A Normative Study on Aahper Youth Fitness Test Items for Boys of Government Senior Secondary Schools of U.P.

Dr. K. M. Valsaraj

Associate Professor & Head, Department Of Physical Education, LCC Lucknow

Abstract – Today, we live in an automated society. Most of the activities that used to require strenuous physical exertion can be accomplished by machines with the simple pull of handle or push of a button. The groceries do not even have to be carried out any more. A store employee willingly takes them out in a cart and places them in the vehicle. During a visit to a multi-level shopping mall, nearly everyone chooses to ride the escalators instead of taking the stairs. Automobiles, elevators, escalators, mobile phones, intercoms, remote controls, electric garage door openers-all are part and parcel of modern-day life that minimizes the amount of movement and effort required for the human body.

We do not have any local parameter of fitness evaluation for young students at school level, especially in government sector. It makes physical education professionals handicap, when it comes to selection of teams and conducting training programms. Keeping this in view the investigator planned this study for that1596 boys studying in XI and XII standard in government senior secondary schools of Lucknow region were selected randomly as subjects. The age of the subjects were ranged between 16-18 years.The investigator has chosen AAHPER Youth Physical Fitness Test Battery for the present study. The test battery includes the 6 items:- 1) Chin ups/Flexed Arm Hang., (2) Bend Knee Sit ups, (3) Shuttle Run (4) Standing Broad Jump, (5) 50mt dash, (6) 600mt run/walk. For preparing hull scale the mean and standard deviation for different test items of AAHPER Youth Physical Fitness Test was calculated and the hull scale was constructed by locating its zero point 3.5 standard deviation below the mean and its 100th point 3.5 above the mean, distributing scores uniformly between the expressed decile values in the test items in which scores are recorded in normal values.

Key words:- Physical Fitness, Endurance, Flexibility, Agility, Speed and strength.

INTRODUCTION

One of the most significant effects of modern-day technology has been an increase in chronic diseases related to lack of physical activity. These include hypertension (high blood pressure), heart disease, chronic low-back pain, obesity and so forth. They sometimes are referred to as hypo kinetic diseases. ("Hypo" means low or little, and "Kinetic" implies motion.) Lack of physical activity is a gift of modern life. If we want to enjoy contemporary commodities and still expect to live life to its fullest, a personalized lifetime exercise program must become a integral part of our daily lives.

Sound physical fitness gives the individual a level of independence throughout life that many people no longer enjoy. Older people should be able to carry out activities similar to those they conducted in their youth, though not with the same intensity. Although a person does not necessarily to be an elite athlete, however, average fitness level is required to carry out activities such as changing attire comfortably, chopping wood, climbing several flights of stairs, playing a game of basketball, mountain biking, playing football with grandchildren, walking few miles around a lake, and hiking through a park.

A primary objective of overall physical fitness and enhanced quality of life is to attain recommended body composition. Individuals at recommended body weight are able to participate in wide variety of moderate to vigorous activities without functional limitations. These

people have the freedom to enjoy most of life's recreational activities and reach their fullest potential. Excessive body weight does not afford an individual the fitness level to enjoy vigorous life time activities such as basketball, soccer, racquetball, surfing, mountain cycling, and mountain climbing. Maintaining high fitness and recommended body weight person a degree of independence throughout life that the majority of people in a developed nation no longer enjoy.

Physical fitness also contributes to cognitive performance. This trend in healthy older adults has repeatedly been demonstrated. Animal studies, however, have revealed differential relationships between physical and motor fitness and brain metabolism. We therefore investigated whether for older humans' different dimensions of fitness are differentially associated with cognitive performance and brain activation patterns. Seventy-two participants (mean age 68.99 years, SD = 3.66; 52 females) completed four psychometric tests reflecting two primary abilities of higher cognitive functioning (executive control, perceptual speed) and a battery of fitness tests comprising two fitness dimensions (physical and motor fitness). We found that not only physical fitness indexed by cardiovascular fitness and muscular strength, but also motor fitness including movement speed, balance, motor coordination and flexibility showed a strong association with cognitive functioning. Additionally, functional brain imaging data revealed that physical and motor fitness were differentially related to cognitive processes. Results are discussed with regard to the compensation hypothesis and potential consequences for intervention work.

