Sports Scientists Views in
Indian Journal of Physical Education, Sports & Applied Sciences
I.J.P.E.S.A.S
Available Online
www.sportscientistsviews.in
Journal DOI-05-2016-44975451
Scientific Journal Impact Factor-4.917

THE EFFECT OF DIFFERENT GEOGRAPHICAL CONDITION ON SELECTED PHYSICAL VARIABLES ON BADMINTON PLAYERS

Dr. Divesh Chaudhary[1] & Javad Khan[2]

Affiliations:

[1] Assistant Professor, Department of Physical Education, Swami Vivekanand Subharti University, Meerut (U.P.).

[2] Research Scholar, Dravidian University, Kuppam (A.P.).

ABSTRACT

The objective of the study was to investigate the effect of different geographical condition on selected physical variables on badminton players. Another purpose of the study was to find out the relationship of different geographical among physical variables of badminton players. The subjects for the study were selected from the ninety badminton players who have participated in national level badminton tournament. Thirty subjects were selected from Karla, Tamilnadu and Andhra Pradesh (Coastal area). Thirty subjects were selected from Uttar Pradesh, Haryana and Punjab (Non-coastal area) and thirty were selected from Uttarakhand, Himachal Pradesh and Jammu and Kashmir (hill area). The age level of subjects ranged from 15 to 18 years. All the subjects were residing at different geographical conditions. Stand and progressive matrices organizational selected physical variable is (speed, endurance, leg strength and abdominal strength). To find out significant effect of different geographical conditions on selected physical variable of badminton players, the one-way analysis of variance was used. To find out the relationship among physical variable, the Pearson's Product moment correlation was computed. The level of significance was set at .05 levels. The result reveals the one-way analysis of variance that there was insignificant ($p>.05$) the effect of different geographical conditions on selected physical variables (Leg strength and abdominal strength) of badminton players and significant ($p<.05$) deference of physical variables (Speed and Endurance) of badminton players. The result also reveals that there was insignificant ($p>.05$) the effect of different geographical conditions on selected physical variable (Endurance, Leg strength and abdominal strength) of badminton players and significant ($p<.05$) deference of physical variable (Speed) of badminton players.

Keywords: Geographical Conditions, Physical Variable, Badminton, Players

1 INTRODUCTION

In India the effect of environment and ecology on sports need to be emphasized more and its needs to be taken care of because geographically India is a unique country where we have tropical and sub tropical rain/deciduous forest, arid and semi arid tropics, Alpine forest, Tundra's and the desert. The total geographical area accounting for 19.44 percentage of the total area. Of this eastern hilly regions (eastern Himalayas) account for 70-90 percentage of actual forest cover followed by Madhya Pradesh, Haryana, Himalchal Pradesh, Kerala, Orissa with 20-30 percentage forest cover. Other states including Gujarat (6.0 %) have bare minimum of forest cover (1.2 to 4.4 percentages). The forest survey of India estimates that out of a total forest cover only 50 percentage is of adequate density. The effective forest cover, therefore, is just 10 percentage of the geographical area of the country (https://visionias.files.wordpress.com).

Badminton is a sports branch which can be played easily and savorily by all people from several ages, which does not drives the player to violence, which also can be used for a recreation and fitness purposes (R. C. Memedov and R. Kale, 1994). On the other hand tennis is not only a sports branch which is so popular but also has new point of views. On one hand it is a kind of sport which is a popular spare time activity and many people can exercise and this sport also became a remarkable revenue source provider (P. Unierzyski, 1995).

The performances and physical characteristics of elite sportsmen which perform in different sports branches may vary and as well anthropometric and basic motoric differences may be distinctive for branches in talent identification (Australian Sports Commission, 1998). The studies which seek for how the structural features affect the performance in the selected sports branch are limited (B. Durmaz et al., 1995; A. Farkas et al., 1989; J. A. Mazza et al., 1992).

