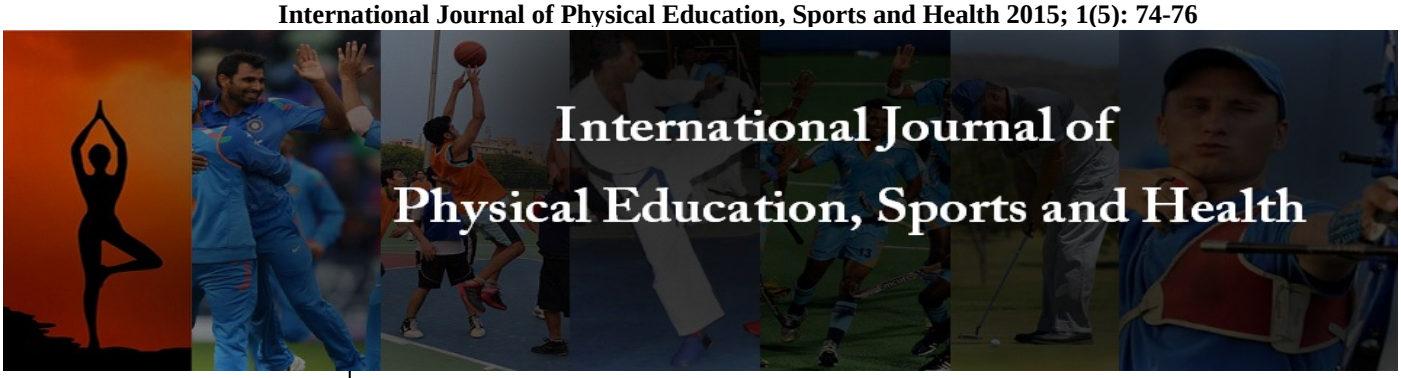

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Effects of yogic programme on blood pressure and respiratory rate

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Abstract
This investigation evaluated the effects of yogic programme on Blood Pressure and respiratory rate. The current investigation was conducted at the Physical Education Department, V.N. Govt. Institute of Arts & Social Sciences, Nagpur (M.S.). The age of the subjects were ranged between 18 to 20 years. Tools and Technique Selected Physiological variables i.e. Blood Pressure and respiratory rate were used and measured in this study to know the effect of yoga training on its. Measurements for the variables were taken at the pretest and at the end of the treatment period, after six weeks posttest the data were collected for all the variables from treatment group, for six days. During this period the subject were not allowed to participate in any training. The information was analyzed using paired‘t’ test to compare the before and after yogic training programme values of treatment group. P value of less than 0.05 was accepted as indicating significant difference between the compared values. The results of this investigation indicate that 6 weeks of yoga practice can significantly improve blood pressure and respiratory rate in collegiate students.

Keywords: yogic programme, Blood Pressure, respiratory rate.

Introduction
Regular yoga practice reduces illness and daily stress in the body. As a result, your body becomes healthier and more energetic. Physical exercise and yoga improve blood flow in the body and lower blood pressure. When small problems in life increase the tension and make you a patient of BP. This is not known. But in yoga there is a solution to this problem of yours. If you take the path of yoga to control increased blood pressure, then you feel healthier for longer.
The lungs can be kept healthy. By doing this yoga practice, the respiratory system is strengthened and the lungs also function actively. This reduces the risk of any type of disease associated with the respiratory system by several times.

Methodology
The current investigation was conducted at the Physical Education Department, V.N. Govt. Institute of Arts & Social Sciences, Nagpur (M.S.). The age of the subjects were ranged between 18 to 20 years. Tools and Technique Selected Physiological variables i.e. Blood Pressure and respiratory rate were used and measured in this study to know the effect of yoga training on it. Measurements for the variables were taken at the pretest and at the end of the treatment period, after six weeks posttest the data were collected for all the variables from treatment group, for six days. During this period the subject were not allowed to participate in any training.

Table 1: Yoga Training Programme

Asana and Pranayama	1st to 3rd Week		4th to 6th Week	
	Set	Duration Of Exercise in seconds	Set	Duration Of Exercise in Seconds
Warming Up	-	250	-	250
Tada – asana	3	190	2	190
Urdhva – hasta asana	3	190	2	190
Vriksha – asana	3	120	3	120
Vajra asana	3	120	3	120
Paschima – uttana – asana	4	120	2	120
Padma – asana	4	160	2	160
Sarvanga – asana	3	120	2	120
Hala – asana	3	120	1	120
Karna – pida – asana	3	120	2	120
Bhujanga – asana	3	120	2	120
Dhanur asana	3	120	2	120
Shawa – asana	1	180	1	180
Kapalbhati	2	240	2	240
Anulom vilom pranayam	2	240	2	240
Nadi shodhana	2	240	2	240
Ujjayi-pranayama	2	240	2	240
Simhasana-pranayama	2	240	2	240
Shawa – asana	1	180	1	180

Selection of Variables and Tests

The subjects were tested on the following variables.

Table 2

Name of Variables	Test	Unit
Blood Pressure	Sphygmomanometer	Milliliter of Mercury
Respiratory rate	Manual method	Numbers of breathing cycle in one minute

Statistical analysis

The information was analyzed using paired‘t’ test to compare the before and after yogic training programme values of treatment group. P value of less than 0.05 was accepted as indicating significant difference between the compared values.

