

Compare the Explosive Cardiovascular endurance of female soccer players of Tripura

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Abstract

The purpose of the study was to compare the cardiovascular endurance ability of female soccer players of Tripura state at different level. The subjects for the study were from the state of Tripura. A total of ninety female subjects were selected. Thirty subjects were selected from each level i.e Sub Junior, Junior and Senior, with the help of expert and scholar's personal understanding. The cardiovascular endurance ability was measured by the cooper's 12 minute run/walk test. The score was recorded in meters. Two trails were given to each subject and the best one was recorded as score. To compare the cardiovascular endurance ability of female soccer players of Tripura state at different level the mean, standard deviation and analysis of variance was applied at 0.05 level of significance. In the present study mean and standard deviation of cardiovascular endurance ability Sub Junior 30.09 ± 5.97 , Junior 29.01 ± 6.31 Senior 38.65 ± 5.85 and Total 32.59 ± 7.38 .and a significant difference was found in case of cardiovascular endurance ability.

KEYWORDS: cardiovascular endurance, Sub Junior, Junior and Senior level.

Introduction

During the modern times, sport has become a part and parcel of our culture. It is being influenced and does influence all of our social institutions including education, economics, arts, politics, mass communication and international diplomacy- its scope is awesome. Today sports has become mass participation; it is being adopted as fashion by some. It attracts the mass either for recreation or physical fitness, or as a profession. Women's association football is the most prominent team sports for women in the many countries, and one of the few women's team sports with professional leagues. Physical fitness: "A successful adaptation to the stressors of one's lifestyle". The insufficient training of co-coordinative abilities limits the performance ability specially at higher level. On contrary, better developed coordinative abilities provides an effective learning, stabilization and variation in technique and successful execution in game situation. The quality of performance of all fundamental mechanical skills, the system, flow, accuracy, amplitude etc are improved by coordinative abilities. It helps in developing very fine extra credible skill. In fact, any kind of movement training depends on coordinative abilities to a great extent. Although Motor Fitness is most often used synonymously with the physical fitness by the coaches but, it is very important for the physical education students to understand the basic difference between physical fitness and motor fitness. Physical fitness is used to denote the five basic fitness components, i.e muscular strength, muscular endurance, cardiovascular endurance, freedom from obesity and flexibility whereas, skill related physical fitness is more comprehensive term which include all the ten fitness components including additional five motor components, i.e., power, speed,

agility, balance and reaction time which are important mainly for success in sports. Cardiovascular endurance means the ability to perform muscular work at sub maximal level by moderate contractions for a long time is known as cardiovascular endurance.

Statement of the problem

The purpose of the study was to compare the cardiovascular endurance abilities of female soccer players of Tripura state at different levels.

Objectives of the study

To compare the cardiovascular endurance ability of female soccer players of Tripura state at different levels. (Sub Junior, Junior and Senior)

Hypothesis

On the basis of the literature reviewed, expert opinion and scholar's own understanding the problem it was hypothesized that there will be no significant difference between cardiovascular endurance ability of the soccer female players of Tripura State at different levels.

Sample

The subjects for this study were from the state of Tripura. A total of ninety female subjects were selected. Thirty subjects were selected from each level i.e Sub Junior, Junior and Senior.

Criterion Measure

Cardiovascular endurance was measured by cooper's 12 minute run/walk test. The score was recorded in meters.

Results

Result of the study has been presented in tabular and graphical form for the component of Cardiovascular endurance ability where ** shows to be significant at 0.05 level.

Table-1

Descriptive statistics of Female Soccer players (Sub-division, District and State) of Tripura State in relation to Explosive strength Ability

		N	Mean	S.D.
Explosive strength	Sub Junior	30	30.09	5.97
	Junior	30	29.01	6.31
	Senior	30	38.65	5.85
	Total	90	32.59	7.38

Table- 1 clearly indicates the mean and standard deviation of female Soccer players (Sub Junior, Junior and Senior) in relation to cardiovascular endurance ability.

The observe mean and standard deviation of Cardiovascular endurance ability Sub Junior 30.09±5.97, Junior 29.01±6.31 Senior 38.65±5.85 and Total 32.59±7.38.

Table-2

Analysis of variance of Female Soccer players belonging Sub-division, District and State Level in relation to cardiovascular endurance

	Sum of Squares	df	Mean Square	F
Between Groups	1673.867	2	836.934	22.872*
Within Groups	3183.510	87	36.592	
Total	4857.377	89		

Tab. F .05 (2, 87)= 3.09

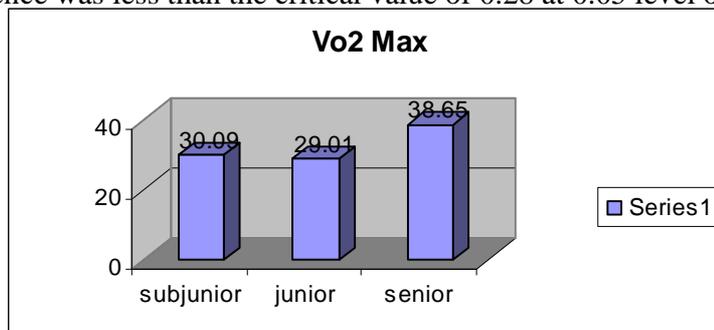
It appears from the Table-8 that the computed value of F (22.872) among different level of female Soccer players of Tripura State (i.e. Sub-division, District and State) in relation to vo2 max was greater than the tabulated (3.09), F at .05 level . Therefore null hypothesis among different level of female Soccer players of Tripura State (i.e Sub-division, District and State) in relation to vo2 max was not accepted at 0.05 level.

Table-3

Mean Comparison of different level of soccer players in relation to VO2 Max

Sub-division	District	State	M.D.	C.D.
30.09	29.01		1.08	3.12
30.09		38.65	5.56*	
	29.01	38.65	9.64*	

The above table reveals that significant difference was found in case of Sub-division & District level, District and State as the mean difference was greater than the critical difference. No significant difference was found in case of Sub-division and State level as the mean difference was less than the critical value of 0.28 at 0.05 level of significance.



Graphical representation of Cardiovascular Endurance

Discussion of Findings

According to the results of the study significant difference was found between Sub-division, District and State level of female soccer players in Tripura.

Discussion of Hypothesis

In the light of findings of the study, the hypothesis that there shall not be any significant differences between means of cardiovascular endurance ability of female Soccer players of Tripura State at Different Levels (State, Sub-division and District) was not accepted.

Conclusion

Significant difference was found in case of cardiovascular endurance ability.

Recommendations

In light of conclusions drawn, the following recommendations were made:

- i. Studies can be conducted on national level female soccer players receiving specialized exercise training so that future training is supported by scientific data for excellence in specific fields.
- ii. Studies on fatigue resulting from different types of exercises can be carried out and its metabolic basis worked out. Such studies would be of great applied value in enhancing players' performance and would safeguard their health.
- iii. India is a vast country both from the geographical as well as the genetic lineage point of view. Therefore, to exploit the potential of the masses, sport research should be conducted in different climatic regions and on populations of different genetic origins.

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