The world's top most badminton playing nations, especially China, Indonesia, Malaysia and Korea are very much aware of these and concentrate on the development of basic physical fitness variables and related aspects. They start training a child , concentration of those fitness factors which are supposed to play a significant role in the future performance of a player such as flexibility, agility, balance, cardio-vascular endurance, strength, reaction time, power etc. (general motor ability qualities) which are appropriate for a specific age group.

Stamina, speed, strength, skill and strategy are essential ingredients of all sports disciplines. A variation in degree in which these ingredients are present marks out special feature of any particular sports. Badminton at its best is a game of swift and graceful movement, a power play contrastingly highlighted by delicacy of touch, of wrong, footing deception, of incredible retrieving and lighting interception, and of varied chess-like tactics of singles, doubles and mixed doubles each an absorbing and different game on its own. (Devis, 1984)

Sports performance is frequently regarded as a function of genetic endowment, training and health status, and athlete skill, in various combinations. Sport scientists and trainers are often tasked with maximizing physical performance with the aim of improving competition success. Indeed, some authors have recommended that, at least in European leagues, more focus be directed towards the effective training of players' physical abilities. The extent to which technical/tactical versus physical fitness interventions are required

remains a difficult question to answer in practice. More specifically, the question of whether physical fitness of players is a contributing factor to the difference between successful and less-successful teams should be addressed.

2. METHODS

The subjects for the study were selected from the ninety badminton players who have participated in national level badminton tournament. Thirty subjects were selected from Karla, Tamilnadu and Andhra Pradesh (Coastal area). Thirty subjects were selected from Uttar Pradesh, Haryana and Punjab (Non-coastal area) and thirty were selected from Uttarakhand, Himachal Pradesh and Jammu and Kashmir (hill area). The age level of subjects ranged from 15 to 18 years. All the subjects were residing at different geographical conditions. Stand and progressive matrices organizational selected physical variable is (speed, endurance, leg strength and abdominal strength).To find out significant effect of different geographical conditions on selected physical variable of badminton players, the one-way analysis of variance was used. To find out the relationship among physical variable, the Pearson's Product moment correlation was computed. The level of significance was set at .05 levels.

3. RESULTS

TABLE1

ANALYSIS OF VARIANCE IN SPEEDS AMONG HILL AREA, COASTAL AND NON-COASTAL PLAYERS

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	11.509	5.754	42.133*
Within Group	87	11.882	.137	

*Significant at .05 level F.05(2, 87) = 4.92

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

TABLE 2

COMPARISON OF SPEEDS AMONG HILL AREA, COASTAL AND NON-COASTAL PLAYERS

Hill Area	Coastal Area	Non-Coastal Area	M.D	C.D
7.50	6.64		.86	.28
7.50		6.95	.55	
	6.64	6.95	.31	

*Significant at .05 level F.05(2, 87) =4.92

The post hock test to compare the speeds among hill area, coastal area and non-coastal area players has clearly revealed the in significant difference among the badminton players of hill area and coastal area where the calculated mean difference found (.86), hill area and non-coastal area where the calculated mean difference found (.55) and coastal area and non-costal area where the calculated mean difference found (.31) was lower than the required value 4.92. The required value was much lower than the calculated value at .05 level of significant. The scores are also illustrated in the figure-I

