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Biomassage Technique With Biosteak Oil Is Effective In Reducing Blood Pressure In Hypertension In The Tourist Community Of Bali Province In 2025

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ABSTRACT

The main health problem in the tourism community is hypertension because the lifestyle of the tourism community is high cholesterol food and high activity which causes fatigue. This causes atherosclerosis and damaged blood vessels. Conventionally, hypertension is treated with antihypertensive drugs which are only for control purposes, so the medication must be taken continuously. Therefore, another complementary method is needed: biomassage using biosteak oil, which has been phytochemically tested *in vivo* and has been found to have strong anti-inflammatory, antibacterial, and antioxidant properties, thus preventing heart disease, kidney failure, and stroke. The aim of this study was to determine whether biomass using a biosteak oil device is effective in lowering blood pressure in tourism communities experiencing hypertension. This study used a quasi-experimental method with a pretest-posttest control group design. The variables studied in this study were blood pressure in hypertensive patients as the dependent variable and biomass using biosteak oil and biosteak cupping oil as the independent variables. A sample of 120 people using purposeful sampling technique was divided into three groups: two experimental groups and one control group. Data analysis techniques included univariate analysis, normality test, Wilcoxon test, and Kruskal-Wallis test. Based on the analysis of the results with a Sig. value (2-tailed: 0.00 or < 0.05 with a rank difference in systole of 23 mmHg, meaning there was a significant difference before and after treatment in all groups. It was concluded that there was a significant difference before and after the Bio Massage procedure with bio steak oil in the tourism community who experienced hypertension.

Keywords: Hypertension, Tourism, biomassage, Oil Biosteak.

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INTRODUCTION

The background to this research is that Bali, as a tourism destination, requires a healthy tourism community, where local residents, tourism operators, and tourists are healthy. However, in reality, hypertension still occurs. (Irawan, 2022). The largest tourist communities in Bali are in Ubud, Sanur and Nusa Dua and this is the reason for choosing the research location .(Niluh Pt wahyuni, 2021) Hypertension is when blood pressure is measured on two different days, systolic blood pressure on both days is ≥ 140 mmHg and/or diastolic blood pressure on both days is ≥ 90 mmHg. (WHO, 2023)

Hypertension is a degenerative disease (Nugraheni, 2022) related to hyperglycemia, hypercholesterolemia and hyperuricemia (Sthepanie dkk, 2023) is one of the entry points for heart disease, kidney failure, diabetes and stroke (Kemenkes, 2019) so that hypertension is often called the silent killer because without complaints, complications occur which require palliative care, namely care with an approach aimed at improving the quality of life of patients and families who face problems related to life-threatening diseases by preventing and reducing suffering through early identification, careful assessment, treatment of pain and other physical symptoms, psychosocial and spiritual problems (Kemenkes RI, 2023)

World Health Organization (WHO) data estimates that in 2025 there will be 1.5 billion people suffering from hypertension, and every year 10.44 million people will

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die from hypertension. (Kemenkes, 2019) The 2018 Riskesdas showed that the prevalence of hypertension in the population aged 18 years was 34.1%, the 31-44 year age group 31.6%, the 45-54 year age group 45.3%, and the 55-64 year age group 55.2% (Kemenkes RI, 2019) . Based on the Bali provincial health profile data, the number of people with hypertension in 2020 was 555,184 and only 270,924 sufferers (48.8%) received standard services, meaning that the achievement of the Bali Provincial Health Service is still far below the target (100%) (Dinas Kesehatan Kota Denpasar, 2021)

Many things cause the failure to treat hypertension conventionally, the results of Noor Hijriyati Shofiana's research obtained data that 41.5% were not compliant in taking medication (Sulistyawati, Wedani and Wiartha, 2020) Therefore, other technologies are needed to complement hypertension management, one of which is complementary biomass massage services. The biomass massage used uses biosteak oil, which has been phytochemically tested in vivo and has strong anti-inflammatory, antioxidant, and antibacterial properties, complementing hypertension treatment. The urgency of this research is because the conventional intervention of hypertension targets not healing but controlled hypertension so that drugs are given continuously, so it needs to be supplemented with biomass.

Biomassage or life massage is a technology that combines massage with bioenergy, so it is very different from other massage methods that

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focus on the main effect of relaxation, while biomassage besides relaxation also cleans blood vessels from plaque and converts it so that it enters the cells into energy. (Ribek *et al.*, 2023) (12). Other massage methods can reduce systolic blood pressure by an average of 10-15 mmHg, but in a preliminary study at the biomassage clinic, it was able to reduce systolic blood pressure by 20 mmHg. Cleaning the blood vessels is very important because in hypertension there is plaque along the blood vessels so that the blood vessels become narrow and blood to the kidneys is reduced, thus triggering the renin enzyme to produce more angiotensin hormone which results in the blood vessels becoming stiff, hyperglycemia,

hypercholesterolemia, and hyperuricemia. (Sparks *et al.*, 2014) The research question is whether biomass massage using oilbiosteakbekam can lower blood pressure in tourism communities experiencing hypertension. The aim of this study was to identify the characteristics of tourism communities experiencing hypertension and to test the effectiveness of biomass massage in lowering blood pressure.

