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COMPARATIVE STUDY OF PHYSICAL 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 physical 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 physical characteristic is (Speed, Cardiovascular Endurance, Explosive Leg Strength and Agility). To find out significant different of physical 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 physical characteristics (Speed, Cardiovascular Endurance, Explosive Leg Strength and Agility) among national level kabaddi players of different geographical regions in India.*

Keywords: Geographical Regions, Speed, Cardiovascular Endurance, Explosive Leg Strength and Agility, Kabaddi Players

INTRODUCTION

The impact of environment and ecology on sports in India needs to be overestimated and taken care of because geographically India is a unique country where we have tropical and sub-tropical rain / deciduous forests, arid and semi-arid tropics, There are alpine forests, deserts of tundra and total geographical area, the total area of this eastern mountainous region (eastern Himalayas) The 19.44 percent of Trfl, which is 70-90 percent of the original forest cover after Madhya Pradesh, Haryana, Himalayan state, Kerala, Orissa with 20–30 percent forest cover. Other states including Gujarat (6.0%) have bare minimum forests (1.2 to 4.4 percent). The Forest Survey of India estimates that only 50 percent of the total forest cover is of sufficient density. Therefore, effective forest cover is only 10 percent of the geographical area of the country.

Sports serve to bring out the suppressed inner feeling of a person. It is like a safety balloon to 'blow' from steam. Serves a tonic for a person in panic, tiredness and despair. Sports can be used to isolate students from concentration in books and the pressure of studying. Games further provide a learning situation in a formal and informal way from which participants learn to modify certain qualities in a unique way. Sports activity is divided into four sub-systems, which are determined by cultural, social, personal and biological systems. Sports also play an important role in the development of the character and personality of the person which is important for survival in human society. According to the objective and organizational perspective, play has been divided into many levels. There are sprint games, endurance games, power sports, technical games, tactical games, water sports, precision sports etc., which can be individual or team sports or mediocre and non-mediocre games. Kabaddi sports demand a high level of technical and tactical abilities as well as the desired level of fitness. (Singh, 2008)

Physical activities were promoted as part of education in Germany, France and England. In the seventeenth century, the Englishman John Locke used the popular phrase "a sound mind in a sound body". He believed that exercise is an easy way to live a health life, and dance has helped develop this grace.

In England, Archibald McLaren (1820–1884) devised a physical training program, emphasizing gymnastics for the military. He and his trainees later taught it in schools and promoted this form of exercise. He advocated a balance between recreational activities (physical sports) and educational physical activity. (Gerber, 1971)

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 physical characteristic is (Speed, Cardiovascular Endurance, Explosive Leg Strength and Agility). To find out significant different of physical 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

Speed:

To find out speed 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 speeds among coastal area, non-coastal area and hill area kabaddi players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	7.676	3.832	37.078*
Within Group	147	15.217	.104	

*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. Farther the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their speed 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 speeds among coastal area, non-coastal area and hill area kabaddi players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
6.77	6.45		.32	.127*
6.77		7	.23	
	6.45	7	.55	

