

A Comparative Study of Selected Physical Fitness Components between Volleyball and Non-Volleyball Players

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Abstract

Physical fitness is a very essential part of every individual. Physical fitness allows individual to do their daily works vigorously and continuously without any exhaust and have energy leftover to meet any emergency need and enjoy leisure time. The main purpose the revise is in the direction of evaluates desired bodily strength components volleyball in addition to non-volleyball players. 30 student from different schools of Moradabad district were considered as subjects whose age was between 15&18. The variables of the study were leg explosive strength and abdominal strength. The mean value of volleyball group is 2.64 and non-volleyball group is 2.23. Whereas standard deviation of volleyball group is 0.15 and non-volleyball group is 0.26. While (5.68) be more for leg explosive strength and on the other hand the mean value of volleyball group is 57.85 and non volleyball group is 34.92. Whereas standard deviation of volleyball group is 10.97 and non-volleyball group is 08.4, while the (8.42) is further the tabulated t-value in case of abdominal strength. From the above study was accomplished with the purpose of there was significance difference between leg quick-tempered strength furthermore abdominal strength between volleyball players and non-volleyball players.

Keywords : Explosive, Fitness, Physical, Strength, Volleyball.

I. INTRODUCTION

Volleyball is very common and popular game in India. Main reason behind its popularity is it is very simple and takes minimal equipment to play. William G. Morgan, who started volleyball game, took birth in New York State in the year of 1870, initially named volleyball game as "Mintonette". Young Morgan took his graduation degree from YMCA Springfield College.

Physical fitness is a very essential part of every individual. Physical fitness allows individual to do their daily works vigorously and continuously without any exhaust and have energy leftover to meet any emergency need and enjoy leisure time. In general physical fitness two general i.e. general fitness as well as specific fitness. General fitness means the minimum fitness level that one need to achieve to do daily life works without undue fatigue. On

the other hand specific fitness means the fitness what we need to perform any particular type of job or activity, which is mainly sport or performance specific activity.

Every sport requires different types of physical fitness, which varies sports to sports. The main physical fitness components that are required to play volleyball are coordination, power, and agility. Coordination is an ability of a person to coordinate with some external moving object. Power means how much work one can do in a specific period of time and on the other hand agility means the ability of a person to change its position while in motion. For a greater agility a good amount of core strength is required[1].

Yadav. M. & Rohilla K. conducted a study on the topic of "A comparative study of bodily strength amongst student within Bhiwani ward Haryana." [2]. Investigation was done on

twenty-five sportsmen and twenty five non-sports person female understudy of Bhiwani. The age of the chosen students was from eighteen to twenty five years. Fifty gauge hasten investigation, as well as reputation expansive hop test were utilized to measures the chosen physical wellness component of the understudies so as to realize. In the examination of the information specialist watched diverse among sportsmen and non-sportsmen understudies of various chose physical wellness parts.

II. REVIEW OF LITERATURE

Kohli Keshav et al. in their case study suggested that the muscle strength the Athletics but instead Basketball clubs from Khalsa Public School in Amritsar, Amritsar, INDIA. 15 sports for this research. Length, tenacity, nimbleness, tempo, and versatility were still the aerobic endurance factors. Drive, office fit, spaceship runs, 50-meter dashes, and now a 600-meter run were used to quantify these. The analysis was completed using a t-test with a probability value of 0.05. The results revealed that because there was no distinction between the two groups meter sprint, or meter runs, although great disparity in flyer run performance[3].

J. Pena et al. In their case study suggested that Model are some of the most recent ideas in the area of determining the economics of the thinking. This same bodily action is one of the many types of engagements upon which changes or modifications are concerned. The goal of this study is to see how the pattern of the graph of resting heart rate affects the specified variables of muscular endurance in adolescent volleyball players in Qom. Throughout the current field study, 30 volleyball players aged 12 to 15 were arbitrarily chosen from the city of Qom. This erikson's psychosocial program was used to get the erikson's psychosocial cycles. In two states of fueled (the second position) and discharges (the first position) of the biorhythm physical cycle, vertical leap and medicine ball chucking were employed as provided better magoosh force production, while pull-up and sit-up were utilized as tests associated with muscular

endurance. Your data will be analyzed using a statistic correlated t test threshold. Its results show with the intention of measures of power, such as vertical leap and medicine ball throwing, were very well with biorhythmic physical period ($p=0.042$ $p=0.019$)[4].