Physical fitness is very important for the persons of all the sections of the society. Productivity is directly related to human efficiency and human efficiency depends upon physical proficiency attained through adequate laws of physical fitness. Similarly a person who engages in sports as a profession must possess higher levels of physical fitness. Further physical fitness is also essential for everyone to live a happy and long life, thereby, emphasizing the individual values attached to being physically fit.

During the last three decades, the benefits of physical activity have been substantiated by scientific evidence linking increased physical activity and positive life style habits to better health and improved quality of life. Even though some people live long because of favorable genetic factors, the quality of life during middle age and the "golden years" is more often related to wise choices initiated during childhood and young age and continued throughout life. Keeping this in view the investigator planned this study to prepare Physical fitness norms for boys of Government senior secondary schools of Lucknow region.

STATEMENT OF THE PROBLEM

A Normative Study on AAHPER Youth Fitness Test Items for Boys of Government Senior Secondary Schools of Lucknow (U.P.)

PROCEDURE AND METHODOLOGY:-

For the purpose of this study, 1596 boys studying in XI and XII standard in government senior secondary schools of Lucknow region were selected randomly as subjects for the study. The age of the subjects were ranged between 16-18 years. As precautionary measures, it was ensured that the students willing to take part in various test items are not suffering from any physical ailment, were medically examined by the health personnel of the respective schools.

SELECTION OF TEST/TEST ITEMS

Keeping in view the economic, the technical, the time, the equipment and the facility feasibilities, the investigator has chosen AAHPER Youth Physical Fitness Test Battery for the present study. The test battery includes the following items:

1) Chin ups/Flexed Arm Hang., (2) Bend Knee Sit ups, (3) Shuttle Run (4) Standing Broad Jump, (5) 50mt dash, (6) 600mt run/walk.

MEASUREMENT OF VARIABLES

The following variables were measured with the help of AAHPER Youth Fitness Test:

1. Arm strength
2. Abdominal strength
3. Agility
4. Lower Body Strength
5. Speed
6. Endurance

ADMINISTRATION OF TEST/ TEST ITEMS

The Investigator explained the tests and testing procedures to all the assistants and all the items will then be demonstrated to them. Later on the assistants

were given sufficient practice to conduct the test items. Further, to maintain uniformity in diurnal changes, all the test items were conducted in the morning hours from 7.30Am to 9.30Am. The subjects were directed to be in playing kit, i.e. vests and shorts.

RESULTS AND DISCUSSION:

The statistical analysis of data on performance of subjects on different items of AAHPER Youth Physical Fitness Test Battery collected on 1596 male students of Government Senior Secondary School of Lucknow deals with the formulation of Norms on AAHPER Youth Fitness Test Items on boys of Government Senior Secondary Schools of Lucknow region as follows -

AAHPER Youth Fitness Test Norms for Boys

Hull Scale for Physical Fitness of Senior Secondary School Boys

For preparing hull scale the mean and standard deviation for different test items of AAHPER Youth Physical Fitness Test was calculated and the hull scale was constructed by locating its zero point 3.5 standard deviation below the mean and its 100th point 3.5 above the mean, distributing scores uniformly between the expressed decile values in the test items in which scores are recorded in normal values. The items in which scores are recorded in time; Hull-Scale was constructed by locating zero point 3.5 standard deviation above the mean and its 100th point 3.5 above the mean, distributing scores uniformly between the expressed decile value. The hull-scale thus constructed for Government Senior Secondary School Boys for different test items of AAHPER Youth Physical Fitness Test along with their mean and standard deviation have been presented in table 1 to table 6

Table 1

Hull-Scale of pull ups for boys

MEAN =7.86

SD=1.50

Decile Value = 1.05

7 sigma position	Calculation	7 sigma position
100	11.89 + 1.05 = 12.94	0
90	10.84 + 1.05 = 11.89	10
80	9.79 + 1.05 = 10.84	20
70	8.74 + 1.05 = 9.79	30
60	7.86 + 1.05 = 8.74	40
50	7.86	50
40	7.86 – 1.05 = 6.64	60
30	6.04 – 1.05 = 5.59	70
20	5.59 – 1.05 = 4.54	80
10	4.54 -1.05 = 3.49	90
0	3.49 – 1.05 = 2.44	100

