



Comparison of Aerobic and Anaerobic Capacity Between College Level and University Level Women Handball Players

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ABSTRACT

The study was to find out the comparison of aerobic and anaerobic capacity between college level and university level women handball player. To achieve the purpose of this study sixty. Players were randomly selected from departments and affiliated colleges of Bharathiar University, Coimbatore, Tamilnadu and their ages were ranged between 18 and 25 years. The subjects were divided in to two equal groups with thirty subject college level women handball players and thirty subjects university level women handball players. The data were collected were statically analyzed by independent 't' test which was used to find out the significant improvement on selected variables, The shows that there were a significant improvement in the aerobic and anaerobic capacity.

Keywords: handball, aerobic and anaerobic

INTRODUCTION

Handball (also known as team handball, European handball or Olympic handball) is a team sport in which two teams of seven players each (six out court players and a goalkeeper) pass a ball using their hands with the aim of throwing it into the goal of the other team. A standard match consists of two periods of 30 minutes, and the team that scores more goals wins.

The word aerobic meaning with oxygen to represent idea. Even so the dynamics of the idea or more complicated than implied by the definition. Aerobic can be viewed as an intricate system of bodily supply and demand. That is the body need energy for any kind of activity and the need is filled by burning off the foods that eat. Oxygen is the spark the fuel needs to burn regardless aerobics is the word in general use. The fact is that cooper codified and organized what fitness means to many people. He is generally credited with being one of the main forces of the current fitness craze. The majority medical opinion is that aerobic programmers strengthen heart muscle, increase the efficiency of lungs and offer other wonderful benefits.

Anaerobic exercise is used by sports person in non-endurance sports to build power and by body builders to build muscle mass. Muscles that are trained under anaerobic conditions develop biologically differently giving them greater performance in short duration, high intensity activities. Aerobic exercise, on the other hand, includes lower intensity activities performed for longer periods of time. Activities like walking, running, swimming, and cycling require a great deal of oxygen to generate the energy needed for pro-longed exercise.

CRITERION MEASURES

The following tests were used to measure the selected variables.

1. Queens college step test was used to measure the aerobic capacity (cardio respiratory Endurance) and score was recorded in minutes
2. Maragariya-kalamen test was used to measure the anaerobic Capacity (speed) and score was recorded in seconds.

METHODS

To achieve the purpose of the study,60 handball women players will be selected as subjects from departments and affiliated colleges of Bharathiar University, Coimbatore, Tamilnadu. The subjects age ranged between 18 and 25 years. The selected women handball players will be assessed by aerobic and anaerobic capacity. The selected 60 handball women subjects will be divided into two equal groups, Group – I named as College level women handball players and Group-II named as University level women handball players.

STATISTICAL ANALYSIS

The descriptive calculation and 't' test will be computed. The level of significance will set at 0.05 level of confident.

TABLE 4.1

COMPUTATION OF 't' RATIO BETWEEN COLLEGE AND UNIVERSITY LEVEL WOMEN HANDBALL PLAYERS ON AEROBIC CAPACITY

Variable	Group	N	Mean	Standard deviation	Standard Error Mean	t-ratio
Aerobic	College	30	44.0330	2.09084	.38173	-11.000*
	University	30	49.4303	1.68836	.30825	

*Significant at 0.05 level of confidence (2.14) 1 and 14

Table 4.1 shows the mean value of aerobic for college level and university level women handball players were 44.0330 and 49.4303 respectively. The obtained "t" ratio value of -11.000 was higher than the required table value of 2.09 for degrees of freedom, 1 and 19 significant at 0.05 level of confidence. The study also reveals that the university level handball players had more aerobic capacity then college level handball players.

The mean value of college level and university level handball players on aerobic were graphically represented in figure I.

FIGURE I

Graphical Representation on Mean Values of college and university level women Handball players on aerobic capacity