Table 3: t-ratio of the means of systolic blood pressure in college students

Test	N	Mean	SD	SE	MD	OT	DF	TT
Pretest	20	121.75	2.12	0.719	2.100	9.703*	19	2.093
Posttest	20	119.65	2.41					

*Significant at. 05 level, t.05 (19) = 2.093

From table -1 it is evident that’t’ value of systolic blood pressure is 9.703 which is significant at. 05 level.

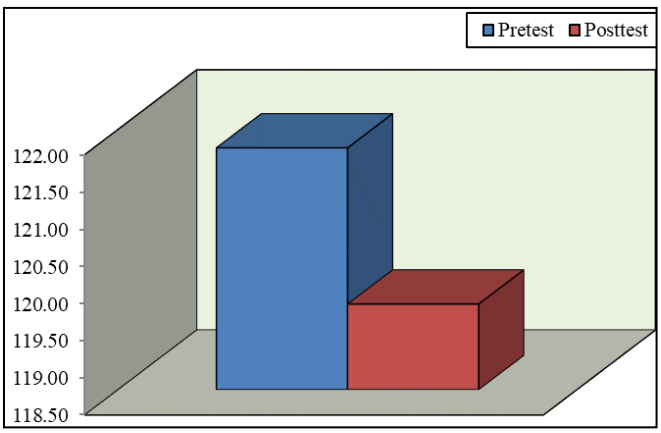

Fig 1: Graphical representation of mean value of systolic blood pressure between pretest and posttest of students

Table 4: t-ratio of the means of diastolic blood pressure in college students

Test	N	Mean	SD	SE	MD	OT	DF	TT
Pretest	20	81.10	2.22	0.734	1.650	6.020*	19	2.093
Posttest	20	79.45	2.42					

*Significant at. 05 level, t.05 (19) = 2.093

From table -1 it is evident that’t’ value of diastolic blood pressure is 6.020 which is significant at. 05 level.

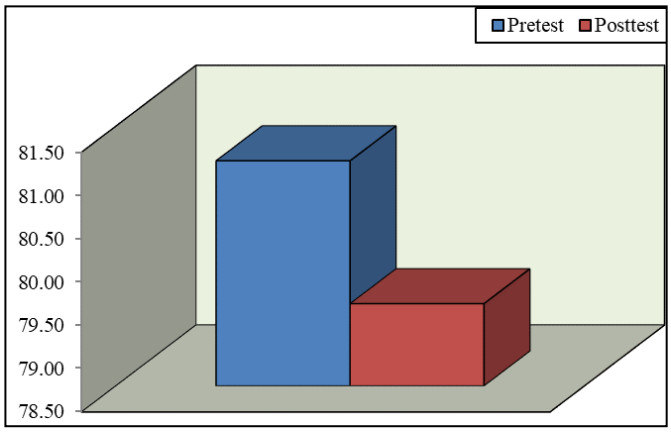

Fig 2: Graphical representation of mean value of diastolic blood pressure between pretest and posttest of students

Table 5: t-ratio of the means of respiratory rate in college students

Test	N	Mean	SD	SE	MD	OT	DF	TT
Pretest	20	18.85	1.57	0.496	1.350	8.102*	19	2.093
Posttest	20	17.50	1.57					

*Significant at. 05 level, t.05 (19) = 2.093

From table -1 it is evident that’t’ value of diastolic blood pressure is 8.102 which is significant at. 05 level.

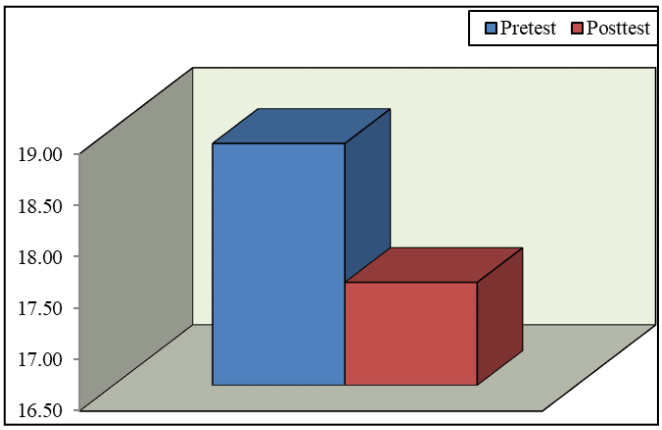

Fig 3: Graphical representation of mean value of respiratory rate between pretest and posttest of students

Discussion

In the current investigation, systolic blood pressures, as well as diastolic blood pressures both have decreased significantly after six months of yoga training. This is reliable with our previous result that yoga training produces a significant decreased in systolic blood pressures and diastolic blood pressures. [1] On the other hand, Chaudhary and Ahsan, M. (2012) have concluded that yoga training produces an decreased in systolic blood pressure and diastolic blood pressure. [2] Sree, R. V. (2012) have reported that the number of respiration per minute is also normalized after 8weeks aerobic dance and pranayama. [3] Jayachandran, K. (2014)

have reported respiratory rate normalized after six months of yoga training. [4]

Conclusion

The results of this investigation indicate that 6 weeks of yoga practice can significantly improve blood pressure and respiratory rate in collegiate students. Yoga is a very useful practice that is easy to do and helps to get rid of some serious health problems that are common in today's lifestyle.

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