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COMPARATIVE STUDY OF PHYSIOLOGICAL CHARACTERISTICS AMONG NATIONAL LEVEL KABADDI PLAYERS OF DIFFERENT GEOGRAPHICAL REGIONS IN INDIA

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ABSTRACT

Introduction: The objective of this study was to investigate the physical characteristics among national level kabaddi players of different geographical regions in India. Another purpose of the study was to find out the physiological characteristics among national level kabaddi players of different geographical regions in India. **Methods:** The subjects for the study were selected from the 150 male national level kabaddi players. 50 subjects were selected from coastal area, 50 subjects were selected from non-coastal area and while another 50 subjects was selected from hilly area. The age level of subjects was range from 20 to 25 years. All the subjects were residing at different geographical regions in India. A stand and progressive matrices organizational selected physiological characteristic is (Vital Capacity, Respiratory Rate, Blood Pressure and Pulse Rate). To find out significant different of physiological characteristics among national level kabaddi players of different geographical regions in India, the one-way analysis of variance was used. The level of significance was set at .05 levels. **Results And Discussion:** The result reveals the one-way analysis of variance that there was significant ($p > .05$) for physiological characteristics (Vital Capacity, Respiratory Rate, Blood Pressure and Pulse Rate) among national level kabaddi players of different geographical regions in India.

KEYWORDS : Vital Capacity, Respiratory Rate, Blood Pressure and Pulse Rate, Kabaddi Players

INTRODUCTION

Many of today's technological inventions that make life easier for a person, but these are serious problems for fitness and health. We use escalators and elevators instead of climbing stairs. We also drive to nearby places instead of walking or cycling. Sedentary lifestyles are responsible for an increase in hypo kinetic diseases. These include coronary disease, hypertension, obesity, anxiety, lower back pain, arthritis, and osteoporosis. It is therefore necessary to maintain a fitness program that maintains health over a person's lifetime and this includes exercise as well as dieting from alcohol and smoking, proper nutrition and proper rest and rest. (Blair, 1978).

Human Physiology is depicted as study of life as it manages the investigation of the working of human framework. Human physiology lets us know how the cell, muscle, organ work together, it portrays the instrument from the nuclear level including the cell works organizing the direct of whole body. Human Physiology is portrayed as investigation of life as it deals with the examination of the working of human structure. Human physiology lets us know how the cell, muscle, organ work does together; it portrays the part from the sub-nuclear level including the cell work organizing the direct of whole body. Physiology focuses on the structures and their organs of the human body and their abilities. Various structures and frameworks interface with a particular ultimate objective to care for homeostasis.

Physiology is the study of life. It is the part of science that means to comprehend the instruments of living things, from the premise of cell work at the ionic and atomic level to the coordinated conduct of the entire body and the impact of the outside climate. Research in physiology assists us with seeing how the body functions in wellbeing and how it reacts and adjusts to the difficulties of daily existence; it likewise assists us with figuring out what turns out badly in infection, working with the improvement of new medicines also rules for keeping up with human and creature wellbeing. The accentuation on incorporating atomic, cell, frameworks and entire body work is the thing that recognizes physiology from the other life sciences.

METHODOLOGY

The subjects for the study were selected from the 150 male national level kabaddi players. 50 subjects were selected from coastal area, 50 subjects were selected from non-coastal area and while another 50 subjects was selected from hilly area. The age level of subjects was range from 20 to 25 years. All the subjects were residing at different geographical regions in India. A stand and progressive matrices organizational selected physiological characteristic is (Vital Capacity, Respiratory Rate, Blood Pressure and Pulse Rate). To find out significant different of physiological characteristics among national level kabaddi players of different geographical regions in India, the one-way analysis of variance was used. The level of significance was set at .05 levels.

FINDINGS OF THE STUDY

Vital Capacity:

To find out vital capacity among coastal area, non-coastal area and hill area kabaddi players, analysis of variance was used and presented in table-1.

Table-1 Analysis Of Variance Of Vital Capacity Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	5914133.33	2957066.67	59.625
Within Group	147	7290350	49594.22	*

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

The value shown in table-1 clearly indicates that the F-Value calculated is much higher than the required value to be the significant. Further the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their vital capacity level through post hoc test were computed which are presented in the following tables and also are represented by figure-I.

