International Journal of Multidisciplinary Education and Research
ISSN: 2455-4588; Impact Factor: RJIF 5.12
Received: 22-04-2019; Accepted: 25-05-2019
www.educationjournal.in
Volume 4; Issue 4; July 2019; Page No. 95-99

Cupping therapy and self help group toward anxiety in outpatient hipertension patient

Anas Makruf[1], Rr Sri Endang Pujiastuti[2], Diyah Fatmasari[3]
[1] Nursing Student, Postgraduate Program, Masters Applied of Health, Indonesia
[2, 3] Politeknik Kesehatan Kemenkes Semarang, Semarang, Indonesia

Abstract
Background: Hypertension is a condition where a person experiences an increase in blood pressure above normal which results in an increase in morbidity and mortality. Untreated hypertension will cause complications and health problems, such as heart failure, stroke, kidney failure and hypertension retinopathy that can cause blindness. The treatment of hypertension includes pharmacological and non-pharmacological treatments. The use of non-pharmacological therapy deals with hypertension sufferers, one of them is cupping and self help group.
Method: The type of research used a Quasy Experiment with a pre-test-post-test with control group design. This study arranged two groups: an intervention group that was given a cupping treatment for 30 minutes and a self help group carried out for 40 minutes, while a control group was given a treatment self help group for 40 minutes without cupping therapy. Technique Non probability sampling with a purposive sampling method is used to get 40 respondents divided into two groups with each group totaling 20 respondents.
Result: Statistical Independent t tests shows p value > 0.05 so that it can be concluded that there is no difference in the effect of cupping therapy and self-help group against anxiety levels between the intervention and control groups. However, the average level of anxiety decreased better in the intervention group compared to the control group.
Conclusion: The results of research after being given nursing care decreased anxiety levels which were getting better in patients who received cupping therapy for 30 minutes and self help group for 40 minutes, so that complementary therapy was effectively implemented to patients who experience anxiety disorders that cause increased blood pressure especially in hypertension patients.

Keywords: cupping, self help group, anxiety, hypertension

1. Introduction
Hypertension is a condition where a person experiences an increase in blood pressure above normal which results in an increase in morbidity and mortality. Hypertension is a condition where systolic blood pressure is above 140 mmHg and diastolic blood pressure is above 90 mmHg [1]. Hypertension becomes a silent killer because in most cases that do not show any signs and symptoms so that the patient does not know if he is exposed to hypertension, that most people are afraid to check the disease, so do not know that hypertension is the most common risk factor cardiovascular disease [2].
People with hypertension according to the World Health Organization (WHO) estimate the number will continue to increase along with the population increase of 1.5 billion people who suffer from hypertension by 2025 and an estimated 9.4 million people worldwide who die from hypertension and are accompanied by complications. Specifically for the Southeast Asian region there are an estimated 1.5 million people per year who die from hypertension [3]. Aside from the increasing number, uncontrolled hypertension can cause complications such as kidney failure, stroke and other cardiovascular diseases which are the number one cause of death in the world [4].
The prevalence of hypertension based on the results of measurements in the population aged ≥18 years according to the results of the 2013 Basic Health Research (Riskesdas) hypertension in Indonesia is 25.8%, while the Basic Health Research (Riskesdas) 2018, shows that in Indonesia there is an increase in the prevalence of hypertension increasing to 34.1%, for the national level where the highest prevalence in South Kalimantan was around 44.1% and the lowest in Papua was around 22.2% [5]. The prevalence of hypertension in West Nusa Tenggara based on blood pressure measurements in the population aged ≥18 years, according to the results of the 2017 health profile survey reached 24.90% while in Bima District alone it reached 69.24% who had hypertension [6]. Data of hypertension patients who visited the Soromandi Health Center in Bima Regency in 2017 were 187 patients who had hypertension [7].
Hypertension that develops from the interaction of complex environmental and genetic factors, although more than 90% of cases have unclear etiologies. Many studies have identified the main factors that contribute to hypertension such as increased activity of the sympathetic nervous system, increased activity of the renin angiotensin system (RAS), increased angiotensin I converting enzyme (ACE) which results in excessive production of angiotensin II (Ang II), which is activated by the system kallikrein-kinin (KKS), endothelial dysfunction and reduced vasodilators meant to naturally reduce nitric oxide (NO) production in the body, abnormal blood vessel resistance caused by altering ion channels, vascular inflammation, and increasing the activity of vascular growth factors [8].
Untreated hypertension will cause complications and health problems, such as in the heart causing coronary heart disease and heart failure, such as in the brain will cause a stroke, in the eye causing hypertension retinopathy to cause

