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Effect Of High And Low Altitude Training On Selected Performance Variables Of Football Players.

***Mr. Britto Clemmy J & **Mr. Deepak Siby**

*NIS COACH, Kerala state sports counsil ,

** PhD Scholar, SRM University, Chennai

ABSTRACT

The purpose of the study is to find out the effect of high and low altitude training on selected performance variables of football players. Compare the selected Performance variables of high altitude and low altitude football players. High altitude Football players means the people who live in medium height above from the sea level, so for this purpose Kodaikanal(nearly 2000 ft from sea level) kodaikanal Christian college boys studying near were selected as High altitude football players. And low altitude level football players mean the people who live near the sea, so for this purpose YMCA student's Chennai were selected as sea level football players.

Keyword: Altitude training, High altitude training , Low altitude training.

1. INTRODUCTION

The purpose of the study was to compare the selected performance variables of high altitude and low altitude football players. High altitude and low altitude training are two types of training methods used by athletes to improve their performance.

High altitude training involves training at altitudes of 2,000 meters or higher above sea level, where the air pressure is lower, and the oxygen levels are lower than at sea level. This type of training is believed to enhance oxygen-carrying capacity in the blood by stimulating the production of red blood cells. This, in turn, improves endurance and stamina levels, making it a popular training method for long-distance runners and other endurance athletes.

However, high altitude training can also have some negative effects, such as decreased muscle strength and power output due to the reduced oxygen availability. It also increases the risk of dehydration due to the dry air at high altitude levels.s. To achieve this purpose, 50 football players were selected, of which 25 were belonged at low altitude level and remaining 25 football players were high altitude football players. The age of the subjects ranged between 18 to 27 years. Based on the review of related literature, the investigator selected among the different performance variables, speed, agility, and endurance were selected as criterion variables. The present study was undertaken to find out the difference, between high altitude and low altitude training on selected performance variables of football players. The performance variables selected for this study were agility, endurance, speed. In order to find out the significant differences, if any, among high altitude and low altitude football players on selected criterion variables such as agility, endurance, speed, of

football players. The collected data were statistically analyzed by using‘t’ test to find out the significant differences, if any, among high altitude and low altitude football players on selected criterion variables separately. The findings of the study proved that football players trained in high altitude were better than low altitude training football players.

1.1 Statement of the Problem

The purpose of the study was to find out the effect of high and low altitude training on selected performance variables of football players.

1.2 Objectives of the study

Each person needs a certain level of strength. Without strength, of would be impossible to carry out most of the simple tasks that are necessary each day. Strength is ability of muscular or muscle groups to exert force against given resistance. Agility and speed are more necessary for soccer players There are several coaching and training methods are being used by coaches to improve the agility and speed of soccer players Few have compared the performance variables between high altitude and low level altitude football players. Hence, the investigator was interested to undertake this study.

2. MATERIALS AND METHODS

. The present study was undertaken to find out the difference, between high altitude and low altitude training on selected performance variables of football players. The performance variables selected for this study were agility, endurance, speed. The investigator analyzed various literatures, has consulted the experts in physical education and selected test item, which were standardized and most suitable for the purpose of the study, and they were

- Agility - Shuttle run
- Endurance - Cooper’s 12 min run/walk
- Speed - 50 meter run

2.1 Training Intervention

The experimental group was given aerobics exercise three times a week, on Monday, Wednesday, and Friday. The session begins at 6.15 a.m. with a standard warm-up, followed by high altitude training from 7 a.m. until 8.30 a.m. It will last for eight weeks. Same for the low altitude training on alternate days Tuesday ,Thursday and Saturday in both groups we focused on endurance, speed and agility workouts

2.2 Statistical Techniques

The he following statistical methodology was utilized to arrive at a conclusion of the effect of aerobic exercise on badminton players' flexibility and muscular endurance. The data on flexibility and muscular endurance were examined using the Dependent 't' test.. The significance level for this study was set at 0.05.

