



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2018; 3(1): 978-980

© 2018 Yoga

www.theyogicjournal.com

Received: 01-11-2017

Accepted: 04-12-2017

Sreenivasa T

Research Scholar,

Dravidian University, Kuppam,

Andhra Pradesh, India

Dr. P.C. Krishnaswamy

Professor and Chairman,

University College of Physical

Education, Bangalore

University, Jnanabharathi

Campus, Bengaluru, Karnataka,

India

## Analysis of the physiological and psychological variables among high school boys of different ethnic groups

Sreenivasa T, Dr. P.C. Krishnaswamy

### Abstract

It is generally acknowledged that the physiological elements of the body enhance with utilization and decrease with abandonment and self-esteem is an imperative part of a person's personality. Students belonging to different ethnic groups vary in their fitness due to their life styles, physical activities, culture, food intake and heredity. In this article, the researcher compares the selected physiological and psychological variables of high school boys studying in Government secondary schools belonging to different ethnic groups in Tumkur District, Karnataka. One hundred and fifty high school boys of government secondary schools from different ethnic groups (each ethnic group of 50 subjects) of Tumkur District with the age ranging from 13 to 15 years were selected randomly. The physiological variables like Breath Holding Time by manual and Resting Heart Rate by Omran Monitor and psychological variable Self Esteem by Ken Williams were selected. The result concludes that there was significant difference in Breath Holding Time and Self Esteem among high school boys of Hindu, Muslim and Christian religion except Resting Heart Rate. Sports are very important for the physical, physiological as well as psychological development of the individual of any religion. It is very important for physiological and psychological development of any individual.

**Keywords:** Physiological, psychological, self esteem, high school boys, ethnic groups

### 1. Introduction

It is generally acknowledged that the physiological elements of the body enhance with utilization and decrease with abandonment. All the more particularly, the heart, lungs and muscles end up evidently stronger and more durable the more they are utilized. To live a healthy life with fitness and to protract life, the scientists and their researches have dedicated lives for the development of medicines that shield life from different diseases and health related medicinal equipments that measure the physiological and psychological parameters of an individual who will find new solutions in these fields. They may be very exceptional and outstanding in the historical backdrop of men and human progress.

The human body is normally compared to a machine. A machine directs oil as fuel and delivers warmth and motion. The same way a body additionally draws glucose as fuel and delivers moment and work. The most essential contrasts lie in the way that the body adjusts to a given anxiety if the anxiety is not very high or excessively sudden while a machine does not adjust to anomalous burdens.

Sports psychology is the scientific study of the athletes and their behaviors in the context of sports and the practical application of that knowledge. Sports psychology deals with the increase of performance by the management of emotions and the minimization of psychological effects of injury and poor performance. Self-esteem is an imperative part of a person's own personality. Self-esteem is characterized by the level of worth and skill that we credit to ourselves. Self-esteem mirrors a man's general subjective enthusiastic assessment of his or her own value. It is a judgment of oneself and additionally a state of mind toward the self. Various research demonstrated that investment in recreations and games and exercise is generally emphatically improves the level of self-esteem work out, yet in the meantime it is additionally found that this level is the most steady and hard to change (Marsh, Hey, Roche, and Perry, 1997) [4].

Correspondence

Sreenivasa T

Research Scholar,

Dravidian University, Kuppam,

Andhra Pradesh, India

Deshmukh (2013) [1] studied physiological factors amongst Basketball and Volleyball male university players and demonstrated significant distinction in resting heart rate and positive breath holding limit. Analyzed physiological factors among college men and found that there was noteworthy contrast among players in heartbeat rate and there was no huge distinction in inhale holding time among basketball, Football and Volleyball players. Analyzed psychological variables in relation to playing ability among Handball groups at various levels and the outcome uncovered that there is critical distinction on self-esteem among the four levels of Handball groups. Nigam (2011) [5] analyzed the impacts of self-efficacy on sports competition anxiety and stated that private and open self-awareness and social anxiety are all contributing elements in foreseeing focused characteristic anxiety. From these studies it was cleared that physiological and self esteem are important factors for higher sports achievement and these are essential for an individual as well as sportsmen. Students belonging to different ethnic groups vary in their fitness due to their life styles, physical activities, culture, food intake and heredity. In the article the researcher compares the selected physiological and psychological variables of high school boys studying in Government secondary schools belonging to different ethnic groups in Tumkur District, Karnataka.