METHOD

This research method used a quasi-experimental approach with a pretest-posttest control group design. The variables examined in this study were blood pressure in hypertensive patients as the dependent variable and biomassage using biosteak oil and biosteak cupping oil as the independent variables. The sampling

technique used was purpose sampling with inclusion criteria of systolic blood pressure >1140 mmHg, diastolic >90 mmHg, and exclusion criteria of non-hypertension and tourism behavior. The sample size was 120 people divided into 3 groups, 2 experimental groups and one control group, each consisting of 40 people. Data collection instruments with questionnaires for characteristic data and with digital tensiometers for systolic and diastolic blood pressure as well as auto check for uric acid in the hypertensive tourism community.

The analysis techniques used were univariate analysis, Wilcoxon test and Kruskal Wallis test. The Wilcoxon test was conducted to see the difference in systole before and after biomassage, which had previously been conducted a data normality test with the results of non-normally distributed data, while the test between groups with the Kruskal Wallis test because the data had 3 groups.

RESULTS

1. Characteristics of the Research Subjects

The subjects of this study were 120 respondents from the tourism areas of Sanur, Kuta, and Ubud who experienced hypertension, meeting both inclusion and exclusion criteria. The characteristics of the research subjects are as follows:

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Table 1. Distribution of Tourists with Hypertension by Gender in the Bali Provincial Health Center Area in 2025

N o	Villag e name	number of people with hypertension				%
		Mal e	Fema le	Amou nt	%	
1	Sanur	21	19	40	33.	3
2	Kuta	19	21	40	33.	3
3	Ubud	10	30	40	33.	3
	Amou nt	50	70	120	10	
	%	42	58		0	

Based on table 1, it shows that the research location is in a tourism area and the majority are women, as much as 58%.

Table 2. Distribution of tourism communities experiencing hypertension based on

education level in the Bali Provincial Health Center area in 2025

N o	Vill age nam e	Level of education					
		S e c ond	S e c ond	S e c ond	P ri ma ry	A m ount	%
		D e n s ity	M e d ia n	M e d ia n	T ot al	A v er age	
1	Sanur	9	7	16	8	40	33
2	Kuta	2	2	17	1	40	33
3	Ubud	2	3	19	1	40	33
	Am ount	1	12	42	4	120	10
		3		3		0	

Based on table 2, it shows that the majority of people with hypertension have tertiary education, namely 43%.

Table 3. Normality test analysis of data from tourism communities experiencing hypertension based on treatment groups in the Bali Provincial Health Center area in 2025

Group	Interv ensi	N	Me an	SD	Sig Shapiro- Wilk
Group 1	Before	40	146	8.73	
	After	40	.10	4.22	
			0	4.51	0, 391
Group 2	Before	40	116	30.	
			100	100	
	After	40	145	10.8	
Group 3	Before	40	.6	1	
			119	7.17	0, 180
	After	40	.07	26.	
	Before	40	141	9.08	
			.82	6,7	
	After	40	133	2.66	0, 148
			.97	8.1	
				5	

Based on table 3, it shows that the majority of the Shapiro Wilk sig values are below (<0.05), meaning that the data is not normally distributed except for the data in group 1 before the action.

Table 4. Differences in outcomes after intervention for each group in the tourism community with hypertension in the Bali Provincial Health Center in 2025.

N o	Villa ge name	Mean systole Before	Mean systole After	Mean rank	Sig. (2- taile d)
1	Group 1	146	116	30	0.00
2	Group 2	145	119	26	0.00
3	Group 3	141	126	8.15	0.00

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Based on table 4, it shows that the Sig. (2-tailed) value: 0.00 means <0.05 in the Wilcoxon test, meaning there is a significant difference before and after treatment in all groups, only the highest difference is in the treatment group 1 of 30 mmHg and the lowest in group 3 of 8.15 mmHg.

Table 5. Kruskal-Wallis Test Analysis of Data from Tourists with Hypertension

Based on Treatment Groups in the Bali Provincial Health Center Area in 2025

Group	N	Mean Rank	Sig (2-tailed)
Group 1	40	39.58	0.00
Group 2	40	54.76	
Group 3	40	87.16	

Based on table 5, it shows that there is a significant difference with a sig value of Sig. (2-tailed): 0.00 between treatment group 1 (bio steak, oil, cupping, medicine), treatment 2 (bio steak, oil, medicine) and treatment 3 (medicine only) on blood pressure.

DISCUSSION.

