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Physical Fitness Status of Female College Athletes

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Abstract

The purpose of the study was to measure the physical fitness status of the college female athletes through the administration of standardized tests of physical fitness as speed, strength, agility, endurance and explosive power etc. It was hypothesized that collegiate women athletes had low fitness level. The study was conducted on (single group design basis in) 100 female athletes of 17.5 age having some level of sports achievement (inter college, intervarsity or state participation) drawn from local colleges of Patiala. Physical fitness was assessed through the administration of AAHPER youth fitness test. The total fitness standard of sample was calculated by converting the raw scores into standard scores ('t' scores). It was concluded that female collage athletes are 'not highly fit' individuals. They are below average in arm and shoulder strength, abdominal strength, agility and endurance but just average in explosive power and speed.

Keywords: Physical Fitness, speed, strength, agility, endurance and explosive power.

Introduction

Physical fitness is central to all objectives of physical education. It is an essential for reconstruction and enjoyment of life. The movement like "Fitness for all and sports for all" are formed the basis of community building that is directive for fitness awareness among the people. Everyone agrees that physical fitness is a basic necessity without which one cannot perform or carry out assigned task comfortably. There have been innumerable physical fitness test batteries developed abroad especially, in the United States. In India too there have been two national attempts to develop such batteries, Physical fitness includes speed, flexibility, rhythm, power, strength, coordination, muscular endurance, cardiovascular endurance, agility etcetera. These characters are all equated with the healthy functioning of the body. Another important part of physical fitness in the athletic powers. The various aspects of physical fitness and the skill are interrelated[1].

Physical fitness plays a very important role in an normal individual as well as in an individual who is there participating in some kind of sports events. There are different kinds of sports and games which are performed all over world some are related to each other but some are entirely different. So to perform their different kind of sports event physical fitness is an essential component which should be possessed by a player, individual has lacked his physical fitness due many new inventions and now is totally dependent upon various machines for his daily works, yes its true that it saves times but at last these has some sort of adverse effects on physical fitness and wellbeing of an individual. To improve physical fitness of an player training plays a very important role, as the techniques which are given in training to a player improves the players performance give positive effects to his performance in events. The ability of a sportsmen to bear things play a vital role in his performance[2].

Physical fitness, as one aspect of total fitness, is a means for development of individual personality as a whole. Physical fitness includes adequate degrees of health, posture, physique, proper functioning of vital organs, nutrition, and good health habits, along with an adequate amount of endurance, strength, stamina, and flexibility[3].

Organic fitness is a pre-requisite not only for healthful living but also for "Struggle for existence." Man has to be totally fit, because his mental soundness and his adjustment in social milieu (Set up) depends upon how physically fit he is.

Total fitness is that which characterized the degree to which the person is able to function. Fitness is an individual matter. It implies the ability of each person 'to live most and serve best'. Ability to function depends upon the physical, mental, emotional, social and spiritual components of fitness all of which are mutually interdependent.

Plato, who talked of 'Sound mind in Sound body', also pointed out that 'one who exercises his limbs, should be intelligent individual. The weak, the unhealthy and the unplayful, cannot be as intelligent as the physically fit person.

Ray[4] opines "fitness is a dynamic process of health and functional efficiency but conversely is decreased and degenerated quite rapidly by neglecting of its day-to-day application." Nothing is lost as quickly as fitness if it is not maintained regularity and constantly.

Wellman[5] pointed out "All life functions depend on physical fitness and greater the physical fitness, the greater the potential life efficiency."

Physical fitness is the ability of a person's body to meet the demands placed upon it by his work, by his way of life and by the necessity to meet emergency situation[6].

Fitness is one of the basic elements which are essential for better performance. The players must need be on 'Top' physical condition.

High level of physical fitness is most important for high level of efficiency in techniques and tactics in most of the sports[7]. That is why the physical fitness level of the players is of very high standard so that they should give their best performance.

Every vigorous game or spot requires certain qualities to physical fitness to be developed in every athlete on priority basis. In general these qualities are speed, the ability to run, move, walk or run faster. Agility, the ability to change direction in the air, and on the ground. Flexibility, the range of movement determined by the joints of the body. Strength, the ability of muscles to pull, push and squeeze or press. Endurance, the ability of the cardio-vascular system to keep the activity going on for a longer duration of time etc. During the course of one's training in sports these qualities are developed depending upon physical constitution of an individual.

