

Research Article

# Effects of Different Types of Meditation on Diastolic Blood Pressure

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## I N F O

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## A B S T R A C T

**Background:** The study was intended to find out the effects of different types of meditations namely transcendental meditation and heart rhythm meditation on diastolic blood pressure among male college students.

**Methodology:** Sixty male students studying bachelor's degree in colleges in and around Tiruvannamalai District, Tamil Nadu, India were randomly selected as subjects to achieve the purpose of this study. The age of subjects ranged between 18 and 24 years, height and weight ranged from 158 to 171 cm and 56 to 69 kg respectively. The selected sixty subjects were divided into three groups of twenty subjects each at random. Group I (transcendental meditation), Group II (heart rhythm meditation) and Group III (control). Prior to and immediately after the training programme, all the subjects of three groups were tested on the selected dependent variable. ANCOVA (analysis of covariance) was used to analyse the collected data to find out the effects of different types of meditations on diastolic blood pressure. Whenever the obtained 'F' ratio for the adjusted post-test mean was found to be significant, Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

**Results & Conclusion:** There was a significant differences exist among transcendental meditation group, heart rhythm meditation group and control group on selected physiological variable namely diastolic blood pressure. There was significant change on selected physiological variable namely diastolic blood pressure due to transcendental meditation and heart rhythm meditation after twelve weeks of training period. Significant differences were found between transcendental meditation group and heart rhythm meditation group on selected physiological variable namely diastolic blood pressure after twelve weeks of training period.

**Keywords:** Different Types of Meditations, Transcendental Meditation, Heart Rhythm Meditation, Control Group, Physiological Variable, Diastolic Blood Pressure

## Introduction

Physical activity is an important and essential element in human health and well-being and its importance has achieved widespread acceptance by the public, professional organisations, and the medical community. Sports have assumed worldwide importance in a shrinking world, which is coming nearer and nearer, day by day it is playing an important role in bringing people together at national and international levels. It doesn't distinguish between religion, caste, or race; it embraces every sport and region of the world and thus brings the world closer.

The development of sportsmen to achieve high level of performance is usually concentrated in four areas namely physical power, social adjustment, psychological development, and physiological efficiency. Different activities have different requirements and effects on the body of the participant with respect to circulatory, respiratory, metabolic, cytological, and temperature regulatory functions.

Games, sports and physical activities persisted despite the rise and fall of ancient civilisations and became strongly embedded in the history of civilisation as a cultural heritage, which was passed on from one generation to another. Sports have developed more and more into a scientific discipline. Considerable research is done to identify various factors that influence the skills and performance of different sports.

## Transcendental Meditation

Though transcendental meditation is not a mantra-based meditation in the sense that its main core and directions are oriented towards transcending, it does involve the use of mantras. Another peculiar feature of the transcendental meditation technique is that there is no difference between the brainwaves of experts and beginners - one can master it quickly. In fact, the positive effects of the practice are usually apparent already from the very first transcendental meditation session.

## Heart Rhythm Meditation

Heart rhythm meditation is a method of meditation that has been expanded and developed by Puran Bair and Susanna Bair of the Institute for Applied Meditation. The method was described in the 1998 book *Living from the Heart*, by Puran and Susanna Bair (3rd Edition Published in 2019) and in the 2007 book *Energize Your Heart in 4 Dimensions*, by

Puran and Susanna Bair. maturity is described in the book, *Follow Your Heart*, by Puran and Susanna Bair, edited and illustrated by Asatar Bair published in 2011 The application of heart rhythm meditation to the development of spiritual. The practice originates from the Jesus Prayer and the teachings of Inayat Khan, who founded the Sufi order and is credited with bringing Sufism to the Western world. Puran and Susanna Bair were disciples of Inayat Khan's eldest son and successor Vilayat Inayat Khan. The HRM founders claim that their approach is non-religious, practical, and scientific.

## Materials and Method

### Selection of Subjects

To achieve this purpose of the study, sixty male students studying bachelor's degree in Colleges in and around Tiruvannamalai District, Tamil Nadu, India were randomly selected as subjects. The selected sixty subjects were divided into three groups of twenty subjects each at random: Group I (transcendental meditation), Group II (heart rhythm meditation) and Group III (control).

### Selection of Variable

A physiological variable namely diastolic blood pressure was selected as criterion variable. Transcendental meditation and heart rhythm meditation were selected as independent variables. The selected criterion variable was measured by Sphygmomanometer.