3. RESULT AND DISCUSSIONS

The purpose of the study was to compare the selected performance variables of high altitude and low altitude football players. To achieve this purpose, 50 football players were selected, of which 25 were belonged at low altitude level and remaining 25 football players were high altitude football players. The age of the subjects ranged between 18 to 27 years. Based on the review of related literature, the investigator selected

among the different performance variables, speed, agility, and endurance were selected as criterion variables. The present study was undertaken to find out the difference, between high altitude and low altitude training on selected performance variables of football players. The performance variables selected for this study were agility, endurance, speed. In order to find out the significant differences, if any, among high altitude and low altitude football players on selected criterion variables such as agility, endurance, speed, of football players. The collected data were statistically analyzed by using two‘t’ test to find out the significant differences, if any, among high altitude and low altitude football players on selected criterion variables separately. In all cases 0.05 level of confidence was fixed to test the significance, which was considered as appropriate.(Harrison H. Clarke and David H. Clarke, (1976)

RESULTS

The data collected on performance variable, speed of the football players were analyzed and presented in Table I.

Table I

Significance of Difference between the High Altitude and Low Altitude Training on Speed of Football players

Groups	Means	MD	SD	SDM	Obtained ‘t’
Low Altitude Players (N=25)	6.82	0.20	0.17	0.05	4.18*
High Altitude Players (N=25)	6.62		0.16		

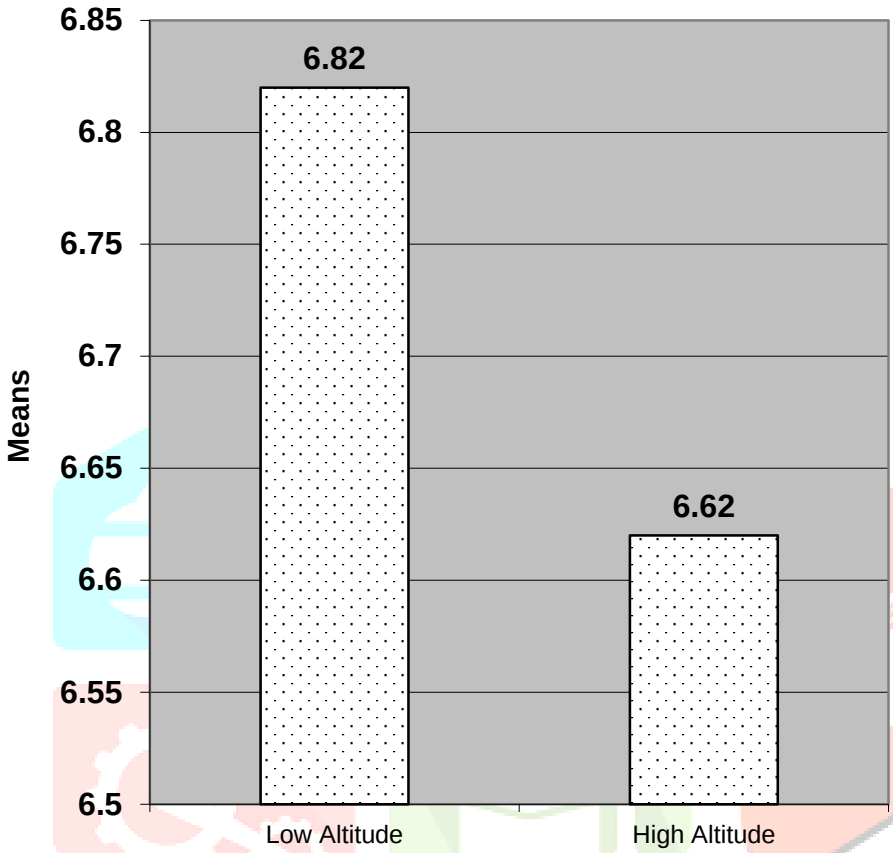
Not Significant at 0.05 levels

‘t’ Value Required at (0.05)(1,49) = 1.676

The mean value for low altitude players’ speed was 6.82 and high altitude players were 6.62 with mean difference of 0.20. The obtained‘t’ value was 4.18, which was greater than required‘t’ table value of 1.676. Thus, it was proved that there was a significant difference between low altitude and high altitude training on performance variable speed among football players .it was proved that high altitude football players were significantly better than low altitude football players on performance variable speed.