M J Duncan et al. in their case study suggested that this same goal of this study was to look at the anatomic and biochemical factors of younger competitive endurance athletes. This same goal of this study was to look at the anatomic and biochemical factors of younger competitive endurance athletes. Hundred global volleyball participants were evaluated on a variety of biological and anthropological factors. Its Social health test was used to estimate somatotype, surface physiology is also used to determine athletic performance (percent body fat, percent muscle mass), a big toe or rather away accelerometer would be used to determine fitness levels, the lap and surpass trial is also used to determine low back but rather hamstring optionality, or the directional jump was also used to determine lower body force. The 20-meter maximal aerobic test was used to estimate maximum aerobic capacity[5].

III. METHODOLOGY

1.1. Design:

In this experiment group of students are taken whose height is in between 15 to 18 and then the testing begins. Used for the principle of the lessons 30 students from different schools of Moradabad district of Uttar Pradesh was preferred when issue whose age was range from 15 to 18 years (Avg. 17.27 years). Among them 15 students those who have player at least interschool volleyball tournament was considered as volleyball players and those who have not played volleyball was considered as non-volleyball player.

1.2. Sample:

The different test sample is taken and studied. The study was taken to pinpoint the specific physical fitness variables only. Therefore, based on literacy proof and scholars own

comprehension the subsequent variables were selected for the purpose of this study (Table 1).

Table 1: *Different types of variables and their procedure of measurement*

Sl no	Name of the Variable	Tool for Measurement	Unit
1	Abdominal Strength	Sit up test	Complete number of sit ups in a minute
2	Leg explosive strength	Standing broad jump test	Nearest 0.05 meter.

1.3. Instrument:

In order to find the level of explosive power and abdominal strength of volleyball specialization and non-specialization group data were outlined by illustrativestatistics independents'' test was utilized discovertheoutstandingcontrastbetween volleyball player andnon-volleyball playergathering. Hugenesslevelissetat0.05 level of connotation[6].

testing system and patterns we found that the player who plays volleyball has good strength and fitness .all the data is collected the study and then only we got the result of fitness of non volleyball player is quite low as compare to the players who play volleyball.

Their mental stability is high and presence of mind is good as compare to the other non volleyball players. They put great effort in the work and response time is high they are actively responding commands and task.

1.4. Data Collection & Analysis:

By collecting all the data of individual students and testing them simultaneously by different

IV. RESULTS AND DISCUSSION

Table 2: *Comparison of leg explosive power between volleyball specialization and nonspecialization group*

Group	Sample Size	Mean	Std. Deviation	cal. t- value	tab. t- value
Volleyball players	15	2.64	0.15	5.68*	1.701
Non-volleyball players	15	2.23	0.26		

*Significant at 0.05 level of confidence.

It is clear starting the Table 2 with the purpose of the mean value of volleyball group is2.64 and non-volleyball group is 2.23.Whereas standard deviation of volleyballgroupis0.15andnon-volleyballgroupis0.26.While the deliberate t-value (5.68) is more than the tabulated t value [1.071] that means significance difference exists between volleyball and non-volleyball group on leg explosive power. Figure 1 discloses the Mean and std. dev. Of leg

explosive strength of volleyball and non-volleyball players

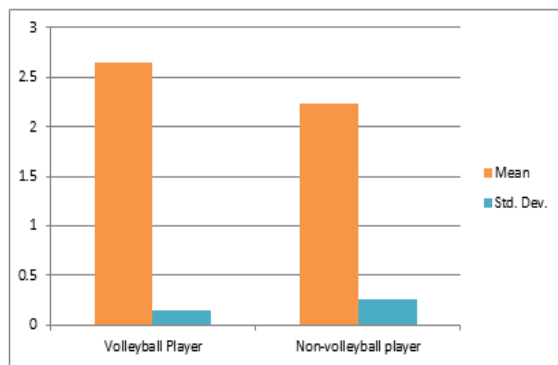


Figure 1: Mean and std. dev. Of leg explosive strength of volleyball and non-volleyball players

Table 3: Comparison of abdominal strength between volleyball and non-volleyball players

Group	Sample Size	Mean	Std.Deviation	cal. t-value	tab. t-value
Volleyball Players	15	57.85	10.97	8.44*	1.701
Non volleyball Players	15	34.92	08.42		

