



# A study of physical fitness between Volleyball Players and Football players of Dr.Y.S.R Horticulture University, Tadepalligudem, AP

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## Abstract

The present study was an attempt to find out the difference in physical fitness level between Volleyball and football players. The sample for this study consisted of 150 subjects each belonging to Volleyball and football from Dr.Y.S.R Horticulture University, Tadepalligudem, AP, who had represented their schools and colleges in various state level tournaments were selected as the subjects for the study. The Criterion measures from AAPHER Physical fitness test have been chosen for this study. Mean, Standard deviation and 't' Test were used to analyses the data Findings of the study revealed that: (i) Football players was found better in 50-yard dash than Volleyball players; (ii) Volleyball players are much better in Standing Broad Jump than football players; (iii) there is no significant difference in Pull-Ups between Volleyball and football players; (iv) Football players were found better in Shuttle-run than Volleyball players; (v) There is no significant difference in Sit-ups of Volleyball and football players and (vi) Football players were found better in six hundred yard run than Volleyball players.

**Keywords:** Physical fitness, Volleyball, football, player.

## INTRODUCTION

We have always known that sport is more than a physical activity. The definition of sport is the broad, inclusive one offered by the Council of Europe (2001): "Sport means all forms of physical activity which, through casual and organized participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels." Seefeldt (1987) has enumerated many benefits associated with participation in any organized sports program. Specifically he proposed that through participation of sports children (a) develop physical skills that can contribute to a life time of physical involvement; (b) improve fitness; (c) learn social and emotional skills; (d) develop moral values; and (e) acquire a better sense of self through increased perceived competence, self esteem, and self confidence. However, the development of these competencies does not occur automatically. Plato (1920, p46) said, "The moral value of exercise and sports far outweigh the physical value".

Sports are a reflection of life and most of the time sports are displayed on a public forum and following good moral values allows you to represent yourself and your team with honor. Often times in sports decisions are made in a split second and having a strong moral background allows people to make good decisions even in tough situations. "Participating in sport can improve the quality of life of individuals and communities, promote social inclusion, improve health, counter anti-social behavior, raise individual self-esteem and confidence, and widen horizons" (sport scotland, 2003, p7).

Many feel that the sports culture is ideal for character development. Today thousands of interscholastic and recreational programs viewed as instruments to foster character among participants (Rudd & Mondello, 2006). Researchers believe the sports environment to be morally fertile ground, vehicular in its character building capacity to develop socially desired values. Since 25% of a youth's time is comprised of time interacting with adults who are not their parents, sport presents numerous opportunities to develop socially desired virtues like trust, loyalty, compassion, integrity, team work, and responsibility (Kleiber & Roberts, 1981; Masteralexis et al, 2005; Sipes, 1973; Taylor, 1999).

Sports can be a valuable training ground for its young participants because of its capacity to instill important life lessons (e.g., how to win and lose gracefully, the value of upholding the spirit of the game, and the benefits of team work) and teach valuable life skills such as taking initiative, being responsible, solving problems, setting goals, processing feedback, working with others, regulating one's emotions (e.g., Danish, Petipes & Hale, 1992; Kleiber & Kirshnit, 1991; Smoll & Smith, 2002).

Sport may provide a context in which youth have opportunities to learn life skills and other positive attributes that help them thrive away from the field of play (Danish & Nellen, 1997; Jones & Lavalley, 2009). The acquisition of such competencies, assets, values, and life skills is the essence of Positive Youth Development (PYD). Positive Youth Development is a strength-based conception of development that can be defined as "the engagement in pro-social behaviors and avoidance of health compromising behaviors and future jeopardizing behaviors" (Roth, Brooks-Gunn, Murray, & Foster, 1998, p. 426). There is a belief that through playing sport youth can learn competencies, assets, values, and life skills that will have a positive influence on their overall development.

Sport is a valued practice because "it is a peculiarly human activity in which values internal to that activity are discovered and realized in the course of trying to achieve the standards of excellence that characterize it" (Arnold, 1997, p. 14). When sport is pursued for its own sake, players abide by the rules, and sportsmanship is shown, sports transcend a game and become a morally just and honorable aspect of life. It is a human practice where individuals are tested (Ibid, p135).

There is a significant impact of modern technology on human living. His muscles, upon which he used to rely entirely for survival, are now used for less and less with inevitable results. Many researchers in such divergent fields as medicine, psychology and physiology, however, attest to the fact that exercise with attendant development of fitness has far reaching effects on vital bodily processes and upon the functional realization of one's growth and capabilities.

Physical fitness is the sum of total five motor abilities namely strength, speed, endurance, flexibility and co-operative abilities. These five motor abilities and their complete forms are the basic prerequisites for human motor actions. Therefore the sports performance in all depends upon these abilities. The improvement and maintenance of physical fitness is perhaps the most important aim of sports training. The performance of a sportsman in any game or event also

depends on muscular strength, agility, power, speed and cardiovascular endurance. Along with these physical variables, physiological and psychological components also play an important role in the execution of the performance. Best suited activity and new training methods achieve excellence. The aim of the present study was to determine the differences in selected physical fitness characteristics between the individual game and team game athletes.

