Comparative Study On Speed Among University Level Football, Handball And Volleyball Players Of Andhra Pradesh.

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ABSTRACT

The purpose of this study was to conduct a comparative analysis of speed among university-level Football, Handball, and Volleyball players of Andhra Pradesh. A total of 300 male players, comprising 100 each from Football, Handball, and Volleyball who had participated in Inter-University tournaments during 2011–12, were selected as subjects. Speed was measured using standard tests, and the data were statistically analyzed using Analysis of Variance (ANOVA) and Scheffe's Post Hoc Test. The results showed mean speed scores of Football (7.375 sec), Handball (7.130 sec), and Volleyball (7.202 sec) players, with standard deviations of 0.066, 0.040, and 0.063 respectively. The obtained *F* ratio (481.68) was significantly higher than the table value (3.03) at the 0.05 level of confidence, indicating significant differences in speed among the three groups. Post Hoc analysis revealed significant mean differences between Football & Handball (MD=0.245), Handball & Volleyball (MD=0.072), and Football & Volleyball (MD=0.173), establishing that Handball players demonstrated superior speed compared to Football and Volleyball players. These findings suggest that sport-specific demands and training requirements play a critical role in influencing the speed performance of athletes in different team games.

Keywords: Speed, Physical Fitness, Football, Handball, Volleyball and University Players,

INTRODUCTION

Sports and games in modern times have taken a definite shape in comparison with the immature and unscientific plays of ancient times. Today sports are becoming professional; players are earning a lot through games and sports. Sports in recent times are mainly of a competitive nature through their procreative values cannot be underestimated or denied. Despite the fighting attitude between the competitors, sports bring the different nations closer and establish brotherhood and friendship between the people of different countries. Sports now-a-days has changed with a lot of characteristics e.g. more scientific and mass oriented, well organized and mostly health directed, elevate mental and physical fitness of the participants, increase mental concentration, bring honor and social dignity to the successful participants Physical fitness is the ability to carry out daily tasks vigour and alertness, without undue fatigue, and with ample energy to engage in a leisure time pursuits and to meet the above average physical stresses encountered in emergency situations. Physical fitness is the capacity to carry out reasonably well various forms of physical activities without being unduly tired and includes qualities

important to the individual's health and well-being. Sports are essentially that aspect of human activity, which strengthens the integration of the body and the mind.

Fitness is important at all levels of the game, whilst being essential for top level players; it is beneficial for beginners who will improve both their effectiveness and enjoyment through good standards of fitness. Fitness enables a player to cope with the physical demands of the game as well as allowing the efficient use of his various technical and tactical competencies throughout the match.

In the field of sports and games where individual has to perform complex motor task, on integrated functioning of physical and physiological variables is of permanent importance. The ability of a sportsman to perform a task effectively and efficiency is an inter action between once physical mental capabilities. Both physical and mental facilities of the individual are so closely linked to each other that along with mental task one has to cope up with demand of physical task and vice-versa.

Earlier physical fitness meant the capacity of an individual to perform given physical task involving muscular effort, but, this narrow concept of physical fitness has undergone a change now a new concept of "physical fitness" is evolved. According to American Association for Health Physical Education and Recreation (AAHPER) physical fitness means that state which characterizes the degree to which the person is able to function.

EXPERMENTAL DESIGN

The purpose of the present study is to Comparative study on speed among university level Football, Handball and Volleyball players of Andhra Pradesh. To achieve the purpose of the study, one hundred male players were selected at random from each category of Football, Handball and Volleyball players, a total of 300 players in Andhra Pradesh state, India, who had their credit in participating inter university tournaments during the academic year 2011-12 in their respective games. The subjects were selected from the following universities in Andhra Pradesh namely, 1. Sri. Venkateshwara University, Tirupathi 2. Srikirshnadevaraya University, Ananthapur. 3. Osmaniya University, Hyderaad, 4. Acharya Nagarjuna University, Guntur and 5. Andhra University, Visakhapatnam.