blindness, the kidneys cause chronic kidney disease and kidney failure terminal. The high risk of patients developing hypertension due to the aging process. The aging process can cause changes in the structure and function of the body, one of the aging processes that causes an increased risk of hypertension, namely aging in the cardiovascular system [9]. Hypertension is also more common in men, women are more likely to suffer from hypertension after menopause. Men are at higher risk of suffering from hypertension compared to women up to age 55 years [10].

The high incidence of hypertension is inseparable from lifestyle changes such as obesity, lack of physical activity, smoking habits, coffee drinking habits, alcohol consumption, high consumption of salt and cholesterol and anxiety. Anxiety is a psychological problem that often causes hypertension [11]. Anxiety and hypertension have a reciprocal relationship where anxiety can cause an increase in blood pressure and vice versa high blood pressure can cause anxiety caused by thinking a lot about the disease being experienced, giving rise to stress, a sense of fear will result in complications [12, 13]. Anxiety will affect a person in determining problem solving strategies because it affects the perception of a problem. Interpretation of the causes of illness or symptoms of chronic illness will influence in making decisions to seek health services, prevent complications and also follow the advice of the health team [14]. This requires an appropriate decision-making mechanism, so actions will be chosen that are appropriate to the disease to prevent disease progression [15].

Treatment in the treatment of hypertension which includes pharmacological treatment basically lowers blood pressure by affecting the heart or blood vessels including diuretics, sympathetic inhibitors, vasodilators, betabloker, angiotensin conversion enzyme inhibitors, angiotensin II receptor inhibitors, and calcium angiotensin [16]. Alternative treatments are carried out for patients who have normal hypertension through non-pharmacological therapy. The role of complementary medicine is to improve the body's blood circulation. The use of non-pharmacological therapies has evolved and has a high average use to deal with chronic diseases such as high blood pressure (hypertension) [17], of which are cupping, acupressure, yoga, aromatherapy massage, self help group and acupuncture.[18-23] The recommended healthy lifestyle is weight loss, reducing alcohol consumption, reducing salt intake, stopping smoking and regular exercise [24].

Wet Cupping is a method of treatment by suctioning the skin in certain parts to remove toxins and oxidants in the body through thin nicks or punctures affecting the capillaries in the epidermis, with the cupping method that is facedown on the skin surface to cause a local dam. Local dams are caused by negative pressure in the tubes that were previously punctured by skin and inserted into a cupper to cause local blood collection, the collected blood is removed from the skin by inhaling [25]. Blood vessels in the bruise area are dilated due to the presence of vasodilators such as adenosine, noradrenaline and histamine which are known to increase blood circulation [26]. Cupping modulates the neuro hormones and the immune system, stimulates the autonomic nervous system to reduce blood pressure [27]. Cupping secretes interstitial fluid, excess intravascular fluid, and metabolic waste toxins. Cupping stimulates the production of nitric oxide (NO) and excretes accumulation of vasoactive substances and free radicals which can reduce blood pressure. All of the above effects are the benefits of cupping for treating hypertension [28].

Needle puncture applied to an area of the skin and by applying negative air pressure at a certain point, aims at removing thecausative pathological substances(CPS). Negative air pressure on the skin using a cup causes an increase in capillary infiltration which causes a local buildup of filtered fluid, lymph fluid and interstitial fluid containing CPS depending on the pressure applied [18.29]. This CPS includes the causative substances and substances related to disease conditions that arise during the course of the disease. The benefits of cupping are related to the amount of CPS that is excreted, not to the amount of blood that is expelled [30].

Akbar's research on the effect of wet cupping on cholesterol and blood pressure in hypertensive patients with this study provided cupping twice, namely at week I and week II. After the first cupping, with a sample of 40 people without the control group produced a percentage change in systolic blood pressure after cupping in week I by 5.21% and week II by 7.86%. Diastolic blood pressure in week I was 5.21% and week II 6.55%, while for total cholesterol levels only measured in week II produced a change of 0.28% [31].

