

Comparative Study of BMI and Vital Capacity between Physical Education Students and Yoga Students



Physical Education

KEYWORDS : BMI, Randomly, Static, Vital Capacity

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ABSTRACT

Back Ground: - The purpose of the study was to compare BMI and Vital Capacity between Physical Education and Yoga Students. *Objectives of the study:-* 1) to characterize the level of BMI and Vital Capacity of Physical Education and Yoga Students. 2) To compare BMI and Vital Capacity between Physical Education Students and Yoga Students. *Materials and Methods:* - Total 30 students (15 from Physical Education students and 15 from Yoga Students) randomly were selected from D.A.V.V Indore as subject for the purpose of the study. *Static Group design was used. Statistical Techniques:-* 1) Descriptive statistics was used to characterize the level of BMI and Vital capacity of Physical Education and Yoga Students. 2) Independent T-test was used to compare BMI and Vital Capacity between Physical Education Students and Yoga Students. *Results:* - Physical Education students were having mean and SD (3229.53 ± 619.70) & (3459.3 ± 373.4) and Yoga students were having mean and SD (18.8 ± 1.30) & (19.6 ± 1.40) in relation to Vital capacity and BMI respectively and Calculated -t value was found 1.23 and 1.59 in relation to vital capacity and BMI. *Conclusions:* - 1) Physical education students were having greater mean of vital capacity in comparison to Yoga students. 2) Yoga students were having greater BMI in comparison to Physical education students. 3) Insignificant difference was found between Physical education and Yoga students in relation to Vital capacity and BMI.

Introduction

Today yoga being a subject of varied interests has gained worldwide popularity. Recent research tends have shown that it can serve as applied science in a number of fields such as education physical education and sports health and family welfare psychology and medicine and also one of the valuable means for the development of human resources for better performance and productivity [1]. Yoga is recognized as one of the most important and valuable heritage of India. Today, whole world is looking towards yoga for answering various problems. In spite of this, no field is so grossly misunderstood as yoga, even in India. If one take a sample of the society and take a general survey of the public opinion about yoga, one shall find that there are many misbelieve. However, yoga is respected by the Indian schools of philosophy and other philosophers because of its practical aspect containing various psycho-physiological practices rather than its philosophy [2]. Physical Education is not only aimed at physical development but also includes the development of the individual as a whole. Physical Education is a means to encourage the development of motor skills, physical abilities, knowledge reasoning, appreciation of the value (attitude-mental-emotional-spiritual social), and habituation healthy lifestyle that leads to stimulate growth and balanced development. With Physical Education, students will acquire a variety of expressions which are closely related with the personal Impressions of fun as well as various innovative, skilled, have physical fitness, healthy habits and have the knowledge and understanding of human motion [3].

Objectives of the Study

- The first objective of the study was characterizing the level of BMI and Vital Capacity of Physical Education students.
- The second objective of the study was to characterize the level of BMI and Vital Capacity of Yoga Students.
- The third objective of the study was to compare BMI and Vital Capacity between Physical Education Students and Yoga Students.

Materials & Methods

Thirty students of DAVV Indore were selected as subjects between the age group of 19 to 25 years for the purpose of this study. The thirteen subjects were divided into two groups, fifteen from school of Physical education and fifteen students from school of yoga. Two variables i.e. Vita capacity and BMI were selected as variables. Vital Capacity was measured through dry Spiro meter in milliliter and BMI was measured through the for-

mula (weight in kg / (Height in cm) ^2). Static Group design was used to provide the blue print of the study [4].

Results, Discussion and Conclusions

The statistical analysis of data was conducted on the physiological variables (vital capacity & BMI) of thirty male students of school of yoga and school physical education of Indore. The "t" test was used to carry out the comparison of BMI and Vital Capacity between Physical Education and Yoga Students and descriptive statistics was used to characterize the level of BMI and Vital capacity of Physical Education and Yoga Students [5 & 6]. In order to test the hypothesis the level of significance was set at 0.05. The results are given in table 1, 2, 3 & 4.

Table-1

Mean and standard deviation of male students in relation to Vital Capacity (N=30)

Variables	Groups	Mean	S.D.
Vital Capacity	Physical Education Students	3229.53	619.70
	Yoga Students	3459.33	373.40

Table-1 reveals that Vital Capacity, Physical Education students (3229.53 ± 619.70), Yoga Students (3459.3 ± 373.40301), Yoga students were having greater mean in relation to Vital Capacity in comparison to Physical Education students.