### Physical Fitness Components

Health is a state of complete mental physical and social wellbeing whereas fitness is the ability to meet the demands of a physical task. Basic fitness can be classified in 4 main components - Strength, speed, stamina and flexibility. However, exercise scientists have identified nine components that comprise the definition of fitness:

**Strength:** The extent to which muscles can exert force by contracting against resistance (e.g. holding or restraining an object or person.)

**Power:** The ability to exert maximum muscular contraction instantly in an explosive burst of movements. The two components of power are strength and speed (e.g. jumping or a sprint start)

**Agility:** The ability to perform a series of explosive power movement in rapid succession in opposing directions (e.g. Zig Zag running)

**Balance:** The ability to control the body's position either stationary (e.g. handstand) or while moving (e.g. a gymnastic stunt)

**Flexibility:** The ability to achieve an extended range of motion without being impeded by excess tissue, i.e. fat or muscle (e.g. executing a leg split)

**Local muscle Endurance:** a single muscle's ability to perform sustained work (e.g. rowing or cycling).

**Cardiovascular Endurance:** The heart's ability to deliver blood to working muscles and their ability to use it (e.g. running long distance).

**Strength Endurance:** A muscle's ability to perform a maximum contraction time after time (e.g. continuous explosive rebounding through an entire Volleyball game)

**Co-ordination:** The ability to integrate the above. Listed components so that effective movements are achieved. Of all the nine elements of fitness cardiac respiratory qualities are the most important to develop as they enhance all the other components of the conditioning equation.

## Statement of the problem

“A study of physical fitness between Volleyball Players and Football players of Dr.Y.S.R Horticulture University, Tadepalligudem, AP “

## Significance of study

1. The study might reveal some Interesting facts about physical fitness of Volleyball and football players living at other states will be enlighten the general players.
2. The finding of this study will be add to the new knowledge in the area of physical fitness which will benefit the players and those who are concerned with coaching in games and sports.
3. The study may provide guidance to physical education teachers and Coaches in training athletics and players for different sports.

## Objectives of the study

To find out the difference in 50 Yard Dash, Standing Broad Jump, Pulls-up, Shuttle, Sit-ups and 600 Yard dash/walk of Volleyball and football players of Dr.Y.S.R Horticulture University, Tadepalligudem, AP.

## Hypothesis

There is no significant difference in 50 Yard Dash, Standing Broad Jump, Pulls-up, Shuttle, Sit-ups and 600 Yard dash/walk of Volleyball and football players of Dr.Y.S.R Horticulture University, Tadepalligudem, AP.

## Sample

The sample for this study consisted of 150 subjects each belonging to Volleyball and football players of Dr.Y.S.R Horticulture University, Tadepalligudem, AP., who had represented their Affiliated colleges in various inter collegiate level tournaments were selected as the subjects for the study.

## Tool used

The Criterion measures from AAPHER Physical fitness test have been chosen for this study.

1. 50 yard dash
2. Shuttle run
3. Sit ups
4. Pull ups
5. Standing broad jump
6. 600 yard run/walk.

## Statistical Techniques

Mean, Standard deviation and ‘t’ Test were used to analyses the data,

## Analysis of data

The present study was conducted with the aim of examining the level of physical fitness Dr.Y.S.R Horticulture University, Tadepalligudem, AP.. The data of 150 (75 Volleyball and 75 football) players was analysed by calculating 't' test besides the descriptive statistics (mean and standard deviation).

**Table 1: Mean, Standard Deviation and 't' value for means scores of 50 yard dash of Volleyball and football players.**

S.No	Variable	Group	N	Mean Score	S.D.'S	"t"Value
1	50 Yards Dash	Volleyball	75	6.85	0.38	7.815*
		Football	75	6.23	0.52	
2	Standing Broad Jump	Volleyball	75	2.13	0.16	4.855**
		Football	75	2.18	0.11	
3	Pull Ups	Volleyball	75	11.68	1.57	0.423*
		Football	75	11.99	1.51	
4	Shuttle - Run	Volleyball	75	11.23	1.02	14.460**
		Football	75	9.56	0.36	
5	Sit ups	Volleyball	75	38.16	3.26	0.829*
		Football	75	38.66	3.23	
6	600 Yards Run/Walk	Volleyball	75	1.37	0.21	6.986**
		Football	75	1.16	0.14	

