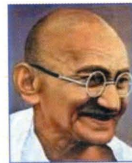


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Assessment of AAPHER Youth Fitness Norms: Sri Lankan (East Province) Adolescent Boys

K. Ketheeswaran & Dr.V. Gopinath

Abstract

The aim of the study was to compare and evaluate the AAPHER youth fitness test among east province adolescent boys in Sri Lanka. To achieve the purpose (N=800) adolescent boys from age of 14 years (n=400) and 15 years (n=400) were randomly selected as subjects from east province, Sri Lanka. AAPHER (50 yards - speed, Standing broad jump-explosive power, 1.5 miles run - endurance, sit ups - abdominal strength, shuttle run - agility and pull-ups-arm strength) youth fitness test were selected as criterion variable and tested, the data were converted into AAPHER youth fitness norms. The result of AAPHER youth fitness existing norms shows that, 14 and 15 years boys of east province were mostly below the 50th percentile in all the fitness qualities. From the result it was concluded that the adolescent boys of east province (Sri Lanka) were having poor physical fitness. The pupils scored below 50 deciles on the selected fitness variable in their respective age group should be encouraged to improve their fitness level. National level special fitness programme will be designed and implemented to the poor fitness students. Further national level common fitness norms may be constructed and standardized for fitness assessment.

Keywords: AAPHER, Fitness, Norms, Adolescent.

Introduction

The unique strength of physical education and sports exists in its capacity to enthuse a dream in successive young generations. The life style of today's generation has changed tremendously. The fitness level of individuals has gone down badly. Students prefer video games to toil and sweat in the play fields. Now kids are suffering more and more from postural deformities. The only way to remove these factors from society is to make the role of Physical Education and Sports become massive. It not only improves the health of an individual but also makes him stronger mentally to face the huge competition present in today's fast changing world. Various postural deformities, if cured at teenage, can reduce the risk of complications.

During adolescent period, major physiologic, cognitive and behavioral changes take place and biological development and psychosocial development overlap. A person's body undergoes dramatic changes. World Health Organization (WHO) defines it as the period between 10-20 years of age. There are three distinct phases of transition from adolescence to adulthood. Early adolescence (10-13 years): mainly characterized with physical maturity with the onset of puberty, mid adolescence (14-15 years): with development of separate

identity from parents and opposite sex, and finally the late adolescence (16-19 years): denoted as fully developed physical characteristics, a distinct identity and well developed opinion and ideas (American College of Sports Medicine, 1988). It is clear that the mid and late phases of transition are more important because the pace of mental and physical development is rapid in this stage.

Over the past decade there has been growing acceptance that young people between 10 and 24 years of age are a distinct population group with needs that differ from those of infants or adults. Youth from marginalized groups and lower and middle income countries are especially vulnerable. The nutrition transitions to lipid-rich diets and a decrease in physical activity have also seen an increasing prevalence in obesity, especially among urban youth. The survey revealed eye opening facts about the students of public schools. 55 % of students are overweight, having chances of heart attack, diabetic problems and hair loss. Blood pressure is much more in these students.

The American College of Sports Medicine (Bouchard 1986) has defined health related physical fitness as “a state characterized by an ability to perform daily activities with vigor and a demonstration of traits and capacities that are associated with low risk of premature development of the hypo kinetic diseases (i.e, those associated with physical inactivity).” Health-related physical fitness consists of those components of physical fitness that have a relationship with good health. The components are commonly defined as body composition, cardiovascular fitness, musculoskeletal fitness (flexibility, muscular endurance, and muscular strength) (Bouchard and Sheppard 1993). The present study has the aim to evaluate the norms of AAPHER youth fitness battery among Sri Lankan (East Province) adolescent-boys.

Methodology

To achieve the purpose (N=800) adolescent boys from age of 14 years (n=400) and 15 years (n=400) were randomly selected as subjects from east province, Sri Lanka. AAPHER (50 yards -speed, Standing broad jump - explosive power, 1.5 miles run - endurance, sit ups -abdominal strength, shuttle run – agility and pull ups-arm strength) youth fitness tests were selected as criteria variable and tested, the data were converted into AAPHER youth fitness norms (Barry and Jack 1976).

