

ASSESSMENT AND COMPARISON OF SPEED AND AGILITY BETWEEN COLLEGE LEVEL MALE ATTACKERS AND LIBEROS IN VOLLEYBALL

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ABSTRACT

The aim of this study was to assess and compare speed and agility among attackers and liberos of volleyball game. Fifteen (n=15) attackers and liberos (n=15) were selected randomly with age ranging between 18-25 years. The subjects who participated in St. Joseph's inter collegiate tournament, Cuddalore, Tamil Nadu, India during the academic year 2012-2013 were only selected. Speed and agility was measured by using 50 meters dash and shuttle run tests respectively. The data was analyzed using descriptive statistics and independent sample 't' test. There was a significant difference in speed and agility between attackers and liberos. It was concluded that in volleyball the liberos have better speed and agility than attackers. The level of significance was set at 0.05.

Key words: Speed, Agility, Volleyball, Libero

Introduction

There are different variables and characteristics which are responsible to excel in sports and games. Various studies have been conducted to identify these factors. All the factors are related to a particular sport as well as to a particular playing position. Now a day's speed, agility and quickness have become essential and popular way to train the players of any game/sports. There is a need to realize that speed, agility and quickness covers the complete spectrum of the training (Brown & Ferrigno, 2005). Agility is the ability of any indi-

vidual to change body positions quickly. Every sports and games require quick change in body positions for any move. In netball also there is a great significance of this ability. This ability may vary at different playing positions and at different levels. So, investigators decided to conduct this study by taking different playing positions and levels in relation to agility.

Volleyball has become an increasingly dynamic sport. The profile of the athlete has been changing and physical capacities are increasingly required. In this context, optimal muscle strength

and power, together with technical and tactical skills are necessary to practice the sport at a high level of performance (Marques, 2009). To reach this level various strategies can be adopted during planning and development of the training process, and these can be implemented through training prescription (Gamble, 2010). Several tests have been proposed and applied for measuring the physical performance of volleyball players. The ability to perform quick and vigorous movements is also important in volleyball (Tsunawake, 2003). However, some authors have questioned the specificity of these skills, for although validated and reliable, they do not perfectly reflect the demands of the sport nor the predominant energy requirements during its practice (Sheppard et al., 2007).

Hypothesis

There will be no significant difference in the Speed and Agility among Attackers and Liberos.

Methodology

The purpose of the study was to find out the difference of speed and agility between attackers and liberos in volleyball game. To achieve the purpose of

the study 15 men Attacker and 15 Libero players from various colleges were selected as subjects. The subjects who participated in St. Joseph's inter collegiate tournament, Cuddalore, Tamil Nadu, India during the academic year 2012-2013 were only selected. The age of the selected subjects ranged from 18 to 25 years. Speed and agility was measured by using 50 meter dash and shuttle run tests respectively. The required instruments such as watch, measuring tape, were taken from the human research laboratory, department of physical education and sports science, Annamalai University and all the instruments were in good condition and they were purchased from the reliable and reputed companies. Their calibrations were found to be accurate enough to serve the purpose of the study. All the subjects were asked to assemble in front of the testing areas and the investigator explained the purpose of the study to the subject. The investigator demonstrated all the test items. Each subject was asked to perform as many trials as they wanted to familiarize themselves with the test items.

Result and Analysis

The results were obtained by applying descriptive statistics and independent t test.

Table 1: Descriptive Analysis and Independent T-Test

Variables	Groups	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Speed	Attackers	15	7.47	0.239	0.061	2.884	28	.007
	Liberos	15	7.23	0.212	0.054			
Agility	Attackers	15	17.42	0.735	0.189	3.170	28	.004
	Liberos	15	16.65	0.599	0.154			

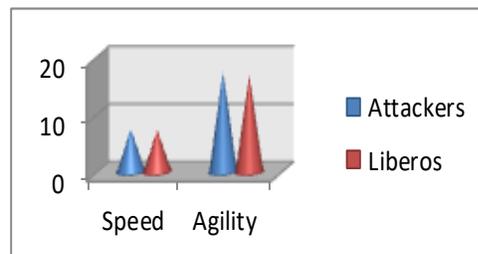
The results indicate that there was significant difference in speed between attackers and liberos, $t(28) = 2.884$, $P = 0.007$, which is less than 0.05. That is the average score of attackers ($M=7.47$, $SD=0.239$) was statistically different from that of liberos ($M=7.23$, $SD=0.212$). Thus, it could be concluded that there was a significant difference in speed between attackers and liberos.

The results indicate that there was significant difference in agility between attackers and liberos, $t(28) = 3.170$, $P = 0.004$, which is less than 0.05. That is the average score of attackers ($M=17.42$, $SD=0.735$) was statistically different from that of liberos ($M=16.65$, $SD=0.599$). Thus, it could be concluded that there was a significant difference in

agility between attackers and liberos.

The graphical representation of mean scores of speed and agility between attackers and liberos are displayed in fig. 1.

Figure-1: Mean scores of speed and agility between attackers and Liberos



Discussion

The study resulted in a significant difference in speed and agility between college level attackers and liberos of volleyball game. A study was condu-

cted by Singh, P. & Choudhary, R. (2015) on netball players by taking Quickness as a variable. The study was conducted on different playing positions. Significant difference was found among Netball players in quickness pertaining the different playing positions. Results of the study revealed that significant difference exist between Goal Shooter (G. S.) and Goal Keeper (G. K.); Centre (C.) and Goal Keeper (G. K.).

Conclusion

Speed and agility plays a great role in a game like volleyball. Shibata, M. (nd) in sport science analysis of the components of volleyball states that the speed of attackers is very much important for skill performance. However, we found speed and agility of liberos better than attackers. It is recommended that the coaches focus on the speed and agility of attackers so that their performance in both the variables increases.

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