of the sympathetic and parasympathetic nervous system. This relaxation can inhibit stress or mental tension experienced by a person, impacting blood pressure

A relaxation technique is a technique that will make a person's condition more relaxed or calm. In the mechanism of autoregulation, relaxation can reduce blood pressure through a decrease in heart rate and Total Peripheral Resistance (13,14).

The spiritual, emotional freedom technique (SEFT), including relaxation techniques, is one form of mind-body therapy from complementary therapies, and alternative SEFT nursing is a technique of combining the body's energy system (energy medicine) and spiritual therapy by using tapping at certain points in the body. The average systolic blood pressure in the intervention group decreased by 12 mmHg, and the average systole blood pressure in the control group decreased by 2.94 mmHg. The results of this study were successful in proving that SEFT had a significant effect on reducing systolic blood pressure compared to pregnant women who only attended classes for pregnant women. SEFT decreases adrenaline and cortisol, so heart rate, high blood pressure, and muscle tension decrease. This is reinforced by the Huda and Aini study in 2018, which stated a reduction in blood pressure systole in hypertensive patients in the working area of the annual Puskesmas in Jepara Regency (12).

Based on the results of the research that has been done, the application of SEFT influences the systole blood pressure of pregnant women. This is evidenced by a decrease in the average systolic blood pressure after SEFT therapy, from 146.07 mmHg before treatment, to 134.07 mmHg after SEFT therapy. Systole blood pressure is arterial blood pressure produced during ventricular contraction (14). Systolic blood pressure is often measured by the first sound indication that is heard when blood pressure measurements use a sphygmomanometer manual. This occurs because when the ventricle contracts, the pressure inside the ventricle becomes larger than in the atrium, and the AV valve closes. In a short time, the aortic and pulmonary artery pressure is higher than the pressure inside the ventricle,

so the aortic and pulmonary valves remain closed. As pressure increases in the ventricles, the aortic and pulmonary valves open rapidly, and blood flows out of the ventricles with high speed and pressure. This period of ventricular contraction is called the systole (15,16).

The blood pressure of hypertensive patients is very closely related to the level of emotional or stress factors experienced by hypertensive patients. Stress factors will affect blood pressure changes in a short time, and both affect the rise in blood pressure or a decrease in blood pressure. This is closely related to the human hormonal system, which is influenced by the physiological system and human psychological system (17,18). When humans are in a state of stress, the hormone neropenefrin and epinephrine will be released by the adrenal medulla into the blood, so that these two hormones increase response (fight or flight), in other words, this will lead to a positive chronotropic and inotropic response or will cause blood vessels to become vasoconstrictors so that blood pressure becomes high (19).

SEFT affects blood pressure reduction because SEFT is one of the relaxation techniques to reduce stress. Touch of SEFT by using light beats (Tapping) and combined with a little hypnotherapy and prayer therapy by increasing patient submission to his condition will help hypertension patients feel comfortable so that the patient's stress level decreases and the hormone norepinephrine and epinephrine will gradually be reduced by the adrenal medulla, so that blood pressure slowly drops. The use of SEFT therapy is considered to be quite useful, this is evidenced by the results of research that shows that the systole blood pressure of pregnant women gradually decreases. Also, the use of SEFT therapy will affect the concentration level of pregnant women. This is related to the success factors of SEFT, namely, belief in God, Khusyu, Sincerity, Resignation, and Gratitude (13).

When SEFT therapy, the concentration level of the patient is in top shape. This is evidenced by the patient's body reaction, which can be seen from the facial expressions and movements of the patient's body. When SEFT is given the patient's facial expressions look calm, relaxed, and there is no visible part of the patient's body such as a hand or foot making a motion which indicates that the patient rejects instructions from the therapist, such as the patient scratching a limb or trying to change a sitting position. This can indicate that the patient is very relaxed and follows the therapist's instructions in carrying out SEFT therapy. So SEFT therapy is more effective in lowering cystole blood pressure in both groups compared to pregnant women

Effect of SEFT on Decreasing Diastole Blood Pressure

Hypertension is a disease that is influenced by psychological or emotional factors, this can be seen from various emotional foundations that affect physical illness, namely hypertension is influenced by past unresolved emotional problems (20). Emotional factors of hypertensive patients can be caused from various things, both the patient's rejection of the state of hypertension that is on him, or the patient's life problems that cause emotional disturbances in patients. Hypertension can be overcome by various methods, both medically and non-medically. Non-medical hypertension can be overcome by modifying lifestyle and one of them is by implementing stress reduction techniques and carrying out various relaxation treatments (21,22). SEFT is a relaxation technique that is quite effective in controlling stress in a person, so that the factors that because hypertension can be inhibited, and high blood pressure will gradually change to normal direction (23).

The results of the study successfully proved that SEFT had a very significant effect on the decrease in diastolic blood pressure. The average diastolic blood pressure after SEFT is 12.8 mmHg while pregnant women who only get a class of pregnant women experience a decrease in diastolic blood pressure of 3.33 mmHg. The effect of SEFT on diastolic blood pressure is known from the results of the study, diastole blood pressure experienced a significant change, this is evidenced by a decrease in the average diastolic blood pressure

before and after SEFT therapy, from 93.6 mmHg to 92.5 mmHg. Diastolic blood pressure is arterial blood pressure produced during ventricular relaxation. Diastole blood pressure can usually be known when blood pressure measurements using spignomanometermanual by listening to the last sound when measuring blood pressure (24,25) As with systolic blood pressure, diastolic blood pressure is also strongly influenced by various factors such as consumption of hypertensive drugs, nerve, hormonal, or psychological or emotional factors (26,27,28).

SEFT therapy is effective in reducing diastolic blood pressure in pregnant women. The results of this study contradict the 2015 research by Rofacky and Aini, that SEFT therapy has not been shown to be effective in reducing diastolic blood pressure, because the decline occurs small (5). The Lismayanti and Sari study in 2018, that SEFT was effective in reducing diastolic blood pressure in older people over 65 years who had hypertension with a value of p = 0,000. Elderly diastolic blood pressure changes significantly, the average diastolic blood pressure before and after SEFT therapy, which is 93.6 mmHg, changes to 92.5 mmHg (25). Another study conducted by applying the the relaxation progressive muscle strategy was effective to reduce the blood pressure level (29).

CONCLUSION

In conclusion, based on the results of research, discussion and to answer the research hypothesis, it can be concluded that the intervention of Spiritual Emotional Freedom Techniqur (SEFT) 1x / day with a duration of 30 minutes for 14 days can reduce the average blood pressure of systole 12 mmHg, diastole blood pressure decreased 12.8 mmHg is higher than those not given SEFT. A decrease in blood pressure can be influenced by other factors such as the consumption of hypertension drugs. It can be concluded that there is effectiveness of Spiritual Emotional Freedom Techniques (SEFT) 1x / day with a duration of 30 minutes for 14 days of systolic blood pressure, and diastolic blood pressure

RECOMMENDATION

For Puskesmas and midwifery services, it is expected to develop SEFT interventions as an alternative management and complementary care especially in the pregnant women class regarding anxiety and blood pressure problems. Pregnant women are expected to continue to update all forms of information and knowledge about pregnancy, especially related to blood pressure in pregnant women, and can apply SEFT therapy independently so that they have a positive mindset

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