Figure I

BAR DIAGRAM ON MEAN VALUES OF SPEED BETWEEN LOW ALTITUTDE AND HIGH ALTITUTDE FOOTBALL PLAYERS



The data collected on performance variable, agility of the football players were analyzed and presented in Table II.

Table II

Significance of Difference between the High Altitude and Low Altitude Training on Agility of Football players

Groups	Means	MD	SD	SDM	Obtained 't'
Low Altitude Players (N=25)	10.83		0.40		
High Altitude Players (N=25)	10.50	0.34	0.38	0.11	3.03*

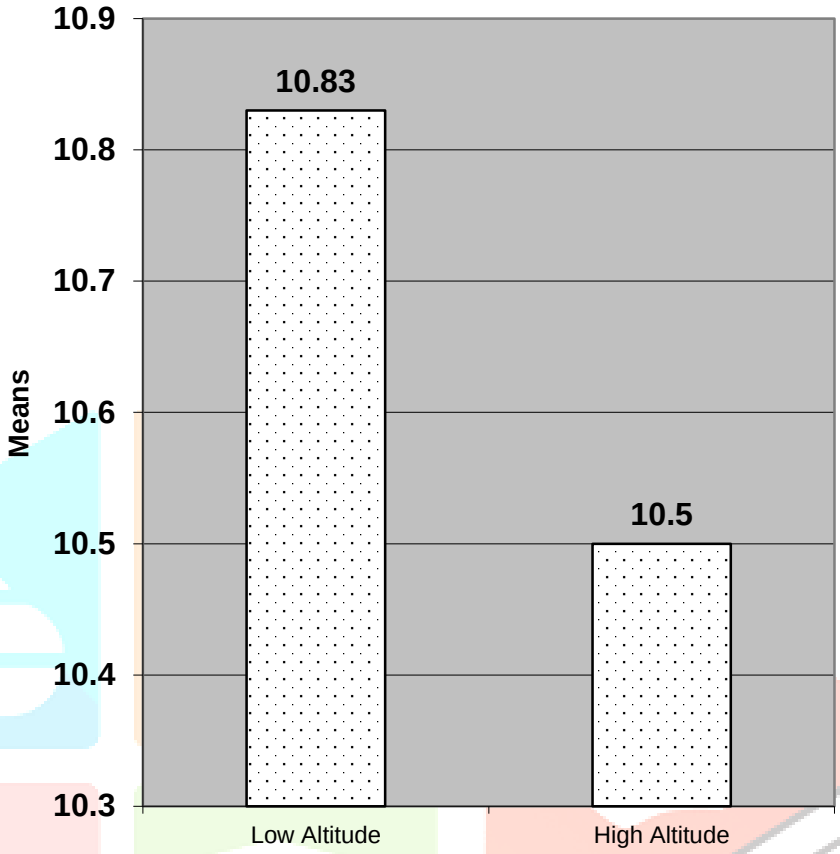
Not Significant at 0.05 levels

't' Value Required at (0.05)(1,49) = 1.676

The mean value for low altitude players' agility was 10.83 and high altitude players were 10.50 with mean difference of 0.34. The obtained't' value was 3.03, which was greater than required't' table value of 1.676. Thus, it was proved that there was a significant difference between low altitude and high altitude training on performance variable agility among football players. It was proved that high altitude football players were significantly better than low altitude football players on performance variable agility.

Figure II

BAR DIAGRAM ON MEAN VALUES OF AGILITY BETWEEN LOW ALTITUTDE AND HIGH ALTITUTDE FOOTBALL PLAYERS



The data collected on performance variable, cardiovascular endurance of the football players were analyzed and presented in Table IV.