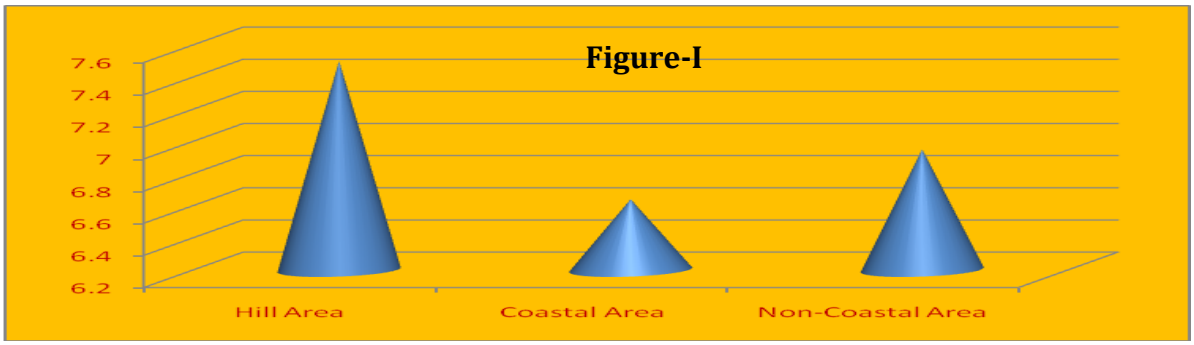

Figure-I

TABLE-3

Analysis of variance in endurance among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	7840446.67	3920223.34	25.25*
Within Group	87	13505808.34	155239.12	

*Significant at .05 level, F.05(2, 87) = 4.92

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

TABLE-4

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

Hill Area	Coastal Area	Non-Coastal Area	M.D	C.D
2737	3434.67		697.67*	284.87
2737		2924.33	187.33	
	3434.67	2924.33	510.34*	

Significant at .05 level.

The post hock test to compare the endurance between hill area, coastal area and non-coastal area players has clearly revealed the insignificant difference between the badminton players of hill area and coastal area where the calculated mean difference of found (697.67) and coastal area and non-costal area where the calculated mean difference found (510.34). Whereas the score did not reveal any significant difference between the badminton players of hill area and non-costal area. The calculated value also did not reveal any significant difference between the players of hill area to that of non-costal area as the required value was much higher than the calculated value at .05 level of significant. The scores are also illustrated in the figure-II

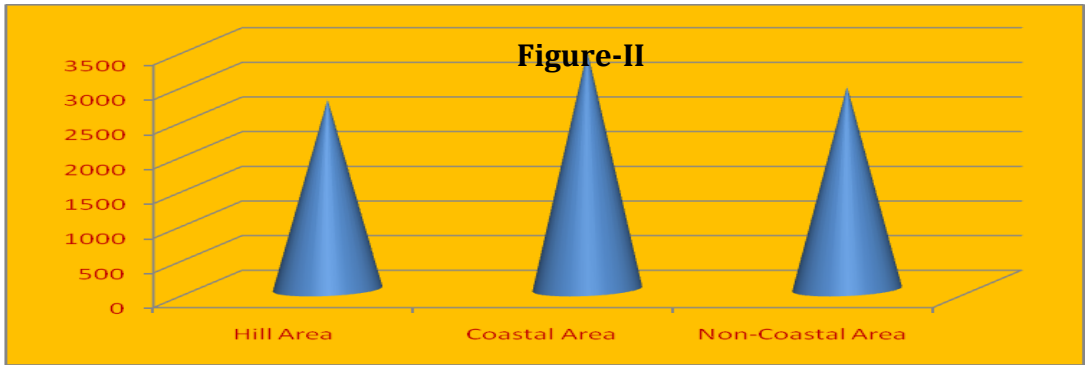

Figure-II

TABLE-5

Analysis of variance in leg strength among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	.359	.180	4.039
Within Group	87	3.867	.044	

Insignificant at .05 level, F.05(2, 87) = 4.92

The value shown in table-5 clearly indicates that the F-Value calculated is much lower than the required value to be significant. Hence it is stated that, no significant relationship exist among the means of hill area, coastal and non-coastal players. The scores are also illustrated in the figure-III