Self help group is a collection of several people who give mutual support between themselves, in that group they share the problems they face, especially about their illnesses. According to Magura's research, stating that self-help groups can produce positive social and health relations with the goals expected by group members in order to reduce symptoms of illness, reduce crisis and hospitalization, improve social skills and expand social networks, as well as improve healthy behavior and perception of circumstances healthy / well-being [32].

Based on the results of Suri Salmiyati's research (2018) about the effect of self-help groups on knowledge about hypertension with 20 respondents, there was a significant difference in changes in systolic blood pressure before and after it was given with p value = 0.000 <0.005 [33].

2. Methods

This type of research uses a Quasy Experiment with a pre-test-post-test with control group design. This study arranged two groups: an intervention group that was given a cupping treatment with a self help group and a control group that was given a self help group treatment without cupping therapy. Cupping therapy is done at 3 points namely hump (al-kahil), Al-Katifain point (right shoulder and left shoulder) with the application of cupping cupping diameter of 5 cm duration 30 minutes and self help group duration 40 minutes. Cupping therapy and self help group research were conducted for 2 weeks with one treatment in the first week and one treatment in the second week. Measurement of anxiety levels using the instrument Zung Self-Rating Anxiety Scale. Measurement of anxiety level is done during the pre test before treatment and post test in the first week and the second week after the treatment of cupping therapy and self help group with hypertension patients.

The population in this study were all blood pressure patients with hypertension who visited the Soromandi Community Health Center, Bima Regency, NTB Province. Determination of the minimum sample size using a technique non- probability sampling with a purposive sampling method and based on inclusion and exclusion criteria as many as 40 respondents divided into two groups

with 20 respondents each in the intervention group (cupping therapy and self help group) and 20 respondents in the control group (self help group without cupping therapy).
In this study, researchers conducted data collection by observation, identification, interviews and filling out questionnaire sheets. The data collected was analyzed through the IBM SPSS program version 24.0, and continued with a different test, namely the parametric test (Independent t test and Repeated Measure Anova). The processed data is used as a basis for discussing statement matters, which are then presented in tabular form so that conclusions can be drawn.

3. Results

Table 1: Distribution frequency of respondents by age, gender, smoking and coffee drinking habits based on demographic data

Variable	Group				p
	Intervention		Control		
	N	%	N	%	
Age (Mean+SD)	(45.50±5.763)		(46.15±5.461)		0.647
Gender					
Male	15	75	9	45	0.053
Female	5	25	11	55	
Smoking habit					
Smoking	11	55	8	40	0.342
No Smoking	9	45	12	60	
Coffee drinking habit					
Drink coffee	13	65	9	45	0.204
Do not drink coffee	7	35	11	55	
Total	20	100	20	100	

*Homogeneous Test

Based on the table above, shows that the average age of respondents in the intervention group is 45.50 and the control group with a mean value of 46.15. The sex of respondents in the intervention group was mostly 15 (75%), while 5 (25%) were women. Where as, in the control group 9 male respondents (9%) and female respondents 11 (55%). From the data on smoking habits of respondents in the intervention group it was found that smoking habits were 11 (55%) and in the control group were 8 (40%). In the habit of drinking coffee, it is obtained that data in the intervention group of respondents with coffee drinking habits were 13 (65%) and in the control group who had coffee drinking habits were 9 (45%). So it can be concluded that the characteristics of age, sex, smoking and coffee drinking habits are not significantly different which means the same or homogeneous with a p value> 0.05.

Table 2: Differences in anxiety levels before and after treatment in the intervention group and control group

Group		Time Measurement			Δ	P
		Pre	Post Day 1	Post Day 14		
Intervention	Mean	50.85	37.90	33.70	17.150	0.000
	SD	4.107	5.693	5.805		
Control	Mean	51.15	39.50	33.30	17.850	0.000
	SD	4.056	5.434	5.342		

*Repeated Measure Anova

Based on the table above, shows that there are differences in anxiety levels before and after treatment in the intervention group and the control group with a p value <0.05. So it can be concluded that there is an effect of cupping therapy and self help group on anxiety levels in hypertensive patients. Judging from the time of measurement pre day 1, post day 1 and post day 14 that the difference in mean defference (Δ) in the intervention group 17.150 and the control group 17.850.