All the basic components of physical fitness are extremely necessary in all the sports events, however, each sports event is basically dominated by one component or the other[8]. For example boxing needs a sudden explosion of energy in muscles and quick reaction time but at the same time it also requires a long period of endurance training. Similarly basketball may be learnt by everyone only those become most successful who have tall body build, have agility to dodge the opponent and have better of physical fitness. In jumping for distance or height, the athlete basically needs explosive energy in his muscles in other words strength, but at the same time he also needs speed and agility to combine all the three in correct proportion so as to show good results in performance. However, the explosive energy which the jumper needs to jump is fundamentally different from the strength a Boxer requires to fight a bout. Each sports event is dominated by one or the other component of physical fitness which is either hereditary or is developed when good environment is provided to the athlete.

Apart from a good genetic make-up, balanced diet, clean environment and physical exercise are the most important factors in keeping an individual physical healthy and mentally alert. In modern age, more and more emphasis has been laid on the nature of 'fitness' not only in terms of general health but more particularly of the special requirements for competitive sports and certain highly specialized and demanding occupations. The achievement and maintenance of high standards of fitness produce a remarkable effect on the human mechanism, Supreme fitness is artificial in the sense that it is not inherent in an individual but it is cultivated.

Physical fitness is considered as the fitness of the body but in the modern concept physical fitness means fitness of both body and mind[9]. Due to body mind relationship physical fitness is viewed as 'the capacity to function in every way at one's best.'

Purpose of the Study: The purpose of the study was to measure the physical fitness status of the college female athletes through the administration of standardized tests of physical fitness as speed, strength, agility, endurance and explosive power etc.

The physical educators can easily distinguish which of their pupils have more of one factor of physical fitness than others. This study might enable an athlete to adopt specialized sports such as football, volleyball, hockey, wrestling, kabaddi, weight lifting, tennis, basketball track and field events etc. depending upon the fact as to which factor is more exaggerated in an individual.

Hypothesis

Collegiate women athletes had low fitness level.

Procedure: The study was conducted on single group design basis on 100 female athletes of average age of 17.5 years having some level of sports achievement as inter college, intervarsity or state participation. The subjects were taken from local colleges of Patiala.

Physical fitness was assessed through the administration of AAHPER youth fitness test which comprises of six sub tests of fitness measuring arm and shoulder strength, abdominal strength, agility, power, speed and endurance were give to the subjects in two parts. During the first period the flexed arm hang for girls, to measure endurance (60 sec.); Broad jump to measure power (feet & inches) shuttle run, to measure speed and agility (Time in seconds) were administered. During second period the sit ups, for measuring abdominal strength, 50-yeard dash to measure speed and 600-yard run-walk to measure endurance.

The data was statistically treated, analyzed and interpreted in accordance with purpose of the study, mean, standard deviation, percentile were calculated to draw results.

Results and conclusions

The results of physical fitness test given to the sample are detailed in table-1

Table-1
Physical Fitness Test

S. No.	Component	Mean	SD	25th percentile (norm)	50th percentile (norm)	75th percentile (norm)
1.	Fixed arm hang for (girls)	6.51	5.18	2.77 (3.0)	5.28 (8.0)	8.94 (17.0)
2.	Sit ups	26.7	8.49	20.54 (25.0)	26.5 (30.0)	33.33 (35.0)
3.	Shuttle run	12.92	0.96	14.21 (11.9)	12.71 (11.1)	12.29 (10.4)
4.	Standing broad jump	5.02	6.6	4'10" (4'11")	5'5.5" (5'5")	5'9" (6.0")
5.	50-yard dash	8.02	0.60	8.45 (8.4)	8.14 (7.9)	7.54 (7.4)
6.	600-yard run-walk	2:93	0:54	3:06 (3:2)	3:06 (2:41)	2:42 (2:24)
	Total physical fitness	300.0	30.71	275.65	300.97	320.75

It is clear from the results that the sample involved in the study is just average in explosive power and speed but much below average in arm strength and shoulder strength, abdominal strength, agility and endurance.

Conclusion

Within the limitations of the study, it might be concluded that female collage athletes are 'not highly fit' individuals. They are below average in arm and shoulder strength, abdominal strength, agility and endurance but just average in explosive power and speed.

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