

ASSESSMENT OF AAPHER YOUTH FITNESS NORMS SRILANKAN (NORTH WEST PROVINCE) ADOLESCENTS BOYS

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ABSTRACT

The aim of the study was to compare and evaluate the AAPHER youth fitness test among North West province adolescent boys in Srilanka. 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 North West province, Srilanka AAPHER (50 yards - speed, Standing broad jump - explosive power, 1.5 miles run - endurance, situps - abdominal strength, shuttle run - agility and pullups-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 North West province were mostly below the 50th percentile in all the fitness qualities. From the result it was concluded that the adolescent boys of North West province (Srilanka) were having poor physical fitness. The pupil 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.

Key Words: AAPHER, Fitness, Norms, Adolescent.

INTRODUCTION

Lifestyles affect people's health, with eating habits and regular physical activity being the two most influential factors (Panagiotakos, 2004) irrespective of sex, age or country of residence (Yusuf, 2004). An appropriate way to assess health in apparently healthy people is to measure their-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. Regular physical exercise has a positive influence on health, a high level of fitness - related health has a greater influence (Eriksson, 2001 & Myers, 2004).

During adolescent period, major physiologic, cognitive, 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 of life 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 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, formed a distinct identity and well developed opinion and ideas (Pandey et al., 1999). It is clear that the mid and late phases of transition are more important because pace of mental and physical development is rapid in these stages.

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. Physical fitness 'A set of attributes that people have or achieve relating to their ability to perform physical activity' (Howly, and Franks, 1997). Physically fit individuals can accomplish the ordinary tasks of life (e.g., carrying groceries, climbing stairs, and gardening) with less fatigue, storing up an energy reserve for leisure-time exercise or unforeseen emergencies. The American College of Sports Medicine (ACSM) 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) (Nieman, 1998). The present study was to compare and evaluate the norms of AAPHER youth fitness battery among Sri Lankan (North West province) adolescent boys.

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METHODOLOGY

The aim of the study was to compare and evaluate the AAPHER youth fitness test among North West province adolescent boys in Srilanka. 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 North West province, Srilanka, AAPHER (50 yards-speed, Standing broad jump - explosive power, 1.5 miles run - endurance, situps -abdominal strength, shuttle run - agility and pullups-arm strength) youth fitness test were selected as criterion variable, and tested. The data were converted into AAPHER youth fitness norms (Johnson and Nelson, 1976).

RESULTS

Table -1

Aapher Norms of 14 And 15 Years Adolescent Boys of North West Province (Srilanka)

Percentile	50 Yards (l/10sec)		SLJ (feet & inches)		1.5 miles (minutes)		Situps (No./1min)		Shuttlerun (l/10sec)		Pull ups (Nos)	
	14 yrs	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	-	-	-	-	-	-	-	-	-	-	-	-
75 th	-	-	1	-	-	-	-	-	7	2	7	25
50 th	5	167	3	42	7	84	1	8	39	141	370	177
25 th	395	233	396	358	393	316	399	392	354	257	23	198

The table indicates the 14 years boys, cumulative scores of AAPHER test battery less than 50th percentile as follow: 50 yard (100%), SLJ (99.75%), 1.5 mile run 100%, situps 100%, shuttle run (98.25) and pull ups (98.25%) respectively. For 15 years boys 50 yard (100%), SLJ (100%), 1.5 mile run (100%). Situps (100%), shuttle run (99.50%) and Pull ups (93.75%) respectively. The result of AAPHER youth fitness existing norms shows that, 14 and 15 years boys of North West province were mostly below the 50th percentile in all AAPHER youth fitness qualities.

DISCUSSION

Physical activity is a major risk factor for cardiovascular disease (CVD; Berlin and Colditz, 1990). Studies living in Iowa, Los Angeles, and New York City found high levels of obesity, serum cholesterol, and blood pressure, and more than 25% of all children studies had at least one elevated CVD risk factor (Wheeler et al., 1983). Adolescents may adopt behavior patterns that, if sustained through the life course may prevent or delay morbidity and mortality from chronic diseases such as CVD (Simons-Morton et al., 1988; Ross et al., 1987; American College of Sports Medicine, 1988). In addition, evidence suggests that participation in physical activity effectively promotes long-term weight loss in adolescents (Epstein et al., 1985; Becque et al., 1988), and may play a role in preventing further increases in childhood obesity. Regular participation in physical activity also is associated with increased longevity (Blair et al., 1989) and decreased risk of coronary heart disease (Paffenbarger and Hyde, 1984). Exercise as a type of "preventive" medicine can be effective in the prevention and treatment of diabetes, hypertension, and a wide variety of other medical conditions (DiNubile, 1993).

The public health burden of lifestyle - related diseases in the European countries is high. The most common caused 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 (Jonker et al. 2006). Regular participation in moderate and vigorous levels of exercise increases physical fitness, which can lead to many health benefits (Ruiz 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 (Bouchard 1986). In adults, low physical

fitness (mainly low cardiorespiratory 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.

There are many other benefits associated with participation in physical activity across the life span. Active participation in physical activity in childhood and adolescence is believed to enhance the uptake of calcium in the bones (Chestnut, 1990), and bone health throughout life should be improved (Smith et al., 1990). Increased physical activity also is associated with higher levels of beneficial high density lipoprotein (HDL) cholesterol in children (Thorland and Gilliam, 1981) and reduced risk of other priority health issues such as reduction in pregnancies, drug use, and violence, as well as academic improvements and lower high school dropout rates (Dinubile, 1993). Physical activity by children is inversely associated with blood pressure (Strazzullo et al., 1988), serum lipoproteins (except HDL, which physical activity is positively associated; Durant et al., 1983), and obesity (Clark and Blair, 1988; Walberg and Ward, 1985).

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 individual has gone down badly. Students prefer video games rather than to toil sweat in the play fields. Now kids are suffering more and more from postural deformities. The only way to remove these factors from society, the roll of Physical Education and Sports become massive. It not only improves the health of an individual but also make him stronger mentally to face the huge competition present in today's fast changing world. Various postural deformities if cured at teenager age can reduce the risk of complications.

Therefore, low educational status and economics with young age make more vulnerable. To rise age at marriage and education with provide quality of care through target oriented programme to adolescents especially awareness of physical fitness may improve the status of adolescents.

CONCLUSION

From the result it was concluded that the adolescent boys (14 Yrs and 15 yrs) of North West province (Srilanka) 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 pupil scored below 50th deciles on the selected fitness variable in their respective age group should be encouraged to improve their fitness level by providing special fitness program.
2. National Level common fitness norms may be constructed and standardized for fitness assessment.
3. 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 Srilanka 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 Srilanka.
4. Extreme inactivity has significant detrimental consequences on health status, but these effects are rapidly reversed by ambulation, the upright posture, and gravity. Thus, low-intensity activity has major health consequences for the very inactive.
5. Most benefits of exercise are produced by movement requiring the dynamic and rhythmic use of large muscles for an extended period of time. This exercise is most effective when it is performed frequently (daily to at every third day) and at a moderate intensity relative to the individual's capacity. Additional benefits are provided by heavy resistive exercise that develops strength and exercises that increase flexibility.

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