

## VALIDATION OF OBSTACLE COURSE TEST AS A MEASURE OF PHYSICAL FITNESS (Received on: 12 July 2013, Reviewed on: 16 Aug 2013 and Accepted on: 19 September 2013)

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### Abstract

The purpose of the study was to investigate the relationship of Obstacle Test and AAHPERD Youth Fitness Test. Total 73 students ( B.P.E. 1<sup>st</sup> year) of Lakshmbai National Institute of Physical Education, Gwalior were taken as subject for the purpose of the study in session 2005-06. The chronological age of subjects was between 19 and 21 years. The criterion variable was assessment of fitness testing programme of obstacle course by using AAHPERD Youth fitness test. Product Moment co-relation was computed for find out the relationship of Obstacle Course and AAHPERD Youth Fitness Test. After conducting the testing programme between Obstacle Course and AAPHERD Youth fitness Test significant relationship was found for both the male and female group.

**Keywords:** Obstacle Test and AAHPERD Youth Fitness Test.

### Introduction

The promotion of health and physical fitness in youth is an objective of many agencies, institutions and organizations. One of the main objective of physical activities is to improve physical fitness in people which is a multi-dimensional concept. The characteristics of physical fitness are composed of many factors like strength, endurance, speed, flexibility, balance, agility, cardio respiratory etc. which can be measurable and changeable. Sports and games provide every individual with healthy physical exercise and therefore help them to be physically fit. Some sports develop strength, some develop endurance, some flexibility, some other eye-hand co-ordination and many sports entail a combination of several fitness parameters. A component of fitness testing programme is much more than just performing a movement or practicing any game. Different organizations and people have prepared some tests for measuring physical fitness. Specific tests measure individual specific fitness, similarly general fitness can be measured or judged through basic and over-all component covering programmes which can be achieved through regular exercising and practice. AAHPERD society (American, Alliance for Health, Physical Education, Recreation and Dance) has

introduced six tests for physical fitness, they are as follows:

- ◆ 50 yard dash for the measurement of speed
- ◆ 600 yard race for the measurement of cardio-respiratory system
- ◆ 4×9 meter race for the measurement of agility
- ◆ Standing long jump for the measurement of muscles power
- ◆ Sit - ups for the measurement of the endurance of abdomen muscles and
- ◆ Pull - ups for the measurement of the endurance of shoulder's muscles.
- ◆ Similarly Obstacle Course is a series of challenging physical obstacles for individual. Obstacle course consists of endures through running, jumping, climbing, ditch jumping, hurdle clearing, forward role, and push ups followed by sprint with the aim of testing component of physical fitness.

### Methodology

Seventy-three students were taken out of which fifty-three male and twenty female students of B.P.E. 1<sup>st</sup> year of Lakshmbai National Institute of Physical Education, Gwalior served as the subjects for the study. The procedure for selection of the subjects was based on purposive sampling technique. The chronological average age of the subjects was 20 year. In order to test the hypothesis of the study the criterion variables selected for the study was valuation of fitness test of obstacle course by comparing with standard of AAPHERD Youth fitness test. Prior to the collection of data, a meeting of the subject and assisting officials for collecting the data was called one day prior to the start of fitness test in the Track and Field ground of the Lakshmbai National Institute of Physical Education to briefly explain the significance of the proposed research project. On the first day of testing only obstacle course test has been taken by researcher and his team and after three days AAFERED Youth fitness test score has been gathered with the help of same assisting officials. In order to avoid tiredness, tests of pull - ups, 4×9 meter and sit-ups, were done in the morning and tests of 50 yard, standing long jump and 600 yard in the afternoon. Tests were given in the gymnasium and outdoors (Track

and Field ground). The AAHPERD Youth fitness test were as follows: (a) pull-up (with flexed-arm hang for girls) (b) flexed leg sit-up (c) shuttle run (d) standing broad jump and (e) 600-yard run-walk. To calculate the validation of obstacle course and AAHPERD Youth Fitness Test, Product Moment co-relation was computed. Level of significance was set at 0.05.

## Results and Findings

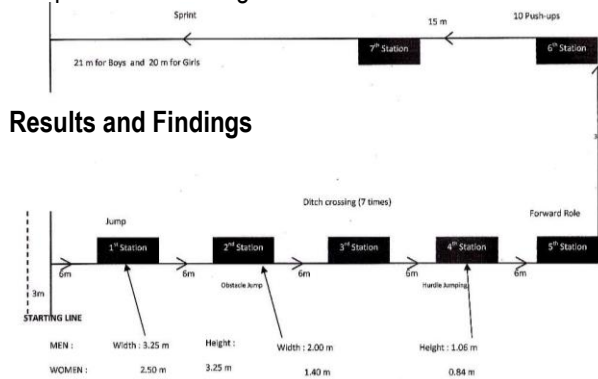


Figure 1: Physical Fitness Test (Obstacle Course)

Table No. 1  
RELIABILITY OF OBSTACLE TEST

Gender	Correlation Co-efficient
Male	0.89
Female	0.91

Table No. 2  
RELIABILITY OF AAHPERD YOUTH FITNESS TEST

S. No.	Test Items	Correlation Coefficient	
		Male	Female
1.	50 Mts Run	0.85	0.93
2.	Pull-ups for Boys / Flexed arm hang for Girls	0.87	0.79
3.	Bend Knees Sit-ups	0.86	0.90
4.	4 x 10 Mts Shuttle Run	0.84	0.86
5.	600 Yard Run / Walk	0.80	0.87
6.	Standing Broad Jump	0.97	0.96

Table No. 3  
RELATIONSHIP OF OBSTACLE COURSE WITH AAHPERD YOUTH FITNESS TEST

S. No.	Variables Correlated	Coefficient of Correlation
1.	Composite score of obstacle test and AAHPERD Test item of Boys	0.331
2.	Composite score of obstacle test and AAHPERD Test item of Girls	0.451

\*Significant at 0.05 level at 38 df= .325      18 df= .444

The above table reveals that there is a significant relationship existing in-between the Obstacle Test and AAHPERD Youth Fitness Test in relation to male. Similarly, the above table reveals that there is a significant relationship existing in-between the Obstacle Test and AAHPERD Youth Fitness Test in relation to female. It was hypothesized that there may be significant relationship between Obstacle Test and AAHPERD Youth Fitness Test. So keeping in view the limitation of the present study, the hypothesis was accepted.

## Discussion on Findings

The result says that there is a significant relationship between AAHPERD Youth Fitness Test and Obstacle Course Test for both Male and female groups. As AAHPERD Youth Fitness Test require more expenses in the form of Officials and time in comparison with Obstacle Course test so the cases in which require day-to-day result regarding fitness of individual, Obstacle Course Test is the best amongst the two. Thereby, the test (Obstacle Course Test) developed by LNIPE for the Fitness measurement of all the students is found to be the best tool.

## Conclusion

On the basis of the findings of the study, the following conclusions were drawn:

The Obstacle Test for boys adopted at L.N.I.P.E., Gwalior for entrance test was found to be insignificant as a measure of physical fitness level as compare to AAHPERD. It was found that there was significant relationship between Obstacle Test and AAHPERD Youth Fitness Test.

The obstacle test for girls adopted at L.N.I.P.E., Gwalior for entrance test was also found to be significant as a measure of physical fitness level. It was also found that there was significant relationship between Obstacle Test and AAHPERD Youth Fitness Test.

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