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## Compare the AAHPERD functional fitness test of the urban and rural high school boys and girls

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### Abstract

This paper is highlighted on Functional fitness of Urban and Rural boys and girls. Physical fitness is oriented on an ability to perform physical work. Combat poses an infinite variety of physical tasks, many of which are foreseeable, some of which are not. This varied nature of physical requirements and the fact that some aspects defy predictability, place any preparation effort that is overly specialized at risk of irrelevance. Functional fitness is about linking fitness to real functions once more. It is designed to reflect movements and functions found in daily life sled pulling, wood chopping, and rope climbing and so on. I have heard people say, "What's the point of that? I'll never have any need to chop wood or pull a sled". But the great thing about functional fitness is that you use ordinary objects found around the home or the garage. You don't need expensive equipment or posh gyms to get fit.

**Keywords:** Body composition flexibility agility, coordination, muscular endurance, aerobic endurance

### Introduction

Physical fitness is oriented on an ability to perform physical work. Combat poses an infinite variety of physical tasks, many of which are foreseeable, some of which are not. This varied nature of physical requirements and the fact that some aspects defy predictability, place any preparation effort that is overly specialized at risk of irrelevance. Fitness encompasses strength, speed, endurance and agility. It includes short, sharp efforts as well as lengthy ones. Most people end up with a bias in one particular direction according to their own preference and build, but functional fitness aficionados make an effort to cover all areas and work on their weaknesses as well as their strengths. You will often find functional fitness practitioners training outside or in a fairly basic indoor environment. Simple and functional environments are appreciated as much as simple and functional equipment (James, 2009). The clerical staff may need different fitness when compared to daily wages employee. The man on daily wages had to toil hard on the ground, where as the clerical staff may need hand and eye coordination to look in to the files and need more patience to sit for a longer hours in the office. The functional fitness differs from place to place, individual to individual, nature of work, etc. Functional fitness is about linking fitness to real functions once more. It is designed to reflect movements and functions found in daily life sled pulling, wood chopping, and rope climbing and so on. I have heard people say, "What's the point of that? I'll never have any need to chop wood or pull a sled". But the great thing about functional fitness is that you use ordinary objects found around the home or the garage. You don't need expensive equipment or posh gyms to get fit. A sledge hammer is not only much cheaper than a cable machine, but you might actually be able to use it for other tasks as well (Amos, 2009). Functional fitness is a simpler approach to fitness. The point is to get fit, not to spend lots of money on machines and supplements.

### The delimitations of study

- The study was restricted to the urban and rural high school boys and girls in Vijayapura taluk.
- The study was delimited to the 40 urban and 40 rural male and female high school boys and girls.

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- The age of the players was limited to 13 to 16.
- The AAPHER Functional fitness test is selected to assess the fitness of subjects.
- The study was confined to the fitness variables of Body Composition, Flexibility, Agility, Coordination, Muscular Strength & Aerobic Endurance

**The limitations of study**

- When testing the subjects the meteorological variation such as air, temperature, atmosphere, pressure, relative humidity etc. we're not taken.
- Physiological factors such as diet, nutrition, rest and practice were not taken into consideration.
- The subjects or children's socio-economic statuses, habits and family backgrounds were not taken into consideration.

**Hypothesis:** It was hypothesized that there is no significant relationship among functional fitness of urban and rural high school boys and girls.

**The significance of study**

- The result of this study will help to physical education teacher, coaches & trainers to use the functional fitness levels to develop the fitness of high school boys and girls.
- The study may provide criteria for selecting team by knowing functional fitness components.
- The study may throw new light to the existing knowledge in the field of physical education and sports.
- The would help to identify lacunae as regard to functional fitness of high school children and proper dietary and training programmes can be planned to improve their functional fitness levels.

**Methodology**

The main purpose of the investigator was to compare the AAHPERD Functional Fitness of urban and rural high school boys and girls in Vijayapura taluk.