Table 1 shows that the research location is in a tourism area and the majority are women, at 58%. The three research locations were chosen because the largest Balinese tourism community is in Ubud, Sanur, and Nusa Dua or Kuta, and this is the reason for choosing the research

location. (Niluh Pt wahyuni, 2021). Table 2 shows that the most people with hypertension are university graduates, namely 43%. However, as a tourism area, Bali requires a healthy community and healthy tourism actors, but in reality, hypertension still occurs (Irawan, 2022)

Table 3 shows that the Shapiro Wilk sig value is mostly below (<0.05), meaning that the data is not normally distributed except for the data in group 1 before the action. According to Sugiyono, the normality test is a test conducted to determine whether data is normally distributed or not, so this test is crucial to ensure the validity of a study. (Sugiyono, 2014) In the data found the mean

rank systole in group 1 was 30 mm Hg while in group 3 which only used medication was 8 mmHg,

This data shows that Biomassage is a life massage technology that combines massage with bioenergy capable of lowering blood pressure by 23 mmHg so that it is very different from other massage methods that focus on the main effect of relaxation, while biomassage besides relaxation also cleans blood vessels from plaque and converts it into energy to enter cells. (Ribek *et al.*, 2023) (12).

Biosteak with a diameter of 5 cm is able to hold blood vessels in the muscles so that if there is a blockage it will be easily destroyed as well as bio massage oil is able to help anti-inflammatory will facilitate blood flow and lymphatic contraction of the system will increase which is able to absorb and flow metabolic results. Based on table 4 shows that the Sig. value. (2-tailed): 0.00 means <0.05 in

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the Wilcoxon test, meaning there is a significant difference before and after treatment in all groups, only the highest difference is in group 1 treatment of 30 mmHg and the lowest in group 3 of 8.15 mmHg. The average hypertension in group 1 is 146 mmHg. Hypertension is when blood pressure is measured on two different days, systolic blood pressure on both days is ≥ 140 mmHg and/or diastolic blood pressure on both days is ≥ 90 mmHg. (3) In group 3 whose treatment was only taking medication, there was an average decrease of 8.15 mmHg.

Many things cause the failure to treat hypertension conventionally, the results of Noor Hijriyati Shofiana's research obtained data that 41.5% were not compliant in taking medication (Sulistiyawati, Wedani and Wiartha, 2020). Hypertension medication based on research results shows that 87% experience side effects (Diatmika, Artini and Ernawati, 2018) Based on table 5 shows a significant difference with a sig value Sig. (2-tailed): 0.00 between treatment group 1 (bio steak, oil, cupping, medicine), Treatment 2 (bio steak, oil, medicine) and treatment 3 (medicine only) on blood pressure. The process of hypertension begins with the accumulation of cholesterol in the blood vessels so that the blood vessels experience thickening and hardening and narrowing of the blood vessel channels (Nadhilah and Soeyono, 2023)

Techniques for Performing Biomassage include 1) Bioenergy general massage points: Starting with pressure, rubbing and vibration on hardened/stiff skin, turning blue,

tissue feels like there are crystals to break down, vibrate and insert energy sources into the cells, so that metabolism occurs, 2). Bioenergy yes point points: Pressing, rubbing and vibrating the location that feels painful and repositioning the bones in the cervical, knee and waist to clean gas in the bones due to cholesterol and uric acid 3) Bioenergy special points: Applying pressure on the hypertension meridian points including: (Kemenkes RI, 2012)

CONCLUSION

1. There is an effect of biomass massage using the Biosteakoilbekam device on reducing blood pressure in hypertensive patients in the Bali Tourism Community.
2. There is an effect of biomass massage using the Biosteakoilbekam device on reducing blood pressure in hypertensive patients in the Bali Tourism Community.
3. Biomassage using the Biosteakoilbekam device is more effective than biomass massage using the Biosteakoil device on reducing blood pressure in hypertensive patients in the Bali Tourism Community.
4. The Wilcoxon test results for all three groups (1, 2, and 3) showed a Sig. (2-tailed) value of 0.00 or <0.05 , indicating a significant difference before and after treatment in all groups. However, the highest difference was in group 1 at 30 mmHg and the lowest in group 3 at 8.15 mmHg.
5. The Kruskal Wallis Test analysis for all three groups (1, 2, and 3) showed a Sig. (2-tailed): 0.00 or <0.05 means a significant difference

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6. There is no relationship between hypertension behavior and the

behavior of the tourism community on the prevalence of hypertension in the Balinese tourism community.

Conflict of interest:

This research is solely aimed at finding solutions to lower blood pressure in hypertensive patients to prevent more complex complications.

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Ethical Clearance

This research has received ethical approval from the Research Ethics Committee of the Ministry of Health's Polytechnic of Health, in accordance with the research ethics clearance certificate. Number: DP.04.02/F.XXXII.25/665/2025, dated May 26, 2025. The research was declared ethically sound and conducted based on the bioethical principles of beneficence, non-maleficence, justice, and autonomy.

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