\*\* Significant at 0.01 level; NS = Not significant

Tabulated Value: 1.96 at 0.05 level

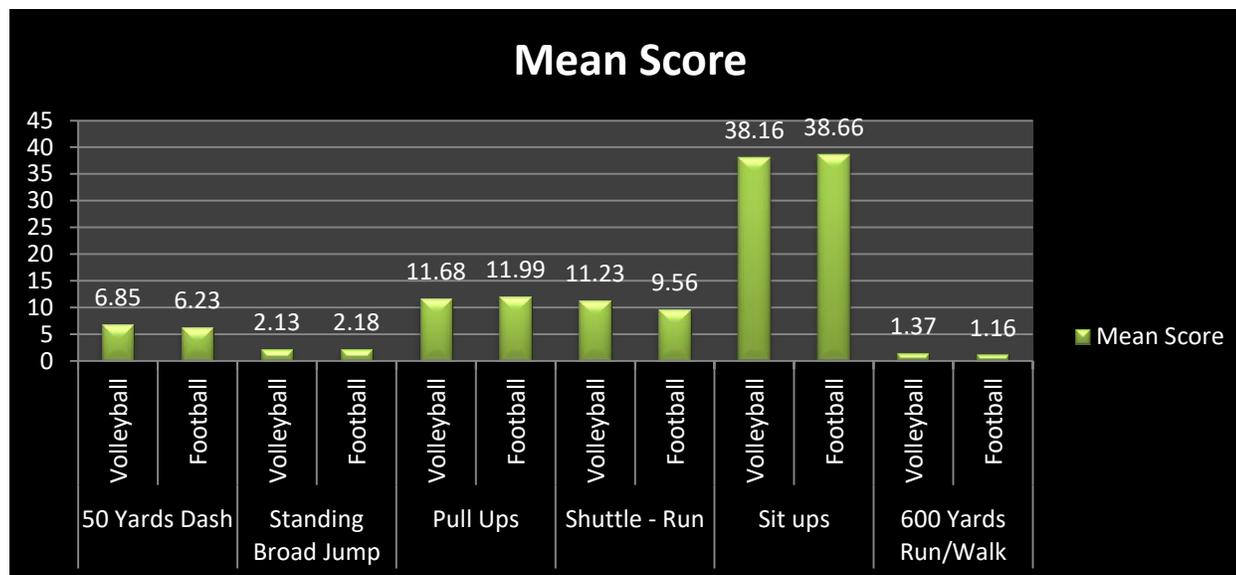
2.58 at 0.01 level

Table and Figure 4.1 reveal that t-value (7.815) for the mean scores of 50 yard dash of Volleyball and football players is significant at 0.01 level of significance. So it was found that the mean scores of 50-yard dash of Volleyball players (6.85) is more than football players (6.23). It may therefore be concluded that Volleyball players took more time in 50-yard dash than football players. Hence, it be concluded that football players were far better than Volleyball players in 50 Yard dash. Table further revealed that t-value (4.855) for the mean scores of Standing Broad Jump of Volleyball and football players is significant at 0.01 level of significance. So it was found that the mean of Standing Broad Jump of Volleyball players (2.31) is more than football players (2.20). It may therefore be concluded that Volleyball players are much better in Standing Broad Jump than football players. Table further revealed that t-value (0.423) for the mean scores of Standing Broad Jump of Volleyball and football players is not significant at any level of significance. In this situation, the null hypothesis that "There is no significant difference in Pulls-up of Volleyball and football players of Punjab" is retained. So it was found that the mean of pulls-up of Volleyball players (11.68) is slight less than football players (11.99), but do not differ significantly.

Table further revealed that t-value (14.460) for the mean scores of shuttle run of Volleyball and football players is significant at 0.01 level of significance. So it was found that the mean scores of shuttle run of Volleyball players (11.23) is more than football players (9.56). It may therefore be concluded that Volleyball players took more time in shuttle run than football players. Hence, it be concluded that football players were far better than Volleyball players in shuttle run. Table further revealed that t-value (0.829) for the mean scores of sit-ups of Volleyball and football players is not significant at

any level of significance. So it was found that the mean score of sit-ups of Volleyball players (38.16) is slight less than football players (38.66), but do not differ significantly. Table revealed that t-value (6.986) for the mean scores of six hundred yard run of Volleyball and football players is significant at 0.01 level of significance. So it was found that the mean scores of six hundred yard run of Volleyball players (1.37) is more than football players (1.16). It may therefore be concluded that Volleyball players took more time in six hundred yard run than football players. Hence, it be concluded that football players were far better than Volleyball players in six hundred yard dash.

**Figure-1: Follow figure Mean for means scores of 50 yard dash of Volleyball and football players.**



## Findings

1. It was found that there is a significant difference between Volleyball and football players regarding 50-yard dash. It may therefore be concluded that Volleyball players took more time in 50-yard dash than football players.
2. It was found that there is a significant difference between Volleyball and football players regarding standing broad jump. Volleyball players are much better in Standing Broad Jump than football players.
3. It was found that there is no significant difference in Pull- Ups between Volleyball and football players.
4. It was found that there is a significant difference in Shuttle-run Volleyball and football players. Volleyball players took more time in Shuttle-run than football players.
5. It was found that there is no significant difference in Sit ups of Volleyball and football players.
6. It was found that there is a significant difference in six hundred yard run Volleyball and football players. Volleyball players took more time in six hundred yard run than football players.

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