**2. Purpose and objective**

The purpose of the study is to know the physiological and psychological variables and also to compare the said variables among high school boys of different ethnic groups.

**3. Statement of hypotheses**

It is hypothesized that there is no significant difference in the selected Physiological (Breath Holding time and Resting Heart Rate) and Psychological variables (Self Esteem)) of the high school boys of different ethnic groups.

**4. Methodology**

**4.1 Selection of Subjects**

One hundred and fifty high school boys of government secondary schools from different ethnic groups (each ethnic group of 50 subjects) of Tumkur District with the age ranging from 13 to 15 years were selected randomly.

**4.2 Selection of Variables**

The following variables were selected for the study

1. Breath Holding Time: Manual (In Secs.)
2. Resting Heart Rate: Omran Monitor (In Minute)
3. Self Esteem: Ken Williams (In Scores)

**4.3 Statistical Technique**

The One-way Analysis of Variance (ANOVA) was used to find the significant difference in the physiological and psychological variables among the different ethnic groups. The Scheffe’s Post Hoc test was used to find the significant difference in the paired means.

**5. Results of the study**

The ‘F’ test results on the selected Physiological and Psychological Variables scores of the high school boys of different ethnic groups are interpreted in the following tables.

**Table 1:** Table shows One-Way ANOVA Analysis on the Physiological and Psychological of the high school boys of different ethnic groups.

Variables	Groups	Sum of Squares	df	Mean Squares	F Value	Level of Sig.
Breath Holding Time (In Secs.)	Between Groups	21882.413	2	10941.207	69.59	Significant at 0.01
	Within Groups	23112.377	147	157.227		
	Total	44994.790	149			
Resting Heart Rate (In one Minute)	Between Groups	215.053	2	107.527	1.04	Not Significant
	Within Groups	15236.840	147	103.652		
	Total	15451.893	149			
Self Esteem (In Scores)	Between Groups	5836.653	2	2918.327	79.18	Significant at 0.01
	Within Groups	5417.940	147	36.857		
	Total	11254.593	149			

Groups: Hindu, Muslim & Christian (N=150)

Table value at 0.05 (3.06); Table value at 0.01 (4.75)

From the table-1 it is observed that the obtained ‘F’ value of 1.04 for the Resting Heart Rate is less than the table value of 3.06 for df ‘2 and 149’ required for the significance at 0.05 level of confidence. The results of the study indicated that “there is no significant difference in the Resting Heart Rate among high school boys of different ethnic groups.”

From the table it is also shows that the obtained ‘F’ values of 69.59 and 79.18 for the Breath Holding Time and Self Esteem are greater than the table value of 4.75 for df ‘2 and 149’

required for the significance at 0.01 level of confidence. The results of the study indicated that “there is significant difference in the Breathing Holding Time and Self Esteem among High school boys of different ethnic groups.”

To determine the significant difference in the criterion variables among these paired means, the ‘Scheffe’s test was applied as the Post hoc analysis and the results were presented in Table-2.

**Table 2:** Scheffe’s Post Hoc Analysis on the Physiological and Psychological scores of the High school boys of different ethnic groups.

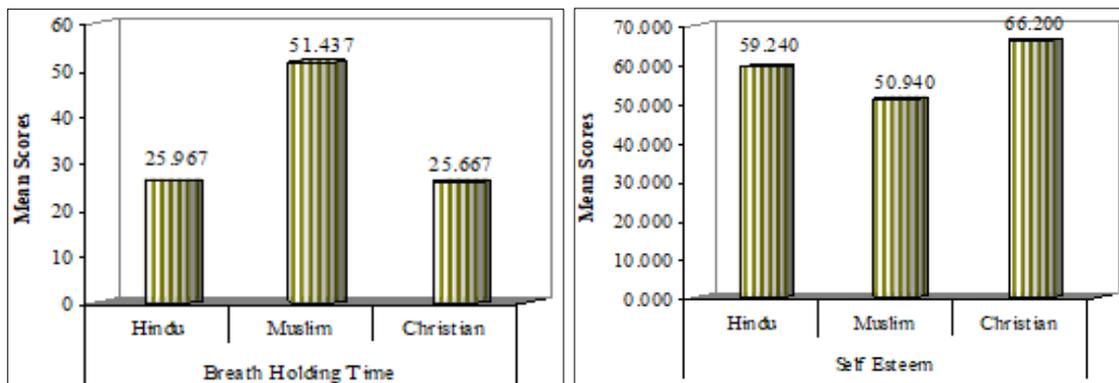
Variables	Ethnic Groups			Mean Difference (MD)	Critical Difference (CD)
	Hindu	Muslim	Christian		
Breath Holding Time	25.967	51.437	-	25.470*	6.204
	-	51.437	25.667	25.770*	
	25.967	-	25.667	0.300	
Self Esteem	59.240	50.940	-	8.300*	3.004
	-	50.940	66.200	15.260*	
	59.240	-	66.200	6.960*	