Table 2

Hull-Scale of sit ups for boys

MEAN=31.73

SD=8.23

Decile Value = 5.76

7 sigma position	Calculation	7 sigma position
100	54.77 + 5.76 = 60.53	0
90	49.01 + 5.76 = 54.77	10
80	43.25 + 5.76 = 49.01	20
70	37.49 + 5.76 = 43.25	30
60	31.73 + 5.76 = 37.49	40
50	31.73	50
40	31.73 – 5.76 = 25.97	60
30	25.97 – 5.76 = 20.21	70
20	20.21 – 5.76 = 14.45	80
10	14.45 – 5.76 = 8.69	90
0	8.69 - 5.76 = 2.93	100

Table 3

Hull-Scale of shuttle run for boys

MEAN=11.49

SD=1.47

Decile Value = 1.02

7 sigma position	Calculation	7 sigma position
0	7.41 -1.02 = 6.39	100
10	8.43 – 1.02 = 7.41	90
20	9.45 – 1.02 = 8.43	80
30	10.47 - 1.02 = 9.45	70
40	11.49 – 1.02 = 10.47	60
50	11.49	50
60	11.49 + 1.02 = 12.51	40
70	12.51 + 1.02 = 13.53	30
80	13.53 + 1.02 = 14.55	20
90	14.55 + 1.02 = 15.57	10
100	15.57 + 1.02 = 16.59	0

Table 4

Hull-Scale of standing broad jump boys

MEAN=1.74

SD=.26

Decile Value = 0.18

7 sigma position	Calculation	7 sigma position
100	2.46 + 0.18 = 2.64	0
90	2.28 + 0.18 = 2.46	10
80	2.10 + 0.18 = 2.28	20
70	1.92 + 0.18 = 2.10	30
60	1.74 + 0.18 = 1.92	40
50	1.74	50
40	1.74 - 0.18 = 1.56	60
30	1.56 – 0.18 = 1.38	70
20	1.38 – 0.18 = 1.20	80
10	1.20 – 0.18 = 1.02	90
0	1.02 – 0.18 = 0.84	100

Table 5

Hull-Scale of 50 metre dash for boys

MEAN=8.37

SD=1.23

Decile Value = 0.86

7 sigma position	Calculation	7 sigma position
0	4.93 – 0.86 = 4.07	100
10	5.79 – 0.86 = 4.93	90
20	6.65 – 0.86 = 5.79	80
30	7.51 – 0.86 = 6.65	70
40	8.37 - 0.86 = 7.51	60
50	8.37	50
60	8.37 + 0.86 = 9.23	40
70	9.23 + 0.86 = 10.09	30
80	10.09 +0 .86 = 10.95	20
90	10.95 + 0.86 = 11.81	10
100	11.81 + 0.86 = 12.67	0

Table 6

Hull-Scale of 600 metre for boys

Mean=2.00

SD=0.57

Decile Value = 0.39

7 sigma position	Calculation	7 sigma position
0	0.44 – 0.39 = .05	100
10	0.83 – 0.39 = 0.44	90
20	1.22 – 0.39 = .83	80
30	1.61 - 0.39 = 1.22	70
40	2.39 – 0.39 = 1.61	60
50	2.00	50
60	2 + 0.39 = 2.39	40
70	2.39 + 0.39 = 2.78	30
80	2.78 + 0.39 = 3.17	20
90	3.17 + 0.39 = 3.56	10
100	3.56 + 0.39 = 3.95	0

CONCLUSIONS:-

The analysis of data indicate that Hull-Scale was chosen for preparing norms for AAHPER Youth Physical Fitness Test for boys Government Senior Secondary Schools of Lucknow region because it is a compromise between 6-sigma scale and T-scale and it is standard scale which can be used for the same group as it covers the whole population.

It is suggested that the norms prepared in this study may be adopted by the schools authorities of Government Senior Secondary Schools of Lucknow region to evaluate the status of physical fitness of their students. Which could be utilised for selection of different teams.

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