



Effect of Rajyoga Meditation on Adult Hypertensive Patients

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Abstract

Hypertension, a chronic lifestyle disorder, has arisen as a global health concern and a major cause of illness and mortality. It not only affects physical health but also disrupts psychological and emotional well-being. The present study examines the effect of Rajyoga Meditation on the overall well-being of hypertensive patients. Thirty participants diagnosed with primary hypertension were selected from Janakpuri Super Speciality Hospital, New Delhi. Purposive sampling method was used to select participants. They underwent an eight-week Rajyoga Meditation program, with daily 30-minute guided sessions. Data were collected before and after the intervention using blood pressure measurements and a standardized well-being scale. Results revealed a significant reduction in both systolic and diastolic blood pressure, along with enhanced emotional stability, stress management and self-reported well-being. The findings recommend that regular practice of Rajyoga Meditation enhances physiological balance and psychological harmony, offering a holistic and cost-effective approach to manage hypertension.

Keywords: Rajyoga Meditation, Hypertension, Well-being, Stress Management, Complementary Therapy, Yogic Science

Introduction

In twenty first century, *hypertension* generally referred to as high blood pressure, is a major global public health concern and a leading contributor to cardiovascular morbidity and mortality. Frequently called the 'silent killer,' hypertension progresses without noticeable symptoms yet knowingly increases the risk of heart disease, stroke, renal failure and other snags. The World Health Organization estimates that nearly 1.28 billion adults between the ages of 30 and 79 suffer from this condition, with many remaining undiagnosed or inadequately treated. In India, fast urbanization, sedentary lifestyles, unhealthy dietary patterns and chronic psychosocial stress have donated to a growing hypertension crisis. Rajyoga Meditation, as propagated by the Brahma Kumaris, offers a holistic approach accent the connection between the self (soul) and the Supreme Being. It nurtures self-awareness, inner peace and emotional regulation, helping practitioners maintain mental stability and spiritual balance. Existing studies indicate that meditation practices can reduce blood pressure, heart rate and stress hormones while enhancing psychological

resilience. However, limited empirical evidence specifically examines Rajyoga's impact on hypertensive patients, making this study both relevant and necessary.

Literature Review

- a. **Rajyoga Meditation and Cardiovascular Health:** Maini *et al.* (2011) ^[5] reported reductions in heart rate and blood pressure among Rajyoga practitioners, demonstrating its potential as a non-pharmacological intervention for hypertension. Sukhsohale *et al.* (2012) ^[6] observed improved cardio-respiratory function and enhanced parasympathetic activity in long-term meditators. Kiran *et al.* (2017) ^[8] found Rajyoga effective in reducing anxiety and cortisol levels in cardiac patients, indicating its benefit in handling hypertension-related stress.
- b. **Psychosomatic Benefits:** Kiran (2017) ^[8] emphasized Rajyoga's role in emotional control and stress reduction. Saini (2024) ^[9] found that Rajyoga meditation reduced blood pressure in hypertensive patients undergoing knee replacement surgery.

- c. **Comparative Studies:** Sinha *et al.* (2018) ^[3] showed that yoga-based meditation reduced sympathetic activity, improving cardiovascular health. Yadav (2024) ^[4] found significant reductions in surgery-related stress in coronary patients practicing Rajyoga.
- d. **Holistic Perspective:** Sukhsohale *et al.* (2012) ^[6] emphasized the anxiety-reducing and hypertension-lowering benefits of Nada Yoga, a component of Rajyoga, highlighting its integrative health potential.

Need for the study

Hypertension is one of the leading global public health concerns and its incidence continues to rise in India. Although pharmacological treatments effectively control blood pressure, they often have side effects and require lifelong adherence. Rajyoga Meditation provides a mind-body-spiritual agenda that enhances emotional balance, reduces stress and promotes physiological stability. Until now, there remains limited systematic research focusing exclusively on hypertensive patients.

Objectives

- To evaluate the effect of Rajyoga Meditation on blood pressure among hypertensive patients.
- To assess its influence on psychological well-being and stress reduction.
- To explore the potential of Rajyoga as a complementary, non-pharmacological intervention for hypertension management.

Hypotheses

Null Hypothesis (H₀): There is no significant effect of Rajyoga Meditation on the BP and well-being of hypertensive patients.

Hypothesis (H₁): There is a significant positive effect of Rajyoga Meditation on the BP and well-being of hypertensive patients.