Table 3: Analysis differences in anxiety levels between in the intervention group and control group

Variable	Blood pressure	Group	Mean	Δ	P
Anxiety	Pre	Intervention	50.85	-.300	0.817
		Control	51.15		
	Post day 1	Intervention	37.90	-1.600	0.369
		control	39.50		
	Post day 14	Intervention	33.70	0.400	0.822
		Control	33.30		

*Independent t test

Based on table above, shows that there is no significant difference between in the intervention group and control group on the measurement of anxiety levels in the pre test with a p value = 0.817, post-test day 1 with a p value = 0.369 and post-test day 14 with a p value = 0.822. So it can be concluded that Ha is rejected which means there is no difference in cupping therapy and self help group on the anxiety levels in hypertension patients before and after treatment is given between in the intervention group and control group.

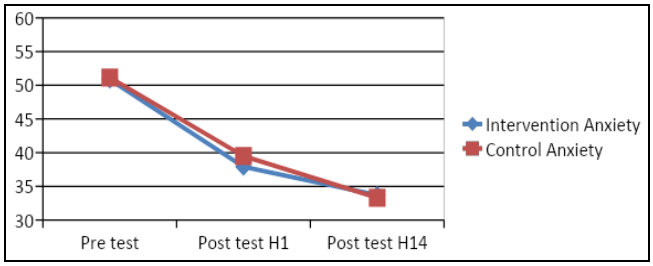

Fig 4: differences in anxiety levels before and after treatment between in the intervention group and control group

Based on the fig above, shows that there was a decrease in anxiety levels before and after treatment in the intervention group and control group.

3. Discussion

Based on the results of the statistical analysis of the independent t test repeatedin 3 measurements showed that there was no significant difference between in the intervention group and control group. There was a slight difference in the decrease in anxiety level between the two treatment groups on the 1st day because it was done in the same way as the cupping and self help group had less effect on reducing anxiety. The biggest role in both treatment groups is more dominantly influenced by the treatment self help group.

Self help group is a form of psychotherapy that is done in groups to help individuals to be able to foster social relations. Self help groups also provide support to all group members who have the same problem so that it creates a safe and comfortable feeling because other people can accept their presence openly.[34] Through the Self help group each individual is given the opportunity to express their feelings and problems that are being experienced so that they get empathy from other group members. This causes them to feel calm because they get emotional support from others.[34]

Based on this description, it can be seen that the Self help group implemented in groups can make respondents increasingly understand that it is not only him who has a mild mentality. In addition, through the Self help group teaches respondents to be able to express all problems experienced while caring for themselves. Meanwhile, other group members listen carefully and give responses and share solutions about the actions they take when experiencing the same problem. Each group member mutually reinforces and supports one another. This causes the feelings of anxiety they experienced previously to be decreased. Thus, it can be concluded that Self help group is an effective psychotherapy to reduce anxiety.

Self-help groups can reduce anxiety levels through the autonomic nervous system, slow deep breathing can have a relaxing effect that affects the body's biochemical changes, such as increasing substances that cause relaxation (endorphins) and reducing adrenaline, self-help groups can reduce anxiety that occurs in stress, pain headaches, and difficulty sleeping so that it can reduce anxiety by increasing the parasympathetic nervous system, reducing the response to stress and increasing the release of hormones in the neuroendocrine system which increases calm and mental awareness status. Therefore self help groups reduce stress and anxiety through counseling related to their illness in the relaxation response. Relaxation can reduce stress hormones, decrease heart rate and blood pressure. The relaxation response in the self help group is a strong antidote to stress. The decrease in anxiety level also has an effect on reducing the degree of hypertension because self-help groups are very effectively used in the community as a non-pharmacological treatment in hypertensive patients who experience anxiety to control blood pressure and reduce the level of anxiety thereby reducing the risk of complications.

Cupping controls the level of the hormone aldosterone so that it controls blood pressure and anxiety as well. The substance nitric oxide (NO) plays a role in vasodilation causing blood pressure to fall. Sodium levels were found to be proportional after cupping, which lowers blood pressure. Cupping through nitric oxide plays a role in increasing the supply of nutrients and blood needed by cells and layers of arteries and veins, making it stronger and more elastic and reducing blood pressure and can reduce the level of anxiety also has an effect on reducing the degree of hypertension.[35]

4. Conclusion

Based on data processing and analysis of cupping therapy and self help group with a duration of 30 minutes and 40 minutes respectively for anxiety levels and when anxiety levels decrease, it can be concluded that.