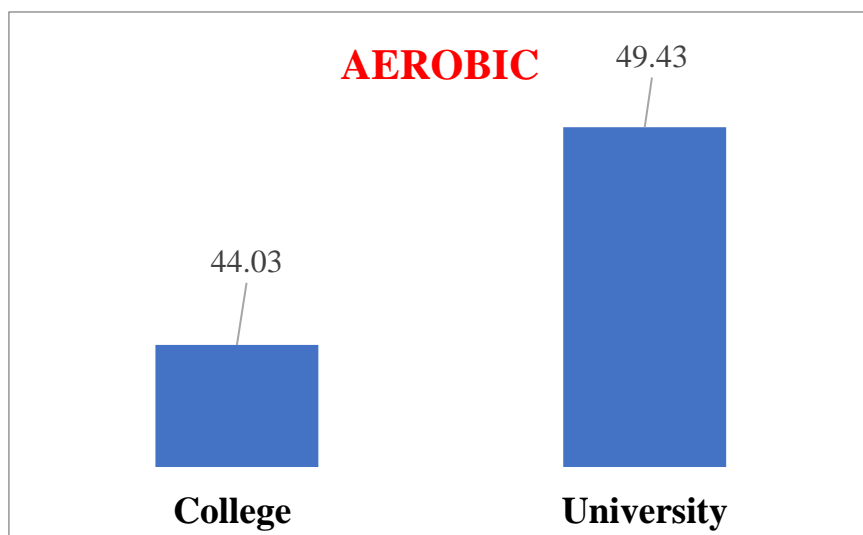


TABLE 4.2

COMPUTATION OF 't' RATIO BETWEEN COLLEGE AND UNIVERSITY LEVEL WOMEN HANDBALL PLAYERS ON ANAEROBIC CAPACITY

Variable	Group	N	Mean	Standard deviation	Standard Error Mean	t-ratio
Anaerobic	College	30	368.4243	34.71485	6.33803	-6.964*
	University	30	450.3033	54.23761	9.90239	

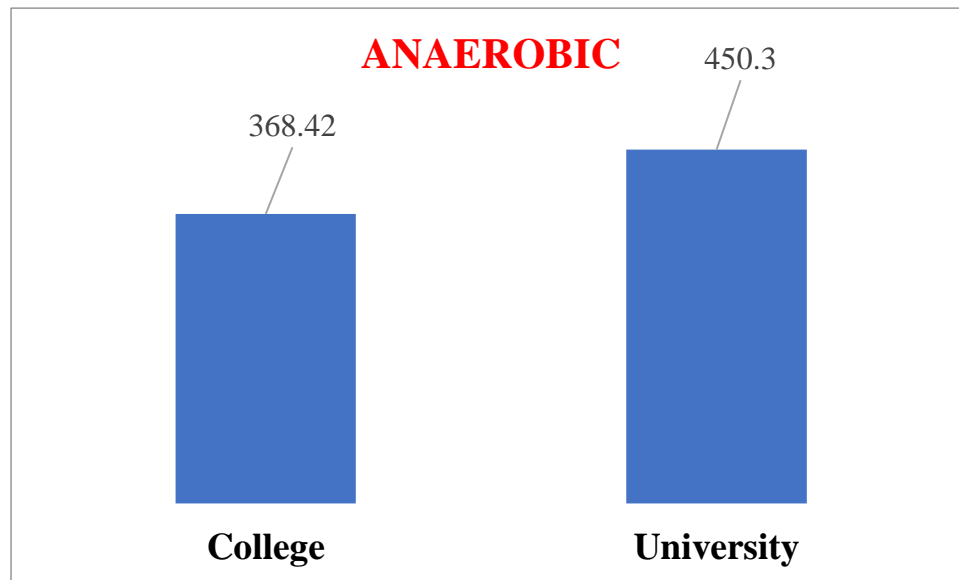
*Significant at 0.05 level of confidence (2.14) 1 and 14

Table 4.2 shows the mean value of anaerobic for college level and university level women handball players were 368.4243 and 450.3033 respectively. The obtained "t" ratio value of -6.964 was higher than the required table value of 2.09 for degrees of freedom, 1 and 19 significant at 0.05 level of confidence. The study also reveals that the university level handball players had more anaerobic capacity then college level handball players.

The mean value of college level and university level women handball players on anaerobic capacity were graphically represented in figure II.

FIGURE II

Graphical Representation on Mean Values of college and university level women Handball players on anaerobic capacity

**DISCUSSION AND FINDINGS**

- The results obtained from present studies revealed that there was significant difference on aerobic capacity between college level and university level women handball players.
- The study also reveals that the university level handball players had more aerobic capacity than college level women handball players.
- The results obtained from present studies revealed that there was significant difference on anaerobic capacity between college level and university level women handball players.
- The study also reveals that the university level handball players had more anaerobic capacity than college level women handball players.

CONCLUSIONS

Based on the results and discussion made into the previous chapter, the Following conclusions have been made:

1. It was concluded that there was a significant difference among college level and university level women handball players on aerobic capacity.
2. It was concluded that there was a significant difference among college level and university level women handball players on anaerobic capacity.
3. It was concluded that university level handball players had better aerobic capacity than college level handball players.
4. It was concluded that university level handball players had better anaerobic capacity than college level handball players.

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