

# A Study to Assess the Effectiveness of Exercise Program on Health-Related Quality of Life in Patients with Hypertension

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## Abstract

**Background:** Hypertension is a leading cause of morbidity and mortality worldwide. Lifestyle interventions, particularly exercise, are cost-effective strategies to improve blood pressure control and enhance health-related quality of life (HRQoL).

**Objectives:** To assess baseline HRQoL among hypertensive patients, evaluate the effectiveness of an exercise program on HRQoL, and determine associations with selected demographic variables.  
**Methods:** A pre-experimental one-group pre-test post-test design was used. Fifty hypertensive inpatients at Dr. V.V.P. Pravara Rural Hospital, Loni (Bk) were selected through purposive sampling. A structured exercise program was administered daily for four weeks. HRQoL was measured using the WHOQOL-BREF scale. Data were analyzed using descriptive and inferential statistics.

**Results:** Participants were predominantly aged  $\geq 51$  years (41.7%), with a slight male predominance (53.3%). Baseline HRQoL scores were moderate across all domains. After the intervention, there was a statistically significant improvement ( $p < 0.001$ ) in physical, psychological, social, and environmental domains. Age, education, family history of hypertension, and physical activity were significantly associated with baseline QoL scores.

**Conclusion:** Structured exercise programs significantly enhance HRQoL in hypertensive patients and should be integrated into routine nursing and clinical practice to improve long-term outcomes.

**Keywords:** Hypertension, Exercise program, Health-related quality of life, Nursing intervention

## 1. Introduction

Hypertension, affecting 1.28 billion adults globally, is a major risk factor for cardiovascular diseases and premature mortality. In India, prevalence has doubled in the last three decades, yet awareness and control remain low. While pharmacological treatment is effective, non-pharmacological strategies such

as structured exercise programs are essential to improve both physiological outcomes and HRQoL. This study evaluated the effectiveness of an exercise program on HRQoL in hypertensive patients.

## Materials and Methods

Design: Pre-experimental, one-group pre-test post-test.

Setting: General Medicine and Inpatient Wards, Dr. V.V.P. Pravara Rural Hospital, Loni.

Sample: 50 hypertensive inpatients selected using purposive sampling.

Intervention: Daily supervised structured exercise program (aerobic and resistance activity) for 30 minutes over 4 weeks.

Tools: Demographic questionnaire and WHOQOL-BREF scale. Reliability coefficient  $r = 0.91$ .

Ethics: Institutional approval and informed consent obtained.

Data Analysis: Descriptive statistics, paired t-test, chi-square test.

## Results

Majority of participants were aged  $\geq 51$  years (41.7%), male (53.3%), and married (83.3%). Occupation: Housewives (36.7%), Farmers (33.3%).

Pre-test HRQoL: Moderate scores across physical, psychological, social, and environmental domains.

Post-test HRQoL: Significant improvement in all domains ( $p < 0.001$ ).

Associations: Age, education, family history, and physical activity showed significant association with baseline QoL.

## Discussion

This study confirms evidence from previous literature that structured exercise interventions improve HRQoL in hypertensive patients. Exercise benefits extend beyond physiological outcomes to psychological well-being, social interaction, and environmental adaptability. The findings align with global recommendations emphasizing exercise as a first-line non-pharmacological intervention for hypertension.

## Conclusion

Structured exercise programs are effective in improving HRQoL among hypertensive patients. Nursing professionals should integrate exercise counseling and supervised programs into routine care to reduce complications and promote holistic health.



## References

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