1. There are differences in cupping therapy and self-help group to anxiety in patients hypertension before and after treatment in the intervention group with a p value = 0.000 Hypothesis is accepted
2. There is a difference in self-help groups to anxiety in hypertensiion patients before and after treatment in the control group with a p value = 0.000 Hypothesis is accepted
3. There is no difference in cupping therapy and self-help group to anxiety in hypertension patients before and after treatment between in the intervention group and the control group with a p value = 0.822 Hypothesis does not accept

5. References

1. Frisoli TM, Schmeider RE, Grodzuki T, Messerli F. Salt and hypertension is salt dietary reduction worth the effort. American Journal of Medicine. 2012; 125(5):433-439.
2. Raja Danasekaran, Geetha Mani, Kalaivani Annadurai, 'Adolescent Hypertension: A Challenge for the Future', Bangladesh Journal of Medical Science, 2016, 15:5-9.
3. World Health Organization, 'A Global Brief on Hypertension', in Silent Killer, Global Public Health Crisis (Geneva, Switzerland: WHO Press, 2013).
4. Junnan Wang, Wei Sun, George A Wells, Zhibo Li, Tianyi Li, Junduo Wu, et al., 'Differences in prevalence of hypertension and associated risk factors in urban and rural residents of the northeastern region of the People's Republic of China: A cross-sectional study', PLoS ONE, 13 (2018), e0195340.
5. Badan Penelitian dan Pengembangan Kesehatan, 'Riset Kesehatan Dasar' ed. by Kementerian Kesehatan Republik Indonesia (Jakarta, 2018).
6. Dinas Kesehatan Provinsi Nusa Tenggara Barat. Profil Kesehatan Provinsi Nusa Tenggara Barat.http://www.depkes.go.id/resources/ download/profil/ profil_kes_provinsi.2017/18_ntb_2017
7. Profil. Kesehatan Puskesmas. Laporan tahunan puskesmas soromandi, 2017.
8. Majunder K, Wu J. Molecular targets of antihipertensive peptides: Understanding the mechanisms of action based on the pathophysiology of hypertension. International journal of molecular sciences. 2014; 16(1):256-83.
9. Susiyanto A. Hijamah or Oxidant Drainage Therapy (ODT) Semua Penyakit Insya Allah sembuh. Jakarta. Gema Insani, 2013.
10. Begg S, Vos T, barker B, Stevenson C, Stanley L, Lopez AD. et al The Burden Of Disease And injury in Australia 2003, 2007.
11. Yuwono GA, Ridwan M, Hanafi M. Pengaruh Pendidikan Kesehatan Tentang Hipertensi Terhadap Tingkat Kecemasan Pada Penderita Hipertensi Di Kabupaten Magelang. Jurnal Keperawatan Soedirman. 2018; 12(1):55-66.

