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## Effects of different types of meditation on selected physiological variables

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### Abstract

The purpose of the study was to find out the effects of different types of meditations namely Transcendental Meditation and Heart Rhythm Meditation on selected physiological variable namely Systolic Blood Pressure among college men students. To achieve this purpose of the study, sixty men students studying bachelor's degree in and around Colleges nearby Tiruvannamalai District, Tamil Nadu, India were randomly selected as subjects. The age, height and weight of the selected subjects were ranged from 18 to 24 years, 158 to 171 cm and 56 to 69 kilogram respectively. The selected subjects were divided into three equal groups of twenty subjects each at random. Group I underwent Transcendental Meditation, Group II underwent Heart Rhythm Meditation and Group III acted as control. All the subjects of three groups were tested on selected dependent variable at prior to and immediately after the training programme. The collected data was analyzed statistically by using ANCOVA (analysis of covariance) to find out the effects of different types of meditations on selected physiological variable. Whenever, the obtained 'F' ratio for the adjusted post test mean was found to be significant, the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. The .05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

**Keywords:** Different types of meditations, transcendental meditation, heart rhythm meditation, control group, physiological variable, systolic blood pressure

### Introduction

Games and sports have been part of human life almost since the time immemorial. Be it a necessity for his survival i.e. hunting for food, shelter and safety from wild animals or other enemies or as a pursuit of pleasure. The games and sports have been indispensable to mankind and have become part of his culture. The games and sports are a great unifying force and have tremendous effect on the national and international integration people used sports.

Sports have developed more and more into scientific discipline. Considerable research is done and devoted to identify various factors. Which influence the skills and performance at different sports. In the modern society greater importance is given to sports.

Asana means holding the body in a particular posture to bring stability to the body and poise to the mind. The exercises of asana bring purity in tabular channels firmness to the body and vitality to the body and the mind.

Physiology is defined as the science of functioning of all the organs and systems of an organism. (Ajmer Singh, 2005)<sup>[2]</sup>.

Resting pulse rate is the number of beats felt exactly one minute when a player is in resting condition. The number of beats of pulse per minute or the number of beats of the heart and entries per minute (Astrand, 1977)<sup>[3, 5]</sup>.

### Transcendental meditation

Though Transcendental Meditation is not a mantra-based meditation in the sense that its main core and direction is oriented towards transcending, it does involve use of mantras.

Maharishi Mahesh Yogi, the great teacher from India who introduced the Transcendental Meditation technique to the wider world, said: "Mantra is a specific thought which suits us, a suitable sound for us which we receive from a trained teacher of Transcendental Meditation.

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### 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. The application of Heart Rhythm Meditation to the development of spiritual maturity is described in the book, Follow Your Heart, by Puran and Susanna Bair, edited and illustrated by Asatar Bair published in 2011. 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 Methods

#### Statistical technique

The collected data were analyzed 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 selected physiological and psychological variables for each variable separately. Whenever, the obtained 'F' ratio for the adjusted post test mean was found to be significant, the Scheffe's test

was applied as post hoc test to determine the paired mean differences, if any. The .05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

#### Selection of subjects

To achieve this purpose of the study, sixty men students studying bachelor's degree in and around Colleges nearby Tiruvannamalai District, Tamil Nadu, India were randomly selected as subjects. The selected subjects were divided into three equal groups of twenty subjects each at random. Group I underwent Transcendental Meditation, Group II underwent Heart Rhythm Meditation and Group III acted as control.

#### Selection of variable

Physiological variable namely Systolic Blood Pressure was selected as criterion variable. The Transcendental Meditation and Heart Rhythm Meditation were selected as independent variables. The selected criterion variable was measured by Sphygmomanometer.

#### Analysis of the Data

##### Systolic Blood Pressure

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

**Table 1:** Analysis of covariance of the data on systolic blood pressure of pre and post tests 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	135.05	134.50	134.00	Between	11.0	2	5.50	
S.D.	3.33	3.28	4.24	Within	757.9	57	13.30	0.41
<b>Post-Test</b>								
Mean	129.35	128.70	134.60	Between	418.6	2	209.30	
S.D.	2.28	2.99	3.99	Within	571.6	57	10.03	20.87*
<b>Adjusted Post-Test</b>								
Mean	129.11	128.71	134.83	Between	464.0	2	232.00	
				Within	423.8	56	7.57	30.65*

(The table values required for significance at .05 level of confidence for 2 and 57 and 2 and 56 are 3.15 and 3.15 respectively).

The table 1 shows that the pre-test mean values on systolic blood pressure of transcendental meditation group, heart rhythm meditation group and control group are 135.05, 134.50 and 134.00 respectively. The obtained "F" ratio of 0.41 for pre-test scores is less than the table value of 3.15 for df 2 and 57 required for significance at .05 level of confidence on systolic blood pressure. The post-test mean values on systolic blood pressure of transcendental meditation group, heart rhythm meditation group and control group are 129.35, 128.70 and 134.60 respectively. The obtained "F" ratio of 20.87 for post test scores is greater than the table value of 3.15 for df 2 and 57 required for significance at .05 level of confidence on systolic blood pressure.

The adjusted post-test mean values on systolic blood pressure

of transcendental meditation group, heart rhythm meditation group and control group are 129.11, 128.71 and 134.83 respectively. The obtained "F" ratio of 30.65 for adjusted post-test means is lesser than the table value of 3.15 for df 2 and 56 required for significance at .05 level of confidence on systolic blood pressure.

The results of the study indicated that there was a significant difference among the adjusted post-test means of transcendental meditation group, heart rhythm meditation group and control group on systolic blood pressure.

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

**Table 2:** The Scheffe's test for the differences between paired means on systolic blood pressure

Transcendental meditation group	Heart rhythm meditation group	Control Group	Mean Differences	Confidence Interval
129.11	128.71	-	0.40	2.21
129.11	-	134.83	5.72*	2.21
-	128.71	134.83	6.12*	2.21

\* Significant at .05 level of confidence.

The table 2 shows that the mean difference values on systolic blood pressure between transcendental meditation group and control group and heart rhythm meditation group and control group are 5.72 and 6.12 respectively which were greater than the required confidence interval value 2.21 for significance at .05 level of confidence. And also the mean difference values on systolic blood pressure between transcendental meditation group and heart rhythm meditation group on low density lipoprotein 0.40 which was lesser than the required confidence interval value 2.21 for significance at .05 level of confidence.

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

## **Conclusions**

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

1. There was a significant differences exist among transcendental meditation group, heart rhythm meditation group and control group on systolic blood pressure.
2. There was significant change on selected physiological variables namely systolic blood pressure due to transcendental meditation and heart rhythm meditation after twelve weeks of training period.
3. Significant differences were found between transcendental meditation group and heart rhythm meditation group on selected physiological variables namely systolic blood pressure and after twelve weeks of training period.

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