**Sampling technique and sample size:** Simple purposive sampling technique was used to collect the data. The subjects were identified for the study were urban and rural high school boys and girls of Shikaripura taluk. One urban and one rural schools identified randomly and 20 urban and 20 rural boys; and 20 urban and 20 rural girls were taken as sample size. These samples were selected on random basis with the help of school attendance register.

**Data Collection:** The process of data collection was collected during March 2013. The permission form the headmaster of the schools were taken well in advance and the help of respective physical education teacher was also sought. The test administration was demonstrated to the student before data collection and the purpose of the research work was clearly convinced to the students and they were encouraged to do their maximum. The following AAHPERED Functional Fitness Test Variables and Predicted Motor Components are given below:

- Ponderal Index test - Body composition
- Sit and Reach test - Flexibility
- Agility test - Agility
- Soda pop test - Coordination
- Arm curl test - muscular strength or Endurance
- 1/2mile walk/run test (880yard) – Aerobic Endurance

**The analysis, Interpretations and Results of Study**

This investigation was meant to compare the AAHPERD Functional fitness of urban and rural high school boys and girls. Forty urban and 40 rural high school boys and girls were taken as subjects for this study. The data collected was subjected to statistical analysis in respect of urban and rural high school boys and girls. To measure the above said components of fitness ponderal index, flexibility, arm curl test, soda pop-test, walk/run 880yard test, agility test, was recorded as per the instruction of the AAHPERD Functional fitness test. The data was subjected to statistical analysis by using SPSS package 17<sup>th</sup> version to get descriptive statistics, which was limited to mean, standard deviation and range. Initially descriptive statistics in respect of boys and girls were obtained and later the correlation matrix of boys' girls' data was obtained and analyzed in respect of rural and urban high school boys.

The descriptive statistics of AAHPERD functional fitness variables of rural and urban high school students are presented in table 1 for boys and in table 2 for girls and analyzed.

**Table 1:** Descriptive statistics of aahperd functional fitness variables of rural and urban high school boys

Variables	Range	Mean	Std. Deviation
Weight U boys	34	40.2kg	10.37
Weight R boys	23	36.2	5.78
Height U boys	0.33	1.52	0.10
Height R boys	0.30	1.49	0.075
PI U boys	0.95	4.75	.202
PI R boys	0.59	4.76	.130
Flex U boys	15.00	5.75	3.80
Flex R boys	15.00	5.95	4.48
Curl U boys	9.00	26.30	2.95
Curl R boys	13.00	25.15	3.45
Soda pop U boys	7.50	21.55	1.91
Soda pop R boys	8.38	20.98	1.97
880 yards Walk & Run test U boys	94.00	251.5	27.57
880 yards Walk & Run test R boys	100.00	257.50	27.69
Agility U boys	4.83	20.51	1.46
Agility R boys	4.63	19.50	1.18

Analysis of table reveals that urban boys' average weight was 40.20 kg (SD =10.37) range was 34kg. Rural boys average weight was 36.20 kg (SD =05.78) range was 23kg which speaks off normal distribution in favor of rural boys. Because range & SD was less when compared to urban high school boys.

Urban boys average height was 1.52mts (SD=0.10mts) range was 0.33 mts. Rural boys height 1.49 mts (SD=0.075) range was 0.30 mts with speaks off normal distribution in favorable of high school boys. Almost all the boys' height is similar wherein, the rural boys were slightly shorter than urban boys. Urban boys flexibility average is 8.10 cms (SD=3.69) range was 13.00 cms. Rural boys average 12.80cms (SD=4.28) range was 17.00 cms which speaks off normal distribution in favorable of high school boys.

Urban boys arm curl average is 24.05 nos. (SD =3.79 nos.) range was 12.00 nos. Rural boys average 25.75(SD =1.91) range was 7.00 which speaks off normal distribution both in favorable of urban and rural boys. Urban boys soda pop test for coordination ability the average was 21.16 sec. (SD=2.86 sec.) range was 8.95 seconds. Rural boys average 24.16 sec.

