



An Investigation on the Correlation among Different Elements of AAHPERD Youth Physical Fitness Test

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Abstract

The fitness of an individual, a society, a civilization and a government is very important in the life of the Nation. If a Nation is to remain strong physically, mentally, spiritually, and socially, education for Physical Fitness must be undertaken. It is self-evident that the fit citizens are nation's best assets and weak ones are liabilities. The wealth of the nation resides in the health and vitality of its people. One of the main objectives of physical activities is to improve physical fitness in people. Different organizations and people have prepared some tests for physical fitness. With the assistance and help of the experts in the field of Physical Fitness, Physical Education, Sports and previous researches on these areas a comprehensive and suitable AAHPERD Physical Fitness Test was select for the study. The aim of this study is to investigate the correlation among the six- items in AAHPERD Physical Fitness Test. The procedure of this study has been semi-experimental and the tests have been carried out in almost equal conditions. The subjects of this statistical research were 480 male college students were randomly selected from twenty one academic colleges of Hemchandracharya North Gujarat University. Statistical method for data analysis is with respect to the type of study and the scales for it. In this research study, pearson's correlation coefficient was used for the investigation of correlation among six physical fitness tests by use of SPSS Software. Then based on the use of SPSS Software, significant and no significant were considered with the ($p < \%5$).

Keywords: Elements, correlation, components, AAHPERD Youth Physical Fitness Test.

Introduction

In the present pushbutton era most of the adolescent are not participating in leisure activities and concentrate are on studies. Regular physical activity would be important for life's quality even if it had no relationship to disease and longevity. Physical activity is a significant ingredient in the quality of life, because it increases energy and promotes, physical and mental well being in addition to conferring health benefits.

Children are the future of a nation. For an emerging and developing country like India, development of underprivileged children holds the key to the progress of the nation itself. Education for underprivileged Children is the key whether we are addressing healthcare, poverty, population control, unemployment or human rights issues. Youth is an integral part of democratic society and future asset of Mankind. It is universally recognized that Sport is an effective way for channelizing the energies of Youth for productive and meaningful purposes. Fitness has proved as a powerful but highly undervalued and under exploited tool for promoting solidarity and in contributing to an atmosphere of tolerance and understanding to the special population as an undefined part of the society.

Thomas Kirt Cureton, Jr.¹ said, "Over the years, I have come to look upon Physical Fitness as a trunk of a tree that supports the

many branches which represent all the activities and make life worth living: intellectual life, spiritual life, occupation, love life and social activities".

Physical Fitness is one's richest possession; it can't be purchased but can be earned through a daily routine of physical exercise. If we view in the field of physical education, physical fitness plays a major role. The sportsman who doesn't have optimum level of physical fitness cannot face the competition successfully. Different philosophers and sports scientists have expressed their views regarding the importance of physical fitness in human life. Shree Ramakrishna said, "Who is soft and weak minded like the puffed rice soaked in milk, is good for nothing; he cannot achieve great success. But strong and vivid one is heroic. He is the accomplisher of everything in life".

Good health is the barometer of a person's well being. It comes from the inner balance of the body, mind, and spirit. Our body is our valued possession and good health is our prime asset. Physical education and sports sciences have always been for promotion and improvement of health and physical fitness through muscular activities. Enthusiasm for sports and physical fitness is growing in our country. The governments, and some voluntary sports organizations, are adopting various measures to make people aware of the importance of physical fitness.

The Greek philosopher and thinker, Aristotle² stated, “Body is the temple of the soul, and to reach harmony of body, mind and spirit, the body must be physically fit”.

Williams³ said, “Physical Fitness is essential not only in terms of general health but also special physical requirement for competitive sports and certain highly specialized and demanding occupation”. Uppal⁴ had given importance of physical fitness to the citizens of the nation. He stated, “It is self-evident that the fit citizens are nation’s best assets and weak ones are liabilities. It is therefore the responsibility of every country to promote physical fitness of its citizens as it is the basic requirement for most of the tasks to be undertaken by an individual in his daily life”.

The wealth of the nation resides in the health and vitality of its people. Every nation is becoming increasingly concerned about the physical fitness of its men, women, and children recognizing that physical fitness is fundamental and contributory to happy and useful living in any capacity⁵.

Adequate level of physical fitness should be developed early in life and then continuously maintained through regular participation in a well-designed activity programme to promote the total well being of an individual. Children should be fit for participation in the play activities of childhood, through which they develop organic vigour, strength and other fitness qualities⁶.