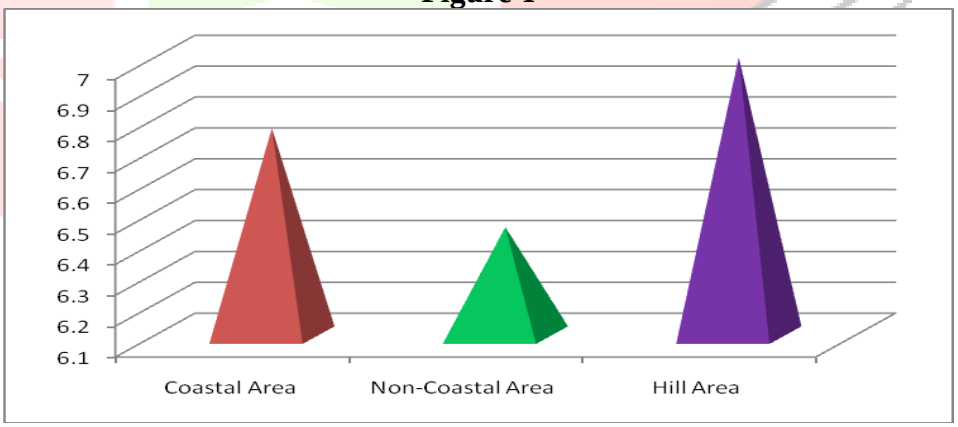
*Significant at .05 level

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

The post hock test is to compare the speeds among coastal area, non-coastal area and hill area kabaddi players. It 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 (.32), coastal area and hill area where the calculated mean difference found (.23) and non-coastal area and hill area where the calculated mean difference found (.55) was higher than the required value .127. The required value was much lower than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-I

Figure-I



Cardiovascular Endurance:

To find out cardiovascular endurance 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 cardiovascular endurance among coastal area, non-coastal area and hill area kabaddi players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	40999	20499.50	132.026*
Within Group	147	22824.50	155.269	

*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. Farther the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their cardiovascular endurance level through post hock test were computed which are presented in the following tables and also are represented by figure II.

TABLE-4

Comparison of cardiovascular endurance among coastal area, non-coastal area and hill area kabaddi players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
198.40	227.60		29.2	4.909*
198.40		188.70	9.7	
	227.60	188.70	38.9	

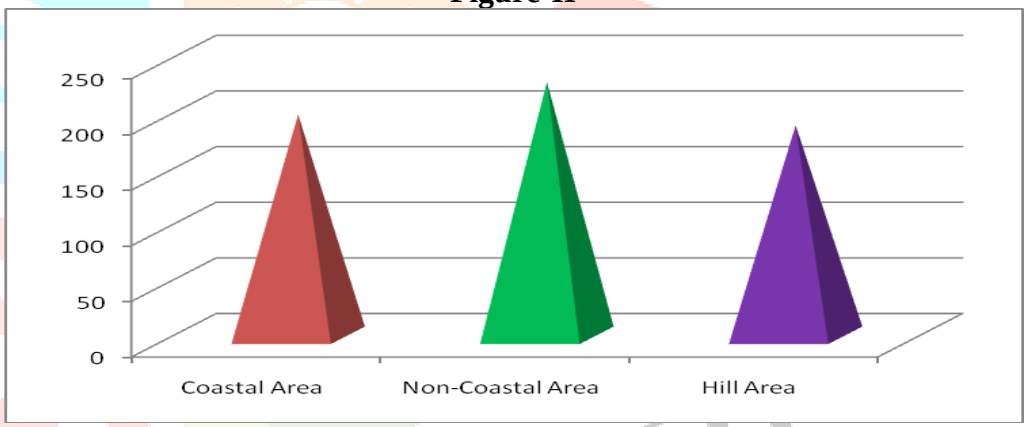
*Significant at .05 level

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

The post hock test is to compare the cardiovascular endurance 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 (29.2), coastal area and hill area where the calculated mean difference found (9.7) and non-coastal area and hill area where the calculated mean difference found (38.9) was higher than the required value 4.909. The required value was much lower than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-II

Figure-II



Explosive Leg Strength:

To find out explosive leg strength 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 explosive leg strength among coastal area, non-coastal area and hill area kabaddi players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	30084.04	15042.02	123.666*
Within Group	147	17880.20	121.63	

*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. Farther the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their explosive leg strength 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 explosive leg strength among coastal area, non-coastal area and hill area kabaddi players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
145.64	180.10		34.46	4.345*
145.64		159.42	13.78	
	180.10	159.42	20.68	