Table-2 Comparison Of Vital Capacity Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
4201	4509		308	87.74*
4201		4681	480	
	4509	4681	172	

*Significant at .05 level
F-Value required to be significant at .05(2, 147) = 3.061

The post hock test is to compare the vital capacity among coastal area, non-coastal area and hill area national level kabaddi players. Has clearly revealed the significant difference between the National level kabaddi players of coastal area and non-coastal area where the calculated mean difference found (308), coastal area and hill area where the calculated mean difference found (480) and non-coastal area and hill area where the calculated mean difference found (172) was higher than the required value 87.74. The required value was much higher than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-I

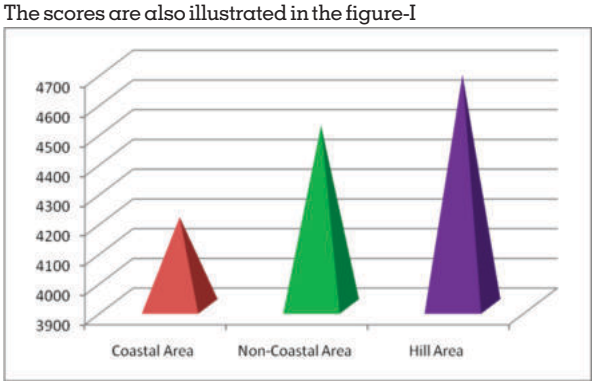

Figure-I

Respiratory Rate:
To find out respiratory rate among coastal area, non-coastal area and hill area kabaddi players, analysis of variance was used and presented in table-3.

Table-3 Analysis Of Variance Of Respiratory Rate Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	129.64	64.82	122.759*
Within Group	147	77.62	.53	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

The value shown in table-3 clearly indicates that the F-Value calculated is much higher than the required value to be the significant. Further the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their respiratory rate level through post hoc test were computed which are presented in the following tables and also are represented by figure II.

Table-4 Comparison Of Respiratory Rate Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
15.36	15.02		.34	.287*
15.36		13.24	2.12	
	15.02	13.24	1.78	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

The post hock test is to compare the respiratory rate among coastal area, non-coastal area and hill area national level kabaddi players. Has clearly revealed the significant difference between the National level kabaddi players of coastal area and non-coastal area where the calculated mean difference found (.34), coastal area and hill area where the calculated mean difference found (2.12) and non-coastal area and hill area where the calculated mean difference found (1.78) was higher than the required value .287. The required value was much higher than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-II

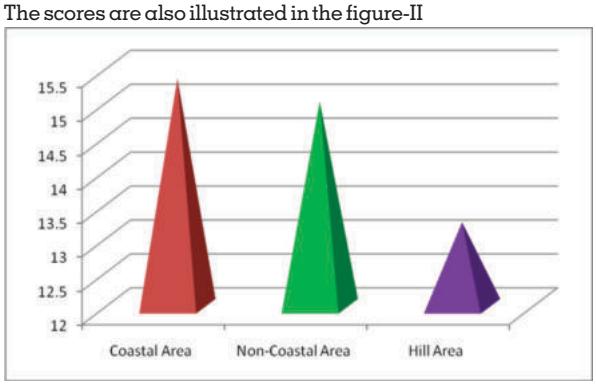

Figure-II

Blood Pressure:
To find out systolic blood pressure among coastal area, non-coastal area and hill area kabaddi players, analysis of variance was used and presented in table-5.

Table-5 Analysis Of Variance Of Systolic Blood Pressure Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	560.053	280.027	3.529*
Within Group	147	11664.72	79.352	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

The value shown in table-5 clearly indicates that the F-Value calculated is much higher than the required value to be the significant. Further the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their systolic blood pressure level through post hoc test were computed which are presented in the following tables and also are represented by figure III.

Table-6 Comparison Of Systolic Blood Pressure Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
126.84	123.20		3.64	3.509*
126.84		122.40	4.44	
	123.20	122.40	0.80	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

The post hock test is to compare the systolic blood pressure among coastal area, non-coastal area and hill area national level kabaddi players. Has clearly revealed the significant difference between the National level kabaddi players of coastal area and non-coastal area where the calculated mean difference found (3.64), coastal area and hill area where the calculated mean difference found (4.44) was higher than the required value .287. But insignificant difference between the National level kabaddi players of non-coastal area and hill area where the calculated mean difference found (.80) was lower than the required value 3.509. The

required value was much lower than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-III

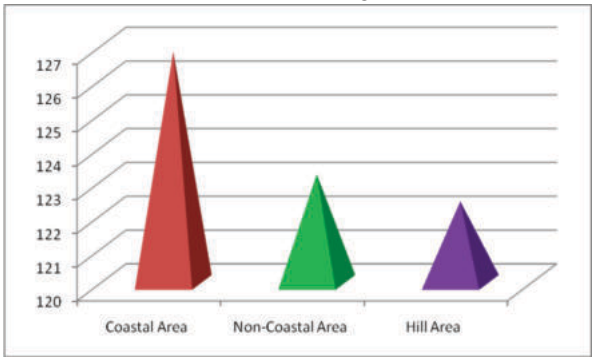

Figure-III

Diastolic Blood Pressure:

To find out diastolic blood pressure among coastal area, non-coastal area and hill area kabaddi players, analysis of variance was used and presented in table-7.

