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Comparison of health related physical fitness components between North and West Zone Volleyball female players

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Abstract

Eighty (60) female volleyball players were selected as subjects for the present study who had participated in North-West zone Inter-University Volleyball (women) tournament, held at Kumaun University, Uttarakhand from 26th to 30th Oct 2010.

From the sixty subjects thirty subjects were volleyball players of North zone Inter-University, and remaining thirty subjects were volleyball players of West zone Inter-University players. The subject's age ranged from 18 to 25 years. The variables for study were- flexibility, muscular Strength, Agility, Endurance, and Body composition To Compare the health related physical fitness components between North and West zone Volleyball female players 't' test was used. The level of significance was set at 0.05 level.

Keywords: Flexibility, Muscular Strength, Agility, Endurance, and Body Composition

Introduction

Physical fitness is a matter of fundamental importance to individual well-being and to the progress and security of a nation. It is the basis for all other forms of excellence. With increased mechanization there has been a corresponding decrease in the number of tasks that require an expenditure of energy, sufficient vigorous exercises are not done to develop and maintain equate levels of physical fitness. Many individuals must rely on attain an acceptable level of physical fitness. (Robert, 1973)

Health and physical fitness have remained the motto of man from ancient times. The marked deterioration in health and physical fitness of people may be due to present automation and a short of mechanized day to-day life. Because of very limited movements caused by scientific and acute stress and strain has caused considerable damage to the health of the people by and large.

A physically fit man will live a long and rich life. His entire success in life depends on his physical fitness. A physically fit man not only lives for himself but also for others. The society and the nation particularly in a developing country like ours, the need for physically fit person is very great. "Since the days of early Greeks, physical fitness has important objective of physical education. Infact the desire to establish a scientific approach to the development of physical fitness was the primary reason for meeting of physical education in 1985, that resulted in the birth of as profession." (Nixon, 1956)^[8]

Physical fitness is to improve the muscular performance of the human being; it can useful for optimum performance of the game in competitive situations. Physical fitness is to develop emotional stability, endurance, strength, agility, speed, flexibility and co-ordination.

Regular activity of physical exercise stimulates growth and development. Fitness improves general health and is essential for full and vigorous living. The physically fit children can to move with confidence.

Physical Fitness is the ability to meet each day demands without becoming exhausted. It is the ability to have a reservoir of endurance life' emergencies in short, "physical fitness is that condition of your body that giver buoyancy to living."(John Walsh1966)^[5],

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Material and Methods

Eighty (60) female volleyball players were selected as subjects for the present study who had participated in North-West zone Inter-University Volleyball (women) tournament, held at kumaun university, Uttarakhand, from 26th to 30th Oct 2010.

From the sixty subjects thirty subjects were volleyball players of North zone Inter-University, and remaining thirty subjects were volleyball players of West zone Inter-University players.

Variable

Following Physiological variable were selected

1. Flexibility: - Sit and reach test was used and it was recorded in cm.
2. Muscular strength: - Bend knee sit-ups test was used and it was recorded in numbers.
3. Agility: - Shuttle run test was used and it was recorded in one tenth of Sec.
4. Endurance: - 12 min run-walk test was used to measure the cardio-vascular endurance and it was recorded nearest every 25meter.
5. Body Composition measuring test for Fat percentage.

Statistical Analysis

To Compare the health related physical fitness components between North and West zone Volleyball female players ‘t’ test was used. The level of significance was set at 0.05 level.

Results and Discussion

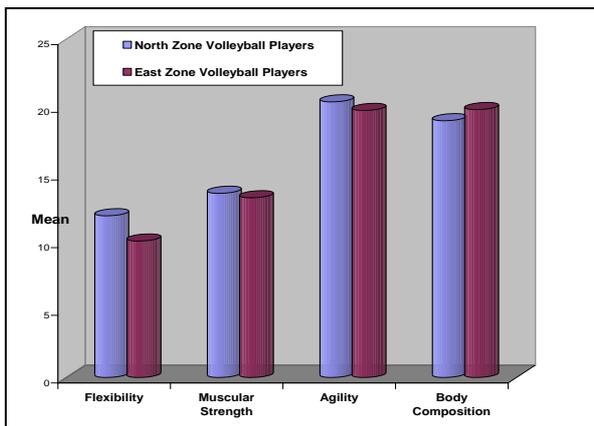


Fig 1: Graphical Representation of flexibility, muscular Strength, Agility, and Body composition of Football and Hockey players