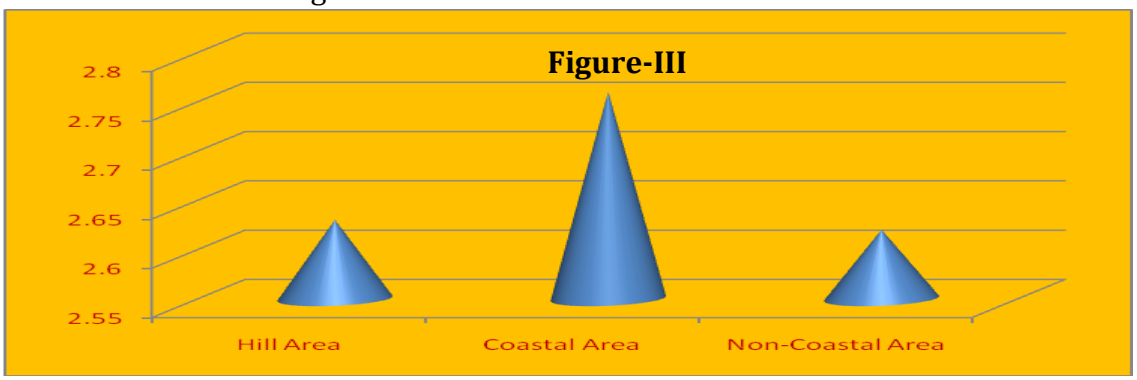

TABLE-6

Analysis of variance in abdominal strength among hill area, coastal and non-coastal players

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	2	66.200	33.100	.820*
Within Group	87	3511.400	40.361	

*Insignificant at .05 level, F.05(2, 87) = 4.92

The value shown in table-6 clearly indicates that the F-Value calculated is much lower than the required value to be significant. Hence it is stated that, no significant relationship exist among the means of hill area, coastal and non-coastal players. The scores are also illustrated in the figure-IV

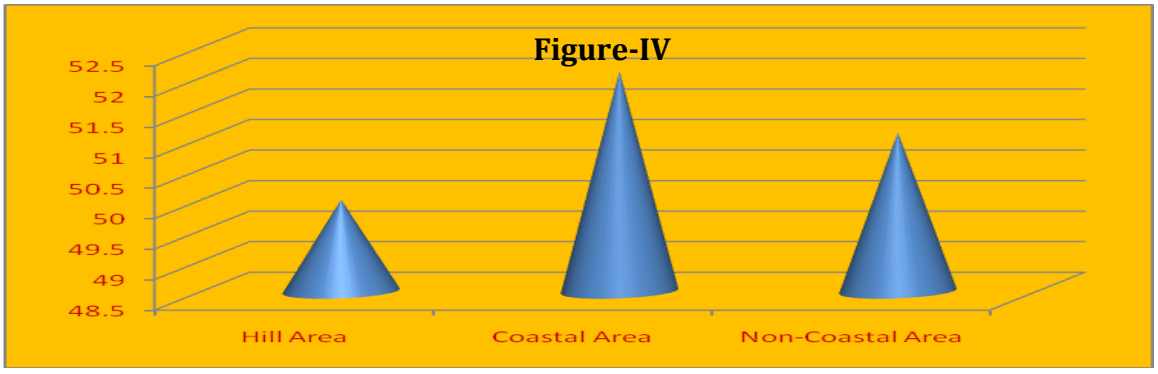

TABLE-7
Correlation coefficient of physical variables among hill area, coastal and non-coastal players

Players	Correlation of coefficient
Speed	.442*
Endurance	.158
Leg Strength	.029
Abdominal Strength	.071

*Significant at .05 level (.217)

It is evident from Table-7 that significant correlation was found among coastal, non-coastal and hill area players in relation to speed and insignificant correlation was found among coastal, non-coastal and hill area players in relation to endurance, leg strength and abdominal strength.

4. DISCUSSION

The result of the study was to compare the Physical variables speed, endurance and strength (leg strength & abdominal strength) among coastal area, non- coastal area and hill area national level badminton players. Though these exist significant difference among the coastal area, non- coastal area and hill area national level badminton players in relation to speed and endurance and insignificant difference among the coastal area, non- coastal area and hill area national level badminton players in relation to strength (leg strength & abdominal strength).