Physical Fitness is a positive and dynamic quality on a continuum from abundant life to death. It is related to the ability to meet the demands of the environment specifically to preserve, to withstand stress, to resist the fatigue and to possess the energy for an abundant life. Physical fitness is minimal in the seriously ill and is maximal in the highly conditioned person. While energy demands of daily tasks vary for individuals, some position between these minimal and maximal poles is satisfactory for most people. Since the individual is a totality, indivisible into discrete parts, physical fitness affects all phases of human existence. It is vital for the whole person to maintain neuromuscular, cardiovascular and other organic systems by improvement of physical fitness through exercises⁷.

Physical Fitness is like the trunk of a tree, which furnishes circulation and nutrition to the branches and permits the synthesis of usable type of energy, the various limbs and foliage are representatives of the many tasks of life which must be maintained effectively. Thus physical fitness is supportive of the whole man to permit his total array of functions on a higher level generally than in the unfit. Total fitness implies the complete long time functioning of intellectual, social, reproductive and occupational behaviors. The trend of fitness is opposite to those seen in physiological aging⁷.

One of the main objectives of physical activities is to improve physical fitness in people. The characteristics of physical fitness

are composed of eight factors, 1- strength 2-Endurance 3- speed 4-flexibility 5- Balance 6-power 7-agility 8- cardio - respiratory system (puyan Far, 1991)⁸.

Different organizations and people have prepared some tests for physical fitness. AAHPERD society (American, Alliance for Health, physical Education, Recreation and Dance) has introduced AAHPERD Physical Fitness Test, six tests for physical fitness, are as follows: i. 50 yard dash for the measurement of speed. ii. Standing long jump for the measurement of muscles power. iii. Shuttle run for the measurement of agility. iv. Sit - ups for the measurement of the endurance of abdomen muscles. v. Pull - ups for the measurement of the endurance of shoulder's muscles. vi. 600 yard race for the measurement of cardio-respiratory system.

The above test designers claim that there are no correlations among different materials of these tests. This points out that if there is a correlation between each pair, so there will be no need to use both tests, As far as we know, so far there has not been any reports on this claim, The researcher in this study is going to deliver an overall view of the subject and to investigate the correlation among different materials in pairs⁹.

Aims: The aim of this study is to investigate the coefficient of correlation among the six- elements of AAHPERD Youth Physical Fitness Test.

Hypothesis: If we want to examine the relationship among Physical Fitness components, such as 50 yard dash, Standing broad jump, Shuttle run, Sit-ups, Pull-ups and Distance run, the null and alternative hypotheses will be: H_0 : There is no correlation among Physical Fitness components. H_1 : There is correlation among Physical Fitness components.

Methodology

Procedure of the study: The procedure of this study has been semi experimental and the tests have been carried out in almost equal conditions.

Procedure and the way of data collection: In order to gather data for AAHPERD Youth Physical Fitness Tests have been carried out among the subjects. In order to avoid tiredness, tests of Pull - ups, Shuttle run and Standing broad jump, were done in the morning and tests of 50 yard dash, Sit - ups and 1.5 mile run in the afternoon.

Statistical sample: Subjects selected for this study were four hundred eighty male students from twenty one academic colleges of Hemchandracharya North Gujarat University at randomly. The average age of the subjects were twenty years, ranging from 19-23 years.

Statistical method for data analysis: With respect to the type of study and the scales for it, pearson's correlation coefficient was

used for the investigation of correlation among six physical fitness tests by the use of spss software. Then based on the use of SPSS Software, significant and no significant were considered with the ($p < \%5$).

Results and Discussion

There is a negative correlation between the 50 yard dash and Standing broad jump such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.347$ and sig. values is $.000$.

There is a positive correlation between the 50 yard dash and Shuttle run such a correlation with ($p < \% 1$) is significant, its prediction equation is 0.331 and sig. values is $.000$.

There is a negative correlation between the 50 yard dash and Sit-ups such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.307$ and sig. values is $.000$.

There is a negative correlation between the 50 yard dash and Pull-ups such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.264$ and sig. values is $.000$.

There is a positive correlation between the 50 yard dash and Distance run such a correlation with ($p < \% 1$) is significant, its prediction equation is 0.348 and sig. values is $.000$.