Table IV

Significance of Difference between the High Altitude and Low Altitude Training on Cardiovascular endurance of Football players

Groups	Means	MD	SD	SDM	Obtained 't'
Low Altitude Players (N=25)	2352.64	-177.56	233.56	60.57	-2.93*
High Altitude Players (N=25)	2530.20		192.81		

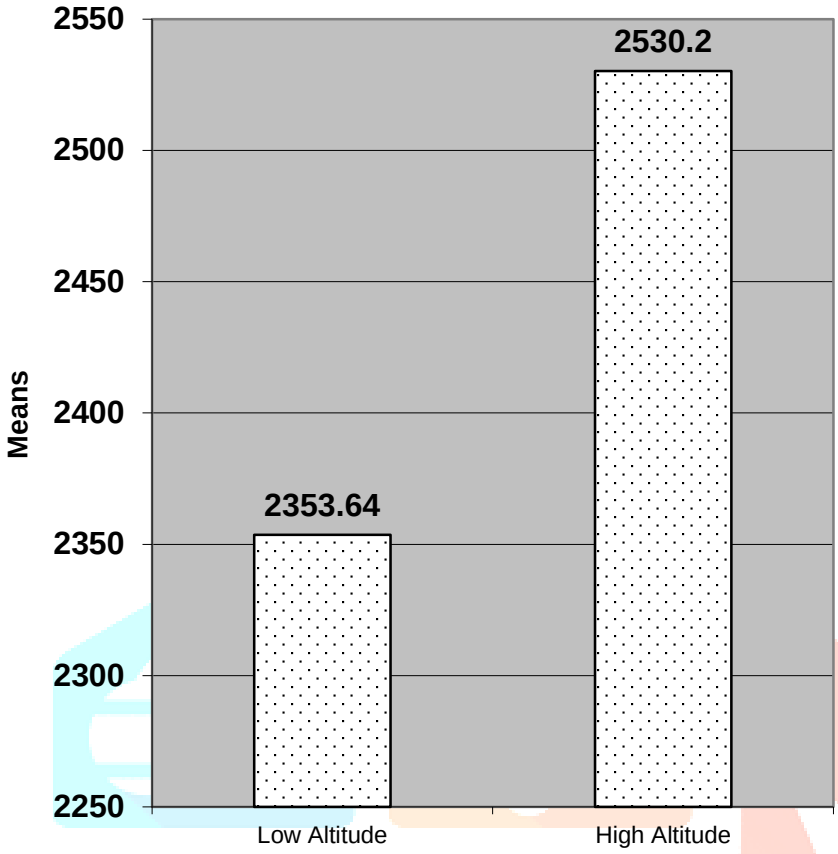
Not Significant at 0.05 levels

't' Value Required at (0.05)(1,49) = 1.676

The mean value for low altitude players' cardiovascular endurance was 2352.64 and high altitude players were 2530.20 with mean difference of 0.177.56. The obtained't' value was 2.92, which was greater than required't' table value of 1.676. Thus, it was proved that there were significant differences between low altitude and high altitude training on performance variable cardiovascular endurance among football players .It was proved that high altitude football players were significantly better than low altitude football players on performance variable cardiovascular endurance.

Figure III

BAR DIAGRAM ON MEAN VALUES OF CARDIOVASCULAR ENDURANCE BETWEEN LOW ALTITUTDE AND HIGH ALTITUTDE FOOTBALL PLAYERS



3.1 Discussion on Findings

The results of the study showed that there were significant differences between low altitude and high altitude football players on speed, agility and cardiovascular endurance at 0.05 level of confidence. This may be due to their training on different altitudes. The formulated hypothesis, mentioned that there might be a significant differences between low altitude and high altitude football players on selected performance variables. The results of the study revealed that there was a significant difference between low altitude and high altitude football players on speed, agility and cardiovascular endurance at 0.05 levels and the formulated hypothesis was accepted.

4. CONCLUSIONS

Within the limitations and delimitations of the study, the following conclusions were drawn.

1. It was concluded that football players trained in high altitude were found to be significantly better than players trained in low attitude on performance variable, speed

2. It was concluded that football players trained in high altitude were found to be significantly better than players trained in low attitude on performance variable, agility.

3. It was concluded that football players trained in high altitude were found to be significantly better than players trained in low attitude on performance variable, cardiovascular endurance.

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