12. Greenage M. The role of anxiety and emotional stress as a risk factor in treatment-resistant hypertension. Current Atherosclerosis Reports, 2011, 13:129.
13. Resya Permatasari Skripsi "Hubungan Kecemasan Dental Dengan Perubahan Tekanan Darah Pasien Ekstraksi Gigi Di Rumah Sakit Gigi Dan Mulut Di Pendidikan (RSGMP) HJ. Halimah DG. Sikati Makasar" Unifersitas Hasanidun Makassar Fakultas Kedokteran Gigi, 2013.
14. Fajar H. Hubungan Tingkat Stress Dengan Tekanan Darah Pada Lansia Hipertensi di Gamping Sleman Yogyakarta. Skripsi pdf. Sekolah Tinggi Ilmu Kesehatan Aisyiyah Yogyakarta, 2014.
15. Hawari D. Manajemen Stress Cemas dan Depresi. Jakarta: Balai Penerbit FKUI, 2011.
16. Eeuropean Society of Hipertensi. Aru W Sudoyo BS, Marcellus Simadi Brata K, Siti Setiati, Idrus Alwi dkk. Ilmu Penyakit Dalam. VI ed. Jakarta; Internal Publishing, 2014.
17. Kretchy IA, Owusu-Daaku F, Danquah S, Patterns and determinants of the use of complementary and alternative medicine: a cross-sectional study of hypertensive patienst in Ghana. BMC Complementari and Alternative Medicine. 2014; 14(1):1-7.
18. Susanah S, Sutriningsih A, Warsono W. Pengaruh Terapi Bekam Terhadap Penurunan Tekanan Darah Pada Penderita Hipertensi Di Poliklinik Trio Husada Malang. Nursing News: Jurnal Ilmiah Mahasiswa Keperawatan. 2017, 2(3).
19. Daniel S. Diantoro W. Husada SK. Pengaruh Terapi Akupresur Pada Pasien Hipertensi Di Klinik Synergy Mind Health. Surakarta, 2014.
20. Nurwidya MD, Hudiyawati D. Pengaruh Yoga Terhadap Tekanan Darah Pada Pasien Hipertensi Di Purwodiningratan. Universitas Muhammadiyah Surakarta, 2018.
21. Eguchy E FN, Tomooka K, Ohira T, Ogino K, Tanigawa T, The effects of aromafoot massege on blood pressure and anxiaty in japanese community-dwelling men end women: a crossover randomized controlled trial. Plos ONE, 2016, 11.
22. Humphreys K, Ribisl KM. The Case Partnership With Self-Help-Group, 2012. Diakses dari htt://www.ncbi.nlm.nih.gov/pmc/article pada tanggal 2013.
23. Luo J XH, Liu B, Real world resaerch: a clomplementary method to establish the effectiveness of acupuncture. BMC Complementary and Alternative Medicine. 2015; 15:153.
24. Grace Valentine Hura, 'Pola Makan Pada Penderita Hipertensi Di Wilayah Kerja Puskesmas Idanögawo Kecamatan Idanögawo Kabupaten Nias Tahun, 2017. (2018).
25. Puspitorini E. Pengaruh Terapi Bekam Basah Terhadap Penurunan Tekanan Darah Pada Pasien Dengan Hipertensi Di Klinik Bekam Medical Center Kepanjen Kabupaten Malang. JURNAL KEPERAWATAN FLORENCE, 2018, 1(1).
26. Ahmedi M, Siddique MR. The value of wet cupping as a therapy in modern medicine-An Islamic Perspective. Webmed Central alternative Medicine, 2014, 5(12). WMC004785.
27. Zarei M, Hejazi S, Javadi SA, Farahani H. The efficacy of wet cupping in the treatmet of hypertension. Arya Atherosclerosis Journal, 2012, S145-S8.
28. Roni Saputra, 'Settings Efektifitas Bekam Terhadap Penurunan Tekanan Darah Pada Penderita Hipertensi', Jurnal Pengabdian Masyarakat Multidisiplin. 2018; 11(6):1
29. Muhammad Nur, Pengaruh Terapi Bekam Terhadap Penurunan Tekanan Darah Pada Kegawat Daruratan Hipertensi Di Puskesmas Pademawu Pamekasan. 2018; (2):34.
30. O'Donnell M AmaSY. Sodium Intake and Cardiovascular Health. Circulation Research Journal of American Heart Association. 2015; 2015(116):1046-57. Epub March 12th. 2015.
31. Akbar N. Pengaruh bekam basah terhadap kolesterol dan tekanan darah pada pasien hipertensi di semarang. Journal Media Medikal Muda, 2013, 1-14.
32. Magura S, Knight EL, Vogel HS, Mahmood D, Laudet AB, Rosenblim A. et al. Mediatots of Effectiveness in Dual-Focus Self-Help Matual Aid Group, 2007. online(http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1828912/?too1= pubmed), diakses 31 Oktober 2015.
33. Suri Salmiyati, Pengaruh Self Help Group Terhadap Pengetahuan Tentang Hipertensi', Journal of Health Studies. 2018; 2:75-83.
34. Klingberg S, Jakobi UE, Wittorf A. Supportive Therapy for Schizoprenic Disorder. Freiburg: Karger GmbH
35. Sharaf AR, Murtadlo H. Penyakit dan terapai bekamnya: dasar-dasar ilmiah terapi bekam: Thibbia, 2012.