\*Significant at 0.05 level of confidence.

The table also shows significant paired mean differences on the Breath Holding Time between Hindu & Muslim groups; and Muslim & Christian groups of high school boys and the MD values are 25.470 and 25.770 respectively which are greater than the CD value at 0.05 level of confidence. It was concluded that there is a significant difference in the Breath Holding Time between Hindu & Muslim; and Muslim & Christian groups of high school boys and no different exists between the Hindu & Christian groups of high school boys. The high school boys belonging to Christian religion had better breath holding time when compared with high school boys belonging to Hindu and Muslim religions. The table also shows significant paired mean differences on

the Self Esteem between Hindu & Muslim groups; Muslim & Christian groups; and Hindu & Christian groups of high school boys and the MD values are 8.300, 15.260 and 6.960 respectively which are greater than the CD values at 0.05 level of confidence. It is concluded that there is significant difference in the Self esteem between Hindu & Muslim; Muslim & Christian; and Hindu & Christian groups of high school boys. The high school boys belonging to Christian religion had more self-esteem when compared with students from Hindu and Muslim religions.

The following Bar graph shows the comparison of mean scores of the breathing holding time and self-esteem of the high school boys of different ethnic groups.



**Fig 1:** Comparison of mean scores of Breath Holding Time and Self Esteem of high school boys of different ethnic groups.

## 6. Discussion of findings

From the 'F' Test it was found that there exists significant difference in the Breathing Holding Time among High school boys of different ethnic groups. The high school boys from Muslim community (M=51.437) would do well to breath holding capacity when contrasted and Hindu (M=25.967) and Christian (M=25.667). This might be because of their nourishment and the way of life among the students. Yoga and Aerobics assumes a significant part in improving breathing time. The study also proved that there exists significant difference in the self-esteem among High school boys of different ethnic groups. The high school boys have a place with Christian (M=66.200) would be advised to self esteem when contrasted and Hindu (M=59.240) and Muslim (M=50.940). This might be because of the way of life among the children. This finding is contrary with studies by which has detailed that minority group slant towards a lower level of self-esteem. The study also proved that insignificant difference found in the Resting Heart Rate of the high school boys of different ethnic groups.

## 7. Conclusion

The result concludes that there was significant difference in Breath Holding Time and Self Esteem among high school boys of Hindu, Muslim and Christian religion except Resting Heart Rate. Sports are very important for the physical, physiological as well as psychological development of the individual of any religion.

## 8. References

1. Deshmukh Sanjay V. Comparison of Selected Physiological Variables between Basketball and Volleyball Male Players. International Indexed & Refereed Journal. 2013; (49):11-13.
2. Garrett Henry E, Woodworth RS. Statistics in Psychology and Evaluation, Vakils Faffer and Simonx

Pvt. Ltd., Ballard Estate, Bombay.

3. Kamlesh ML. Psychology in Physical Education and Sport, New Delhi: Khel Sahitya Kendra, 2015.
4. Marsh HW, Hey J, Roche LA, Perry C. Structure of Physical Self-Concept: Elite Athletes and Physical Education Students. Journal of Educational Psychology. 1997; 89(2):369-380.
5. Nigam, Ashish Kumar. Effect of Self Efficacy on Sports Competition Anxiety. International Referred Research Journal. 2011; I:17.
6. Sharma RA. Elementary Statistics in Education and Psychology. Vinay Rakheja Publication, Meerut, 2005.
7. Wilmore JH, Costill DL. Physiology of Sport and Exercise. Champaign, IL: Human Kinetics Publishers, 1994.