The researcher explained the purpose and the significance of the study to all the selected players before conducting the tests to ensure maximum cooperation from the subjects. All the subjects agreed voluntarily to cooperate in the testing procedures explained to them and to put in their test efforts in the interest of the scientific research and in order to enhance their own performance and achievement standards. Though no special techniques were used to motivate the subjects to put in their best effort, the subjects were very enthusiastic and cooperative throughout the research work. They were free to withdraw as respondents in case they feel any difficulty or discomfort during the test. The researcher has taken sufficient care and caustion in the counseling the sample respondents about the utility of physical fitness for a healthy body and also the purpose of study. Because of this, no dropouts as respondents and all the selected subjects voluntarily cooperated well throughout the period of test.

RESULT ON SPEED

There would be no significant difference among University Players of different disciplines (Football, Handball and Volleyball games) on Speed.

TABLE-I

ANALYSIS OF VARIANCE FOR THE DATA ON SPEED (SCORES IN SECS.) COMPONENT OF PHYSICAL FITNESS AMONG FOOTBALL, HANDBALL AND VOLLEYBALL PLAYERS

Test	Players of Different Disciplines			Source of Variance	Sum of Squares	df	Mean Squares	F Ratio
	Football	Handball	Volleyball					
Mean Scores	7.375	7.130	7.202	Between Groups	3.188	2	1.594	481.68*
Standard Deviation	0.066	0.040	0.063	Within Groups	0.983	297	0.003	

* Significant at 0.05 level of confidence, Table 'F Ratio' =3.03

The table-I shows the Speed (in seconds) mean scores component of physical fitness variable among football, handball and volleyball university players are 7.375, 7.130 and 7.202 respectively and the standard deviation are 0.066, 0.040 and 0.063 respectively. The table also shows that the obtained 'F' ratio of 481.68 for Speed is greater than the table value of 3.03 for df '2 and 297' required for significance at 0.05 level of confidence.

The results of the study indicated that "there is a significant difference in the Speed component of Physical Fitness variable among university players of different disciplines (football, handball and volleyball games). To determine the significant difference in the Speed among the three paired means, the 'Scheffe's test was applied as Post hoc analysis and the results are presented in Table-II.

TABLE-II

SCHEFFE'S POST HOC TEST FOR SIGNIFICANT DIFFERENCE IN THE SPEED MEAN SCORES (IN SECS.) AMONG FOOTBALL, HANDBALL AND VOLLEYBALL PLAYERS

Players of Different Disciplines			Mean Difference and Sig. Level	Critical Difference
Football	Handball	Volleyball		
7.375	7.130	×	0.245*	0.019
×	7.130	7.202	0.072*	
7.375	×	7.202	0.173*	

*Significant at 0.05 level of confidence.