Table-2

Mean and standard deviation of male students in relation to Vital Capacity (N=30)

Variables	Groups	Mean	S.D.
BMI	Physical Education Students	18.83	1.30
	Yoga Students	19.63	1.40

Table -2 reveals that BMI, Physical Education students (18.83 ± 1.30), Yoga Students (19.63 ± 1.40), Yoga students were having greater mean in relation to BMI in comparison to Physical Education students.

TABLE- 3

Comparison of Vital Capacity between Physical Education and Yoga Students

Group	Mean	S.D.	M.D.	T-Ratio
Physical Education Students	3229.53	619.70	229.8	1.23
Yoga students	3459.33	373.40		

*Significant at 0.05 level, Tab. (28) = 2.04

From table-3 it is clearly evident that on Vital Capacity there is

no significance difference between Physical education and Yoga students. As the t-value 1.23 was found to be insignificant as it is lesser than the tabulated t-value i.e. 2.04 required to be significant.

Fig.1
Graphical representation of Vital Capacity between physical education and yoga students

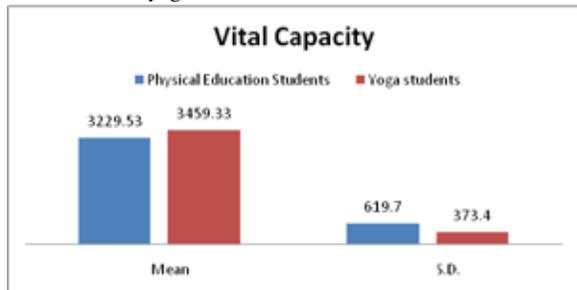


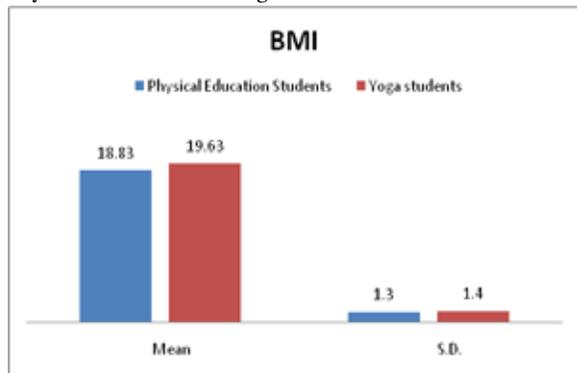
TABLE- 4
Comparison of BMI between Physical Education and Yoga Students

Group	Mean	S.D.	M.D.	T-Ratio
Physical Education Students	18.83	1.30		
Yoga students	19.63	1.40	.7918	1.597

*Significant at 0.05 level, Tab. (28) = 2.04

From table-4 it is clearly evident that on BMI there is no significance difference between Physical education and yoga students. As the t-value 0.1.597 was found to be insignificant as it is lesser than the tabulated t-value i.e. 2.04 required to be significant.

Fig 2
Graphical Representation of Comparison of BMI between Physical Education and Yoga Students



Discussion of Findings

On the basis of result it was concluded that insignificant difference was found between yoga and physical education students, this might be due to that physical education students does not only practiced exercise and physical activity but also they do yoga because yoga is as a subjects teach in physical education curriculum. **Hagins Marshall, Haden Sara C. & Daly Leslie A. (2013)** has conducted the study on “There is an increasing interest in developing school programs that improve the ability of children to cope with psychosocial stress. Yoga may be an appropriate intervention as it has demonstrated improvements in the ability of children to manage psychosocial stress. Yoga is thought to improve the control of reactivity to stress via the regulation of the autonomic nervous system. The current study examined the effects of yoga compared to a physical education class on physiological response (blood pressure (BP) and heart rate (HR)) to behavioral stressor tasks (mental arithmetic and mirror tracing tasks). Data analysis of BP and HR was performed using a 2 × 2 × 4 repeated measures ANOVA (time × group × stressor time points). 30 (17 male) 6th graders participated in the study.

Yoga did not provide significant differences in stress reactivity compared to a physical education. The lack of significant differences may be due to the yoga intervention failing to focus on stress management and/or the stressor tasks not adequately capturing attenuation of stressor response. The present study was supported by the study conducted by **Hagins Marshall, Haden Sara C. & Daly Leslie A.(2013)[7]**.

Conclusions

- Physical education students were having greater mean of vital capacity in comparison to Yoga students.
- Yoga students were having greater BMI in comparison to Physical education students.
- Insignificant difference was found between Physical education and Yoga students in relation to Vital capacity and Yoga Students.

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