Table-7 Analysis Of Variance Of Diastolic Blood Pressure Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	7085.29	3542.65	85.204*
Within Group	147	6112.04	41.58	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

The value shown in table-7 clearly indicates that the F-Value calculated is much higher than the required value to be the significant. Further the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their diastolic blood pressure level through post hoc test were computed which are presented in the following tables and also are represented by figure IV.

Table-8 Comparison Of Diastolic Blood Pressure Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
76.14	72.86		3.28	2.541*
76.14		88.80	12.66	
	72.86	88.80	15.94	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

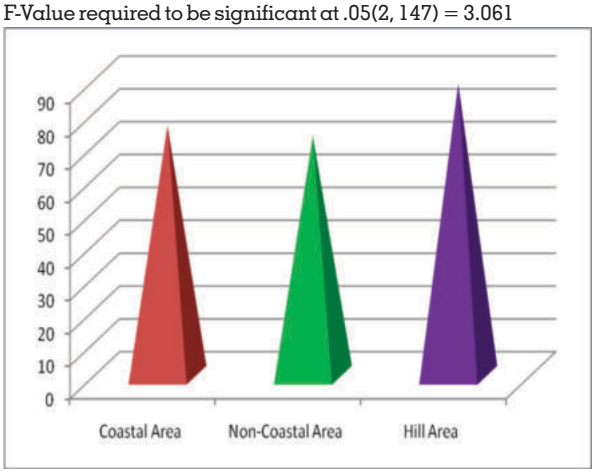

Figure-IV

The post hock test is to compare the diastolic blood pressure among coastal area, non-coastal area and hill area kabaddi players. Has clearly revealed the significant difference between the National level kabaddi players of coastal area and non-coastal area where the calculated mean difference found (3.28), coastal area and hill area where the calculated mean difference found (12.66) and non-coastal area and hill area where the calculated mean difference found (15.94) was higher than the required value 2.541. The required value was much lower than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-IV.

Pulse Rate:

To find out pulse rate among coastal area, non-coastal area and hill area kabaddi players, analysis of variance was used and presented in table-9.

Table-9 Analysis Of Variance Of Pulse Rate Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	461.280	230.64	7.939*
Within Group	147	4270.720	29.053	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

The value shown in table-9 clearly indicates that the F-Value calculated is much higher than the required value to be the significant. Further the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their pulse rate level through post hoc test were computed which are presented in the following tables and also are represented by figure-V.

Table-10 Comparison Of Pulse Rate Among Coastal Area, Non-coastal Area And Hill Area Kabaddi Players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
79.36	75.16		4.20	2.123*
79.36		76.48	2.88	
	75.16	76.48	1.32	

*Significant at .05 level

F-Value required to be significant at .05(2, 147) = 3.061

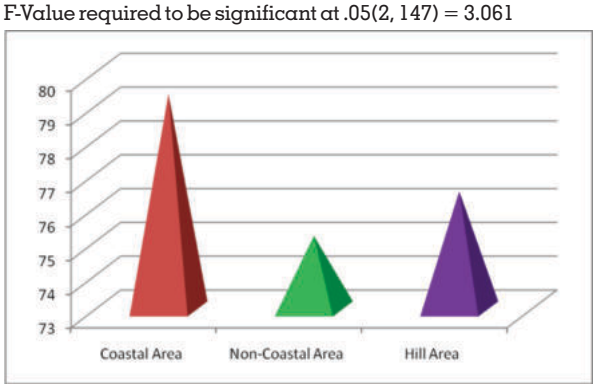

Figure-V

The post hock test is to compare the pulse rate among coastal area, non-coastal area and hill area national level kabaddi players. Has clearly revealed the significant difference between the National level kabaddi players of coastal area and non-coastal area where the calculated mean difference found (4.20), coastal area and hill area where the calculated mean difference found (2.88) was higher than the required value 2.123. But insignificant difference between the National level kabaddi players of non-coastal area and hill area where

the calculated mean difference found (1.32) was lower than the required value 2.123. The required value was much lower than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-V

DISCUSSION OF THE RESULT

The present investigation was designed to know the physiological characteristics among national level kabaddi players of different geographical regions in India. The purpose of this study was revealed some specific differences for physiological characteristics among the national level kabaddi players of different geographical regions in India. The research scholars did not intend to explore personal life of players. Various tools have been used to find out the important differences in aspects of various physiological characteristics of players to achieve the purpose of this research.

The result of the study revealed significant difference among the mean scores of national level kabaddi players of different geographical regions in relation to physiological characteristics. The This fact can be attributed to the different geographical conditions, as all the players live in different geographical conditions, due to which differences have been found in the physical components of all these players. Zelalem Tilahun Muche, Diresibachew Haile Wondimu, Milkessa Bayissa Midekssa & et al (2021)in the study on hematological parameters of endurance runners at Guna athletics sport club (3100 meters above sea level) and Ethiopian youth sport academy (2400 meters above sea level), Ethiopia. Different geographical regions are affecting the physical and physiological characteristics, which appears in the current study.

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