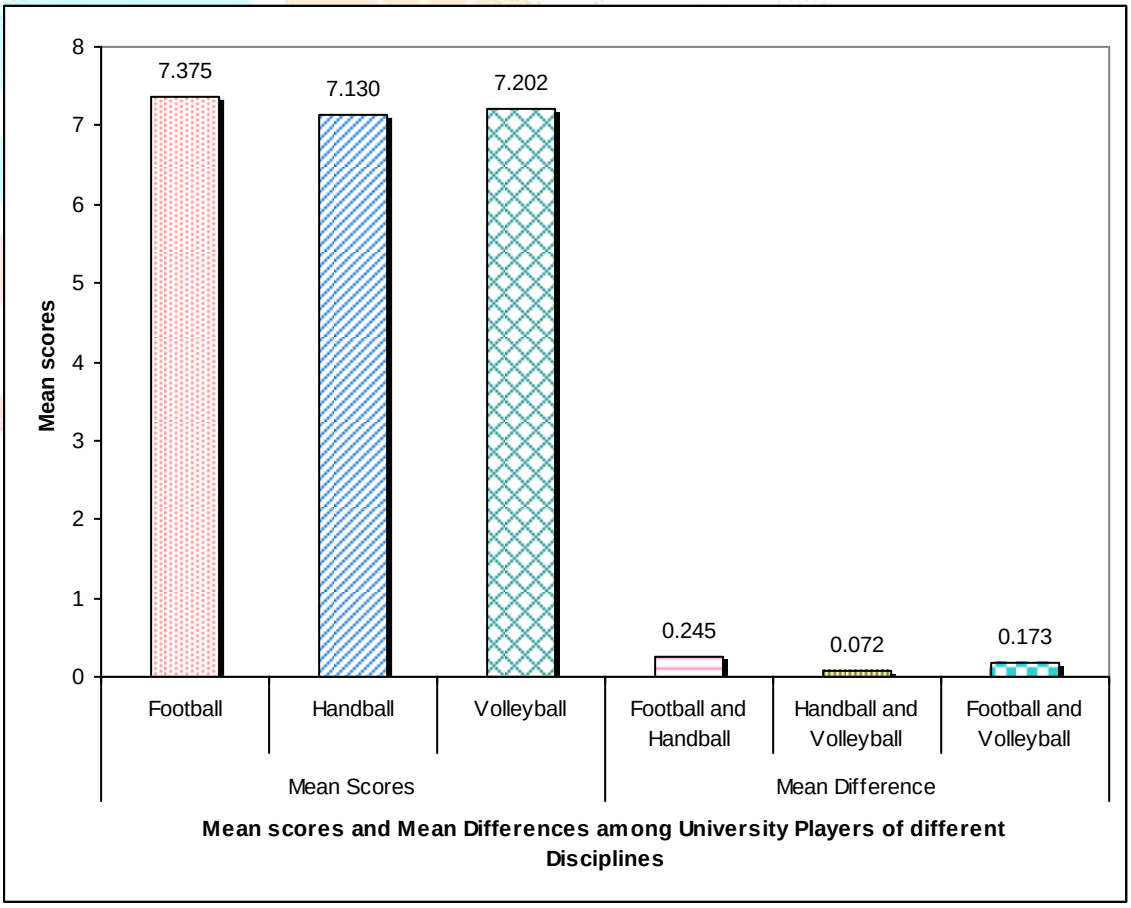
Table-II shows significant paired mean differences on Speed between football & handball players; handball & volleyball players and football & volleyball players and the values are 0.245, 0.072 and 0.173 respectively which are greater than the critical difference value 0.019 at 0.05 level of confidence. It concludes that "there is a significant difference exists in speed between football & handball players; handball & volleyball players and football & volleyball players.

It may be concluded from the results that significant difference exists on speed between football & handball players; handball & volleyball players and football & volleyball players. The handball players have better speed than volleyball and football players.

The mean values on Speed of football, handball and volleyball players are graphically depicted in Fig.I.

FIG.I

BAR DIAGRAM SHOWS THE COMPARISON OF SPEED MEAN SCORES AMONG UNIVERSITY PLAYERS OF DIFFERENT DISCIPLINES (FOOTBALL, HANDBALL AND VOLLEYBALL).



DISCUSSION OF RESULTS ON SPEED

The findings of the present study revealed significant differences in the speed component of physical fitness among football, handball, and volleyball players of Andhra Pradesh universities. The ANOVA results indicated that the observed *F*-ratio (481.68) was far greater than the critical value at the 0.05 level of significance, confirming that playing discipline has a marked influence on speed. Post hoc analysis further

showed that handball players recorded superior mean speed scores (7.130 sec) compared to volleyball (7.202 sec) and football players (7.375 sec).

The superior speed performance of handball players can be attributed to the specific demands of the sport, which involve frequent short sprints, rapid changes of direction, and explosive movements in both offensive and defensive play. Football players, though exposed to high-speed actions, often engage in longer runs interspersed with variable intensity, which may slightly reduce their performance in short-distance sprint tests. Volleyball players, on the other hand, rely more on vertical jumps, reaction time, and agility rather than continuous sprinting, which may explain their comparatively moderate speed scores.

These results are consistent with earlier studies emphasizing that sport-specific training and movement demands significantly influence the development of speed and other motor abilities. The present findings highlight the role of specialized training in shaping speed capacities, suggesting that differences in playing structure, court size, and movement frequency contribute to varying speed levels across different team games.

CONCLUSION

There was significant difference in the Speed among university players of different disciplines (football, handball and volleyball) ('F'=481.68; P<0.05). Further significant paired mean differences exists on speed between football & handball players (MD=0.245); handball & volleyball players (MD=0.072) and football & volleyball players (0.173). The handball players have better speed than volleyball and football players.

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