Evidence from Table 3 with the purpose of the mean value of volleyball group is 57.85 and non volleyball group is 34.92. Whereas standard deviation of volleyball group is 10.97 and non-volleyball group is 08.42. While the deliberate t-value (8.44) is more than the tabulate t-value [1.701] that means significance difference exists between volleyball and non volley ball group on abdominal strength[7]. Figure 2 discloses the Mean and standard deviation of Volleyball and non-volleyball players

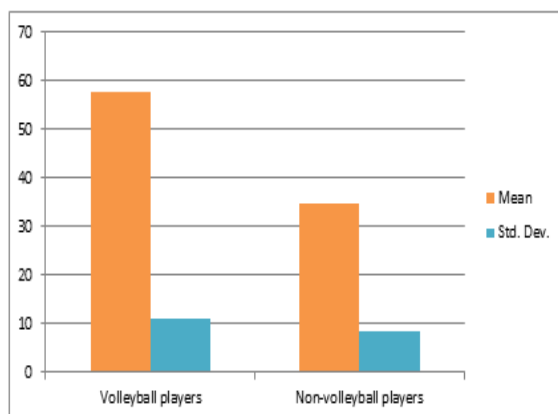


Figure 2: Mean and standard deviation of Volleyball and non-volleyball players

Function to cram a measure up to the selected specific objective vigor linking volleyball player's furthermore non volleyball groups. For the purpose of the study leg explosive power and abdominal strength were selected as physical fitness components. For and 30 male non volleyball players belected as a sample.

The grow old of subjectbe ranging beginning 15-18 years. To achievethe solution of the problem two objectives were formed:

The leg explosive power and abdominal strength selected as dependent variables and volleyball players and non volleyball player for male group were taken as independent variables. Leg explosive power of the subject is measured by standing broad jump test and the scores were record in numbers[8].

Descriptive statistics were used to interpret the results of the study. T-test was used to compare the level of unstable command and abdominal strength stuck among volleyball in addition to non-volleyball dramatis personae for male group. Their overwhelming numbers of vibe categorization research have sought to minimize the difference in distribution between of input and output variables. However, this is a challenging job since most methods suffer from a domain dependence issue, and their effectiveness suffers when the source and target domains have different feature-space distributions. One such paper has been gratefully acknowledged in a future edition of the whole conference, but it is still being edited. Before the final publishing, the subject matter may evolve. Furthermore, cross-domain methods perform poorly when the classifier data are very different[9].

The body of research on text categorization still uses knn classifier, which regrettably does not

provide findings that are useful. When cross domain studying does not require human effort, there is always an over-reliance on domain similarity seen between source and destination domains. As a result, increasing the efficacy of feeling classifiers necessitates the use of new feature models and methods, more testing, and research into the possibilities of various combination or svm classifiers. It's also very necessary to create techniques that account for the issues of showcase deviations and polarization disagreement[10].

V. CONCLUSION

From the above study it may be concluded that volley ballplayers for male group had better leg explosive power in comparison to non-volleyball for male group and volleyball players group had better abdominal strength in comparison to non-volleyball group. Upon this element taxi stroll (dexterity, a quantifiable feature of either the fitness and health scale), the was discovered that there must be a substantial significant different comparing sporting events but also people. In comparison to non-sportspeople, who might have been proven to have a normal force, sportspeople had been discovered to have an agile physique, excellent coordination skills, and versatility.

It's was discovered these on the attribute 30 Garden Jump quiz (Speed, a quantifiable feature of fitness scale), there may be a substantial difference of activities as well as people. Sportspeople have always been discovered to be faster than their non-sporting peers. Marathoners have been discovered to be common among athletes. Non-sportspeople, and from the other arm, suffer shortness and now a first wind owing to a lack of technique and movement. Upon this feature of either the Drive exercise (strength, a quantifiable dimension of aerobic endurance scale), it was discovered that there can be a substantial mean difference between Sporting activities and Non-Sports people.

Sportspeople had been discovered to have a muscular physique. Their shoulder strength was determined to be excellent in their upper body. Non-sports people, on the other hand, found

observed to want a weakened upper body. It was discovered that on the variable of the Modified Sit and Reach test (flexibility, a quantifiable component of physical fitness scale), there is a substantial mean difference between Sports and Non-Sports people. Sportspeople were discovered to have a flexible physique. Non-sportspeople, and from the other arm, have tight muscles throughout their bodies.

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