### Statistical Analysis

The collected data were analysed statistically by using ANCOVA (analysis of covariance) to find out the effects of different types of meditations, namely transcendental meditation and heart rhythm meditation on the selected physiological variable. Whenever the obtained 'F' ratio for the adjusted post-test mean was found to be significant, Scheffe's test was applied as a post hoc test to determine the paired mean differences, if any. The 0.05 level of confidence was fixed to test the level of significance which was considered appropriate.

## Analysis of the Data

### Diastolic Blood Pressure

The analysis of covariance on diastolic blood pressure of the pre and post-test scores of the transcendental meditation group, heart rhythm meditation group and control group have been analysed and presented in Table 1.

**Table 1. Analysis of Covariance of the Data on Diastolic Blood Pressure of Pre and Posttest Scores of Transcendental Meditation, Heart Rhythm Meditation and Control Groups**

Test	Transcendental Meditation Group	Heart Rhythm Meditation Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
<b>Pre-test</b>								
Mean	78.10	78.50	79.20	Between	12.4	2	6.20	0.38
S.D.	6.09	2.56	2.21	Within	924.0	57	16.21	

Post-test								
Mean	76.95	77.10	79.55	Between	85.2	2	42.60	3.62*
S.D.	5.83	3.21	2.63	Within	671.7	57	11.78	
Adjusted Post-test								
Mean	77.35	77.18	79.07	Between	83.2	2	41.6	6.17*
				Within	377.6	56	6.74	

## Discussion

Table 1 shows that the pre-test mean values of diastolic blood pressure of the transcendental meditation group, heart rhythm meditation group, and control group are 78.10, 78.50 and 79.20 respectively. The obtained "F" ratio of 0.38 for pre-test scores is less than the table value of 3.15 for df 2 and 57 required for significance at 0.05 level of confidence on diastolic blood pressure. The post-test mean values on diastolic blood pressure of the transcendental meditation group, heart rhythm meditation group, and control group are 76.95, 77.10 and 79.55 respectively. The obtained "F" ratio of 3.62 for post-test scores is greater than the table value of 3.15 for df 2 and 57 required for significance at 0.05 level of confidence on diastolic blood pressure.

The adjusted post-test mean values on diastolic blood pressure of the transcendental meditation group, heart rhythm meditation group, and control group are 77.35, 77.18 and 79.07 respectively. The obtained "F" ratio of 6.17 for adjusted post-test means is greater than the table value of 3.15 for df 2 and 56 required for significance at 0.05 level of confidence on diastolic blood pressure. The results of the study indicated that there was a significant difference in the adjusted post-test means of diastolic blood pressure among the transcendental meditation group, heart rhythm meditation group, and control group.

Since three groups were compared, whenever the obtained 'F' ratio for the adjusted post-test was found to be significant, Scheffe's test was used to find out the paired mean differences and it has been presented in Table 2.

**Table 2. Scheffe's Test Values for the Differences between Paired Means of Diastolic Blood Pressure**

Transcendental Meditation Group	Heart Rhythm Meditation Group	Control Group	Mean Differences	Confidence Interval
77.35	77.18	-	0.17	1.37
77.35	-	79.07	1.72*	1.37
-	77.18	79.07	1.89*	1.37

Table 2 shows that the mean difference in diastolic blood pressure between the transcendental meditation group and control group and between the heart rhythm meditation group and control group are 1.72 and 1.89 respectively which were greater than the required confidence interval

value (1.37) for significance at 0.05 level of confidence. Also the mean difference in diastolic blood pressure between the transcendental meditation group and heart rhythm meditation group was 0.17, which was lesser than the required confidence interval value (1.37) for significance at 0.05 level of confidence.

The results of the study showed that there was a significant difference between transcendental meditation and control groups and between heart rhythm meditation and control groups in terms of diastolic blood pressure. Further, it showed that there was no significant difference in diastolic blood pressure between the transcendental meditation group and the heart rhythm meditation group.

## Conclusion

Based on the results of the study, the following conclusions were drawn:

There was a significant difference among transcendental meditation group, heart rhythm meditation group and control group in the selected physiological variable, namely diastolic blood pressure.

There was a significant change in the selected physiological variable namely, diastolic blood pressure due to transcendental meditation and heart rhythm meditation after twelve weeks of training period.

Significant differences were found between the transcendental meditation group and the heart rhythm meditation group in the selected physiological variable namely, diastolic blood pressure after twelve weeks of training period.

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**Conflict of Interest:** None

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