Table 1: AAPHER Norms of 14 and 15 Years Adolescent Boys of East Province (Sri Lanka)

| Percentile | 50 Yards (l/10sec) | | SLJ (feet & inches) | | 1.5 miles (min- utes) | | Sit ups (No./l min) | | Shuttle run (l/10sec) | | Pull ups (Nos) | |
|-------------------|-----------------------|-----------|---------------------------|-----------|--------------------------------|-----------|---------------------------|-----------|-----------------------------|-----------|----------------------|-----------|
| | 14yrs | 15 yrs | 14 yrs | 15 yrs | 14 yrs | 15 yrs | 14 yrs | 15 yrs | 14 yrs | 15 yrs | 14 yrs | 15 yrs |
| 100 th | - | - | - | - | - | - | - | - | - | - | - | - |
| 85 th | 17 | 9 | - | 11 | - | 3 | - | 24 | 9 | 13 | 3 | 20 |
| 75 th | 179 | 83 | - | 132 | - | 21 | 25 | 73 | 180 | 89 | 70 | 46 |
| 50 th | 85 | 245 | 133 | 199 | 95 | 258 | 248 | 249 | 200 | 290 | 304 | 329 |
| 25 th | 119 | 63 | 267 | 58 | 305 | 118 | 127 | 54 | 11 | 8 | 23 | 5 |

The table indicates the 14 years boys, cumulative scores of AAPHER test battery less than 50th percentile as follow: 50 yard (51%), SLJ (100%), 1.5 mile run 100%, sit ups 94%, shuttle run (52.75%) and pull ups (81.75%) respectively. For 15 years boys 50 yard (77%), SLJ (64.25%), 1.5 mile run (94%). Sit ups (75.75%), shuttle run (74.5%) and Pull ups (83.5%) respectively. The result of AAPHER youth fitness existing norms shows that, 14 and 15 years boys of east province were mostly below the 50th percentile in all AAPHER youth fitness qualities.

Discussion

The public health burden of lifestyle-related diseases in the Asian countries is high. The most common cause of morbidity and mortality are coronary heart disease, stroke, obesity, hypertension, type-2 diabetes, allergies and several cancers. A sedentary lifestyle is a major risk factor for these diseases and is close to overtaking tobacco as the leading cause of preventable death. The protective effect of intentional physical activity on the above mentioned non-communicable diseases has been widely reported in people of all ages (Howly and Franks 1997). Regular participation in moderate and vigorous levels of exercise increases physical fitness, which can lead to many health benefits (Jonker et al. 2006). Physical fitness is also determined by constitutional factors, and it has been suggested that up to 40% of variation in fitness may be attributable to genetic factors (Panagiotakos et al. 2004). In adults, low physical fitness (mainly low cardio respiratory fitness and low muscular strength) seems to be a stronger predictor of both cardiovascular and all-cause mortality than any other well established risk factors.

According to the UNESCO charter of physical education and sports, "every human being has a fundamental right to access to physical education and sport, which are essential for the full development of his/ her personality. The freedom to develop physical, intellectual and moral powers through physical education and sport must be guaranteed both within the educational system and in other aspects of social and healthy life".

Physical fitness is a set of attributes that people have or achieve relating to their ability to perform physical activity (Pandey et al. 1999). Physically fit individuals can accomplish the ordinary tasks of life (carrying groceries, climbing stairs, and gardening) with less fatigue, storing up an energy reserve for leisure-time exercise or unforeseen emergencies and to persevere under difficult circumstances. Physical fitness is the opposite of being fatigued from ordinary efforts, lacking the energy to enter zestfully into life's activities, and becoming exhausted from unexpected activities demanding physical exertion (Ruiz 2006).

Lifestyle affects people's health, with eating habits and regular physical activity being the two most influential factors (Shephard 1994) irrespective of sex, age or country of residence (Yusuf et al. 2004). An appropriate way to assess health in apparently healthy people is to measure their health-related fitness, defined as the dynamic state of energy and vitality that allows people to perform daily tasks; enjoy active leisure and cope with unexpected emergencies without undue fatigue. At the same time, health-related fitness helps in the prevention of hypo-kinetic diseases, maximum development of intellectual capacity, and in full enjoyment of life (Bouchard and Shepard 1993). Although regular physical exercise has a positive influence on health, a high level of fitness-related health has a greater influence (Eriksson 2001 and Myers et al. 2004).

Conclusion

From the result it was concluded that the adolescent boys (14yrs and 15yrs) of east province (Sri Lanka) were having poor physical fitness qualities such as, speed, explosive power, endurance, abdominal strength, agility and arm strength.

Implication

Some reasonably well-established facts regarding the characteristics of physical activity or exercise that contribute to an improvement in physical fitness are:

1. The pupils who scored below 50th deciles on the selected fitness variable in their respective age group should be encouraged to improve their fitness level. National level common fitness norms may be constructed and standardized for fitness assessment.
2. To identify children and adolescents at risk for the major public health diseases and to be able to evaluate effects of alternative intervention strategies in Sri Lanka and internationally comparable testing methodology across the country has to be developed, tested, agreed upon and included in the health monitoring system currently under development of the human resource department, school education department, public health department and other NGOs of Sri Lanka.

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