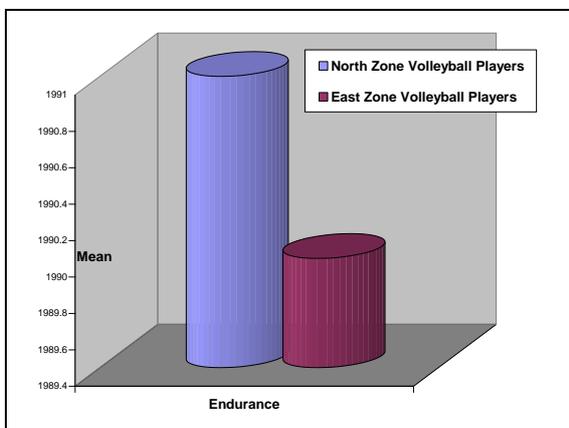


Fig 2: Graphical Representation of Endurance of Football and Hockey players

Table 1: Mean Comparison of Flexibility between North and West zone Inter-University volleyball players.

	North zone Inter-University volleyball players.	West zone Inter-University volleyball players.	“t” ratio
Mean	11.9493	10.0837	3.794
SD	2.39132	2.35779	

Significant t 0.05 (28) = 2.042

It is evident from the table -1 that there are significant differences exist between North and West zone Inter-University volleyball players in flexibility, since the calculated ‘t’ value 3.794 was greater than tabulated ‘t’ value 2.042 at 0.05 level.

Table 2: Mean Comparison of Muscular Strength between North and West zone Inter-University volleyball players.

	North zone Inter-University volleyball players.	West zone Inter-University volleyball players.	“t” ratio
Mean	13.6097	13.2813	1.533
SD	.84706	.99505	

Significant t 0.05 (28) = 2.042

The table-2 reveals that no significant differences was found in muscular strength between North and West zone Inter-University volleyball players as the calculated value of ‘t’=1.533 was less than the tabulated t_{0.05} (28) = 2.042.

Table 3: Mean Comparison of Agility North and West zone Inter-University volleyball players.

	North zone Inter-University volleyball players.	West zone Inter-University volleyball players.	“t” ratio
Mean	20.3667	19.7333	.608
SD	8.53586	8.85100	

Significant t 0.05 (28) = 2.042

The table-3 reveals that no significant differences was found in Agility between North and West zone Inter-University volleyball players as the calculated value of ‘t’=.608 was less than the tabulated t_{0.05} (28) = 2.042.

Table 4: Mean Comparison of Endurance between North and West zone Inter-Universrty volleyball players.

	North zone Inter-University volleyball players.	West zone Inter-University volleyball players.	“t” ratio
Mean	1991.000	1990.000	.020
SD	250.09446	262.03448	

Significant t 0.05 (28) = 2.042

The table-4 reveals that no significant differences was found in Endurance between North and West zone Inter-University volleyball players, as the calculated value of ‘t’=.020 was less than the tabulated t_{0.05} (28) = 2.042.

Table 5: Mean Comparison of Body Composition between North and West zone Inter-University volleyball players.

	North zone Inter-University volleyball players.	West zone Inter-University volleyball players.	"t" ratio
Mean	18.9700	19.7967	-3.040
SD	2.70378	2.70663	

Significant $t_{0.05}(28) = 2.042$

The table-5 reveals that significant differences was found in Body Composition between North and West zone Inter-University volleyball(Women) players, as the calculated value of ' t '=-3.040 was greater than the tabulated $t_{0.05}(28) = 2.042$.

Conclusion

On the basis of results and with in the limitation of study, the following conclusions were drown:-

1. Flexibility has shown significant relationship between North and West zone Inter-University volleyball (Women) players
2. Strength, Agility, and Endurance has shown insignificant relationship between North and West zone Inter-University volleyball (Women) players
3. The Fat percentage has shown significant relationship between North and West zone Inter-University volleyball (Women) players.

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