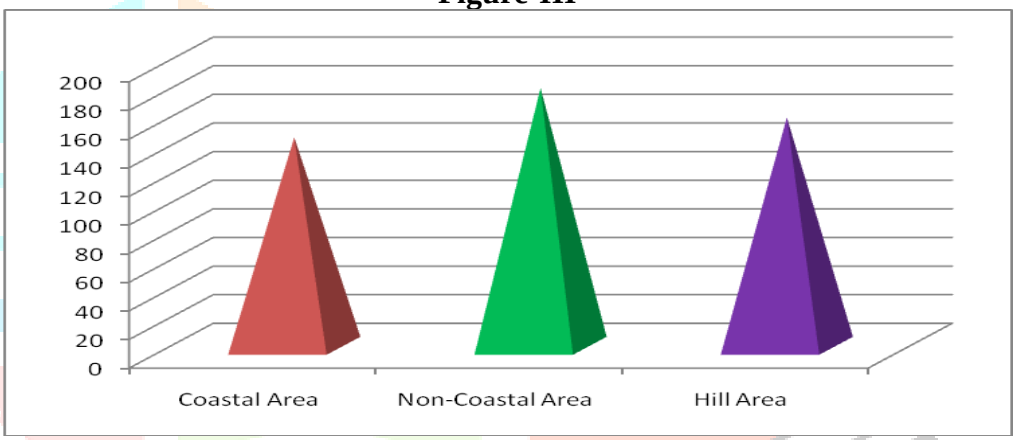
*Significant at .05 level

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

The post hock test is to compare the explosive leg strength 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 (34.46), coastal area and hill area where the calculated mean difference found (13.78) and non-coastal area and hill area where the calculated mean difference found (20.68) was higher than the required value 4.345. 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



Agility:

To find out agility 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 agility among coastal area, non-coastal area and hill area kabaddi players

Source of Variance	df	SS	MSS	F-ratio
Between Group	2	23.805	11.902	96.564*
Within Group	147	18.119	.123	

*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. Farther the mean difference among the coastal, non-coastal and hill area kabaddi players in relation to their agility 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 agility among coastal area, non-coastal area and hill area kabaddi players

Coastal Area	Non-Coastal Area	Hill Area	M.D	C.D
8.93	8.05		.88	.138*
8.93		8.13	.80	
	8.05	8.13	.08	

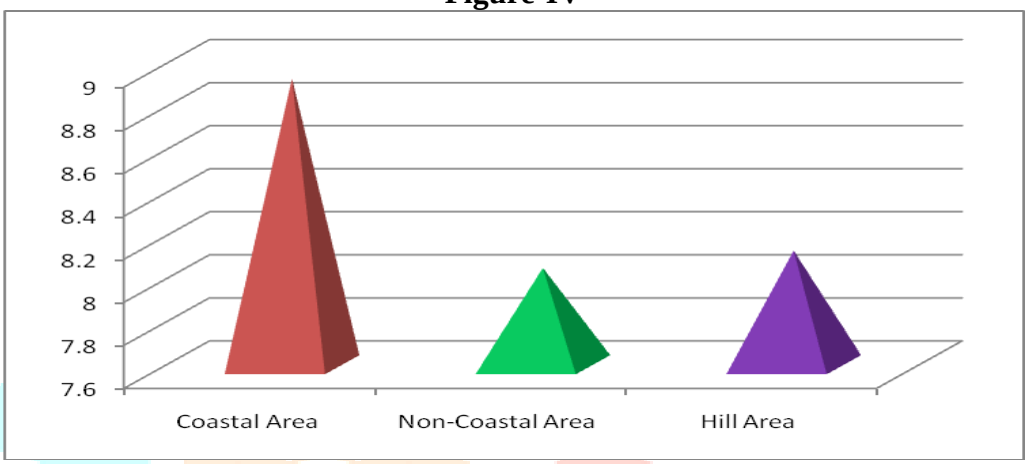
*Significant at .05 level

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

The post hock test is to compare the agility 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 (.88) and coastal area and hill area where the calculated mean difference found (.80). But insignificant difference between the National level kabaddi players of non-coastal area and hill area where the calculated mean difference found (.08) was lower than the required value .138. The required value was much lower than the calculated value at .05 level of significant.

The scores are also illustrated in the figure-IV

Figure-IV



DISCUSSION OF THE RESULT

The present investigation was designed to know the physical characteristics among national level kabaddi players of different geographical regions in India. The purpose of this study was revealed some specific differences for physical 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 physical 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 physical and 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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