The result is in the direction of Balmani (1995) studies, consistently indicated that Analysis with regard to examine the significance of differences among the pre (after warm up) and post test (after playing on beaten earth court and sand court) means of all the selected variables revealed that there were significant differences in the variation of performance of muscular endurance in term of push-up (f =7.20) and in the performance cardiovascular endurance of one lateral jump (F= 4.195) when their performance were compared to study the effect of different surfaces i.e. beaten earth court and sand on strength endurance and flexibility and for strength flexibility variables no significant differences were observed.

5. CONCLUSIONS

0. Significant relationship exist between the means of difference geographical conditions (coastal, non-coastal and hill area) in relation to their speeds level. The F-Value (4.92) calculated is much higher than the required value to be significant.
1. The post hock test to compare the speeds among hill area, coastal area and non-coastal area players has clearly revealed the in significant difference among the badminton players of hill area and coastal area where the calculated mean difference found (.86), hill area and non-coastal area where the calculated mean difference found (.55) and coastal area and non-costal area where the calculated mean difference found (.31) was lower than the required value 4.92. The required value was much lower than the calculated value at .05 level of significant.
2. Significant relationship exist between the means of difference geographical conditions (coastal, non-coastal and hill area) in relation to their endurance level. The F-Value (4.92) calculated is much higher than the required value to be significant.

3. The post hock test to compare the endurance between hill area, coastal area and non-coastal area players has clearly revealed the in significant difference between the badminton players of hill area and coastal area where the calculated mean difference found (697.67) and coastal area and non-costal area where the calculated mean difference found (510.34). Whereas the score did not reveal any significant difference between the badminton players of hill area and non-costal area. The calculated value also did not reveal any significant difference between the players of hill area to that of non-costal area as the required value was much higher than the calculated value at .05 level of significant.
4. No significant relationship exist between the means of difference geographical conditions (coastal, non-coastal and hill area) in relation to their strength level. The F-Value (4.92) calculated is much lower than the required value to be significant.
5. No significant relationship exist between the means of difference geographical conditions (coastal, non-coastal and hill area) in relation to their abdominal strength level. The F-Value (4.92) calculated is much lower than the required value to be significant.
6. Significant correlation was found among coastal, non-coastal and hill area players in relation to speed and insignificant correlation was found among coastal, non-coastal and hill area players in relation to endurance, leg strength and abdominal strength.

REFERENCES

Australian Sports Commission (1998), The National Talent Identification and Development Program, Talent Search, Phase 2, Testing Manu.

Balmani, B. (1995). " Strength, endurance and flexibility variation resulting from a 3-set volleyball match played on different surface", Unpublished Master Dissertation, Jiwaji University, Gwalior (M.P.)

Durmaz, B., Özçaldiran, B., Doğan, B., Varol R. (1995). The Anthropometric Characteristics of Preadolescent Boy Swimmers and Their Relationship with Performance, Journal of Ege Physical Medicine of Rehabilitation, 1 (3): 151-154.

Davis, Pat. (1984) Play the Game Badminton, London: Hamlyn Publishing Group Limited, P.9.

Farkas, A., Mohacsi, J., Meszaros, J. (1989). Four Styles of Swimming Performance and Anthropometry of Child Swimmers, In: Oseid S. editors: Children and Exercise XIII. Illinois, Human Kinetics Books: 129-134.

Memedov, R. C., Kale R. (1994) Uçan Tüytop Badminton. İstanbul: Başak Ofset.

Mazza, J. A., Cosolito, P. Y., Alarcon, et al., (1992). Somatotype Profile of South American Swimmers. In: Mc Claren D, Reilly T, Lees A. Biomechanics and Medicine in Swimming, E&FN Spon; London: 371-378.

Unierzyski, P. (1995). Influence of Physical Fitness Specific to the Game of Tennis, Morphological and Psychological Factors on Performance Level in Tennis in Different Age Groups. Science and Racket Sports, E&FN Spon, London: 61-68.

https://visionias.files.wordpress.com/2011/06/part-i-general-studies-mains geography-of-india-vision-ias.pdf

http://en.wikipedia.org/wiki/Badminton