(SD=3.27 sec.) range was 12.55 secs., which speaks off normal distribution in favour of urban boys. Because range & SD was less when compare to rural high school boys.

Urban boys walk/run test average was 273.40 secs. (SD=37.07 secs.), range was 142.0 secs. Rural boys average 263.35 (S D =20.13) range was 63.00 which speaks off normal distribution in favorable of rural boys. Because range & S D was less when compare to urban high school boys. Urban boys' agility average was 22.98 secs. (SD=1.68 secs.), range was 6.11 seconds. Rural boys average 21.91 secs. (SD=2.14 secs.), range was 7.35 secs., which speaks off normal distribution in favorable of high school boys.

**Table 2:** Descriptive statistics of aahperd functional fitness variables of rural and urban high school girls

Variables	Range	Mean	Std. Deviation
Weight U girls	26	38.1	6.52
Weight R girls	17	37.25	4.15
Height U girls	0.22	1.48	0.053
Height R girls	0.27	1.49	0.060
PI U Girls	.52	4.80	.149
PI R Girls	1.16	4.82	.235
Flex U Girls	13.00	8.10	3.69
Flex R Girls	17.00	12.80	4.28
Curl U Girls	12.00	24.05	3.79
Curl R Girls	7.00	25.75	1.91
Soda pop U Girls	8.95	21.16	2.86
Soda pop R Girls	12.55	24.16	3.27
Wr test 880 U Girls	142.00	273.40	37.07
Wr test 880 R Girls	63.00	263.35	20.13
Agility U Girls	6.11	22.98	1.68
Agility R Girls	7.35	21.91	2.14

Analysis of table 2 depicts that the urban girls' average weight was 38.1 kg (SD=6.52 kgs.), range was 26 kgs. Rural girls average weight was 37.25 kg (SD =4.15 kgs.), range was 17 kg which speaks of normal distribution in favour of rural Girls. Because range & SD was less when compare to urban high school girls. Urban Girls average height was 1.48 mts (SD=0.05) range was 0.22mts. Rural Girls height 1.49 mts (SD=0.06) range was 0.27 mts which speaks off normal distribution in favorable of both urban and rural high school girls.

Urban Girls flexibility average is 5.75 cms. (SD=3.80 cms.), range was 15.00. Rural Girls average 5.95 (S D =4.48) range was 15.00 which speaks of normal distribution in favourable of rural Girls. Because range & S D was less when compare to urban high school Girls. Urban Girls arm curl average is 26.30 (S D =2.95) range was 9.00cms. Rural Girls average 25.15 cms. (SD=3.45cms.) range was 13.00 cms., which speaks of normal distribution in favorable of urban Girls. Because range & SD was less when compare to rural high school Girls.

Urban Girls soda pop average was 21.55 cms. (SD=1.91 cms.), range was 7.50. Rural Girls average 20.98 cms. (SD=1.97 cms.), range was 8.38 cms., which speaks off normal distribution in favorable of urban school girls. Because the range & SD was less when compare to rural high school Girls. Urban girls walk/run test average was 251.55 secs. (SD=27.57 secs.), range was 94.00 seconds. Rural girls average was 257.50 secs. (SD=27.69 secs.), range was 100.00 secs., which speaks of normal distribution in favorable of urban girls. Because range & S D was less when compare to rural high school Girls. Urban Girls agility average was 20.15 secs. (SD=1.46 secs.), range was 4.83 seconds. Rural girls' average was 19.50 secs. (SD=1.18 secs.), range was 4.63

secs., which speaks of normal distribution in favorable of rural Girls. Because range & S D was less when compare to urban high school Girls.