Materials and Methods

- a. **Study Design:** Mixed-methods design combining quantitative and qualitative.
- b. **Participants:** 30 hypertensive patients aged 18–65 years from Janakpuri Super Speciality Hospital, New Delhi.
- c. **Sampling:** Purposive sampling technique was used for selection of participants.
- d. **Intervention:** 8-week Rajyoga Meditation program, 30 minutes daily under certified instructors.

Data Collection

Pre-test and post-test readings for systolic BP, diastolic BP and well-being scores of all 30 participants were recorded and entered into Microsoft Excel and SPSS Version 26.0 for analysis.

Data Analysis and Results

Paired t-tests and descriptive statistics were applied. Results

were considered statistically significant at $p < 0.05$.

Data Analysis

Descriptive Analysis: The collected data were analyzed using both descriptive and inferential statistics. Descriptive statistics, including mean, standard deviation (SD), and percentage, were used to summarize participants' demographic characteristics and baseline measurements. To determine the effect of the Rajyoga Meditation intervention on blood pressure and psychological well-being, a paired sample t-test was employed.

Table 1: Descriptive Statistics (N = 30)

Age				
Mean	SD	Min age	Max age	Range
44.27 years	13.17	18 years	64 years	46 years
Gender				
Gender		Frequency	Percentage	
Male		13	43.33%	
Female		17	56.67%	
Marital Status				
Marital Status		Frequency	Percentage	
Married		21	70.0%	
Single		09	30.0%	
Educational Level				
Education		Frequency	Percentage	
Post Graduate		08	26.67%	
Graduate		14	46.67%	
Secondary		07	23.33%	
Primary		01	03.33%	
Occupation				
Occupation		Frequency	Percentage	
Housewife		10	33.33%	
Job		10	33.33%	
Retired		06	20.00%	
Business		02	06.67%	
Student		02	06.67%	
Socioeconomic Status				
Socioeconomic Status		Frequency	Percentage	
Upper		02	06.67%	
Middle		27	90.00%	
Lower		01	03.33%	

The sample mainly comprises of middle socioeconomic (90%) participants, with a slightly higher proportion of females (56.7%). Maximum participants are married (70%), graduates (46.7%) and engaged either in a job or as homemakers (33% each). The mean age of participants is approximately 44 years, showing a moderate age spread (SD = 13.17) ranging from 18 to 64 years.

Paired t-test analysis

The paired t-test was suitable because the same group of 30 hypertensive patients (aged 18–65 years) was assessed twice - once before the 8-week Rajyoga Meditation program and once after completing it. This test determines whether the mean difference between these two related measurements is statistically significant.

Table 2: Paired t-test Statistics (n = 30)

Parameter	Pre-Test Mean ± SD	Post-Test Mean ± SD	Mean Difference	t-value	p-value	Interpretation
Systolic Blood Pressure (mmHg)	148.0 ± 8.4	132.0 ± 7.6	16.0	6.52	<0.001	Significant ↓
Diastolic Blood Pressure (mmHg)	94.0 ± 6.5	84.0 ± 5.9	10.0	5.87	<0.001	Significant ↓
Psychological Well-being Score	62.3 ± 5.7	70.8 ± 6.1	+8.5	7.24	<0.001	Significant ↑

(↓ indicates decrease, ↑ indicates increase)

Means and standard deviations were calculated separately for pre-test and post-test scores of each variable. The difference for each participant, between pre and post-test values was computed ($D = \text{Post} - \text{Pre}$). The significance level was set at $p < 0.05$. A p-value less than 0.05 indicates that the change observed is statistically significant. The statistical results display a significant decrease in both systolic and diastolic blood pressure after the Rajyoga Meditation intervention, indicating improved cardiovascular regulation. Furthermore, the psychological well-being score increased significantly, reflecting better emotional balance, stress management and overall mental health.

The results reject the null hypothesis and confirm that Rajyoga meditation has a positive effect Findings

After 8 weeks, systolic BP reduced from 148 mmHg to 132 mmHg and diastolic BP reduced from 94 mmHg to 84 mmHg. Stress and anxiety levels reduced significantly. Over 80% of participants experienced enhanced emotional balance and optimism.

Discussion

Rajyoga Meditation effectively condensed blood pressure and stress among hypertensive patients. The practice endorses relaxation, enhances self-regulation and encourages lifestyle changes. Findings align with previous studies (Sharma *et al.*, 2018; Bansal & Bhattacharya, 2020)^[10, 11], supporting Rajyoga as a holistic therapeutic approach.

Conclusion

Rajyoga Meditation significantly improves both physiological and psychological well-being amongst hypertensive patients. It is safe, accessible and cost-effective, making it suitable for addition into hospital wellness programs. Further large-scale research is recommended to validate these outcomes.

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