There is a negative correlation between the Standing broad jump and Shuttle run such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.196$ and sig. values is $.000$.

There is a negative correlation between the Standing broad jump and Sit-ups such a correlation with ($p < \% 1$) is not significant, its prediction equation is $-.016$ and sig. values is $.733$

There is a positive correlation between the Standing broad jump and Pull-ups such a correlation with ($p < \% 1$) is not significant, its prediction equation is 0.045 and sig. values is $.327$.

There is a negative correlation between the Standing broad jump and Distance run such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.193$ and sig. values is $.000$.

There is a negative correlation between the Shuttle run and Sit-ups such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.197$ and sig. values is $.000$.

There is a negative correlation between the Shuttle run and Pull-ups such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.301$ and sig. values is $.000$.

There is a positive correlation between the Shuttle run and Distance run such a correlation with ($p < \% 1$) is significant, its prediction equation is 0.196 and sig. values is $.000$.

There is a positive correlation between the Sit-ups and Pull-ups such a correlation with ($p < \% 1$) is significant, its prediction equation is 0.194 and sig. values is $.000$.

There is a negative correlation between the Sit-ups and Distance run such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.158$ and sig. values is $.000$.

There is a negative correlation between the Pull-ups and Distance run such a correlation with ($p < \% 1$) is significant, its prediction equation is $-.255$ and sig. values is $.000$.

Table
Pearson's correlation coefficient of Aahperd Youth Physical Fitness

		50 yard dash	Standing Broad jump	Shuttle run	Sit-ups	Pull-ups	Distance run
50 yard dash	Pearson Correlation	1	$-.347^{**}$	$.331^{**}$	$-.307^{**}$	$-.264^{**}$	$.348^{**}$
	Sig. (2-tailed)	.	$.000$	$.000$	$.000$	$.000$	$.000$
	N	480	480	480	480	480	480
Standing Broad jump	Pearson Correlation	$-.347^{**}$	1	$-.196^{**}$	$-.016$	$.045$	$-.193^{**}$
	Sig. (2-tailed)	$.000$	.	$.000$	$.733$	$.327$	$.000$
	N	480	480	480	480	480	480
Shuttle run	Pearson Correlation	$.331^{**}$	$-.196^{**}$	1	$-.197^{**}$	$-.301^{**}$	$.196^{**}$
	Sig. (2-tailed)	$.000$	$.000$	.	$.000$	$.000$	$.000$
	N	480	480	480	480	480	480
Sit-ups	Pearson Correlation	$-.307^{**}$	$-.016$	$-.197^{**}$	1	$.194^{**}$	$-.158^{**}$
	Sig. (2-tailed)	$.000$	$.733$	$.000$	.	$.000$	$.000$
	N	480	480	480	480	480	480
Pull-ups	Pearson Correlation	$-.264^{**}$	$.045$	$-.301^{**}$	$.194^{**}$	1	$-.255^{**}$
	Sig. (2-tailed)	$.000$	$.327$	$.000$	$.000$	.	$.000$
	N	480	480	480	480	480	480
Distance run	Pearson Correlation	$.348^{**}$	$-.193^{**}$	$.196^{**}$	$-.158^{**}$	$-.255^{**}$	1
	Sig. (2-tailed)	$.000$	$.000$	$.000$	$.000$	$.000$	.
	N	480	480	480	480	480	480

** Correlation is significant at the 0.01 level (2-tailed).

Conclusion

i. The positive correlation was found between the record of 50 yard dash and Shuttle run, 50 yard dash and Distance, Shuttle run and Distance run, Sit-ups and Pull-ups, such a correlation with ($p < .05$) is significant. ii. There was a negative correlation between the records of the 50 yard dash and Standing broad jump, 50 yard dash and Sit-ups, 50 yard dash and Pull-ups, Standing broad jump and Shuttle run, Standing broad jump and Distance run, Shuttle run and Sit-ups, Shuttle run and Pull-ups, Sit-ups and Distance run, Pull-ups and Distance run, such a correlation with ($p < .05$) is significant. iii. There is a positive correlation between the Standing broad jump and Pull-ups such a correlation with ($p < .05$) is not significant, its prediction equation is 0.045 and sig. values is $.327$. iv. There was a negative correlation between the records of Standing broad jump and Sit-ups, such a correlation with ($p < .05$) is not significant, its prediction equation is $-.016$ and sig. values is $.733$

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