**Summary:** The purpose of this study was to evaluate and compare the selected AAHPERD Functional fitness components of urban and rural high school boys and girls. To achieve this purpose the investigation was conducted on (40) forty rural high school boys and girls and (40) urban high school boys and girls. High school boys and girls Shikaripura taluk the subject taken for study 40 urban boys and girls 40rural boys and girls of Shikaripura taluk. The age of the subject ranged between 13 to 16 years the subject were equally assigned in selection procedure in two groups of A urban boys and B group rural high school boys and girls. The A and b group participate in the test in selected subject were tested by the AAHPERD Functional fitness, test which measurer the 6items of Functional fitness. The data collected from the test where statically analysis with tow gropes to find out the Functional fitness. Quality measurement with standard equipment for pondarel index, sit and reach test, agility test, soda pop test, arm curl test, 880 yard walk/run test, were taken in beginning and all the six items were tested accordingly. From one event other there was a break of ten minutes. For the study 40 students of urban and rural high school boys and girls in Shikaripura taluk whereas the sample on which 40 urban high school boys and girls and 40 rural high school boys and girls were tested by the AAHPERD functional fitness test. Which measure 6 elements of functional Fitness the data collected from these tests were statistically analyzed with two groups to find out the AAHPERD functional fitness.

**Findings:** The descriptive analysis of the variables yielded normal distribution score in respect of urban and rural boys and girls in general. Analysis of boys' data reveals that urban boys were superior in strength and coordination variables and rural boys were better in weight. In all other variables namely agility, height, flexibility and aerobic endurance total distribution was normal in respect of high school boys. In girls' data rural girls were better in weight and agility factors, where as urban girls were better in strength and aerobic endurance factor. The distribution were normal in case of height, flexibility and coordination in respect of both rural and urban high school girls.

Urban high school boys' pondarel index had shown positive correlation with agility of urban high school boys which is significant. The body fat percentage has significant correlation with urban boys' agility factor and had no association with other fitness factors, Urban high school boy's flexibility correlation (0.48) was significant with rural high school boys' flexibility, which speaks of good relationship as regard to flexibility. Urban high school boy's arm curl had significant correlation (0.55) with was arm curl of rural high school boys. Muscular strength of urban boys had negative relationship with aerobic endurance factor. Rural high school boys' Soda pop test, a test for coordinative ability had shown significant correlation (0.59) with aerobic endurance factor and urban high school boys walk/run 880yard test was not significant. Agility test of rural boys had no relationship with any of the variables.

The result indicates that body percent fat has positive relationship with that of flexibility factor and opposing relationship with aerobic endurance factor. Urban high school girls' flexibility correlation was significant with arm curl test

(0.58), where as rural high school girls' flexibility was significant with body composition (-0.56), arm curl test of urban girls (-0.55) and endurance test (0.51). Urban of walk/run 880 yard test urban high school girls correlated to the pondarel index rural high school girls was significant.

### **Conclusions**

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

- There was no significant relationship among total functional fitness of urban and rural high school boys.  
Tthere was no significant relationship among total functional fitness of urban and rural high school girls.
- The body fat percentage has significant relationship with urban boys' agility factor.
- Urban high school boy's flexibility had good relationship with rural high school boys' flexibility.
- Tthere was good relationship between rural and urban high school boys' muscular strength factor.
- Muscular strength of urban boys had negative relationship with aerobic endurance factor.
- Rural high school boys' coordinative ability had shown significant rrelationship with aerobic endurance factor.
- Agility variable of rural boys had no relationship with any of the variables
- The body percent fat has positive relationship with that of flexibility factor and opposing relationship with aerobic endurance factor.
- Urban high school girls' flexibility correlation was significant with strength factor, where as rural high school girls' flexibility was significant with body composition and muscular strength factors of urban girls.
- Urban high school girls endurance correlated to the body composition of rural high school girls was significant.

### **Recommendations**

With the help of the conclusions of study the following recommendations were drawn:

- The same test may be conducted on the urban and rural high school boys and girls at a larger level.
- The result of study may be help the teachers of urban and rural high school boys and girls to know their functional fitness levels.
- The same study may be conducted on college boys and girls and also for different age groups.
- The same study may be conducted on different players of different sports disciplines.

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