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Relationship of body mass index to AAHPER fitness test scores in school children aged 10 -14 years

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Abstract
Regular physical exercises enhance overall health and wellbeing. Children who are physically educated are more likely to become and remain active specifically having basic information regarding exercise and benefits of exercise as well as mastering sets of basic environment skills that are essential to a child's initiating and continuing a regular exercise program. Individuals will not participate in activities they do not know how to do reasonably well. Researchers have identified a child's movement's competence and enjoyment of physical activity as primary factors in how physically active an individual is during childhood and adolescence. The purpose of the study was to analyze the relationship of body mass index to AAHPER fitness test scores in school children aged 10 -14 years. The participants of the study were randomly selected 200 children from Trivandrum district, age ranging between 10 to 14 years.

Keywords: BMI, AAHPER, Children etc.

Introduction
Exercising regularly, eating, properly, managing, stress, avoiding destructive habit, learning first aid, adopting good personal health behaviors, recking and complying with medical advice, being an informed consumer, protecting the environment and managing time effectively, are some of the health life styles considered to be very important to optimal wellness.

The human body is designed for physical activity. A man has to be physically fit for climbing running, jumping and throwing and to escape contact threats of life. Anthropologists indicate that the need to be active is associated with the fight or flight response. In research of food primitive people sometimes had to fight with other predators or to flee for safety. In either case the response was often vigorous activity. Even one more recent ancestor was required to do vigorous activity as a relatively major part of their normal daily routine.

According to the AAHEPERED assumptions [1984], physical fitness is identified with the concept of human health, for it allows an efficient functioning during the day, as well as undertaking various forms of physical activity during free time. Adaptation in unexpected or critical situations is also important from the aspect of the further functioning of an individual. Hence, the Health-Related Fitness components include: cardiovascular endurance, muscle strength, endurance, flexibility and body composition. The level of physical fitness, similar to other elements of life style, including physical activity and inactive behaviors, is engaged in the etiology and occurrence of many non-infectious general diseases, such as: cardiovascular diseases, diabetes, selected types of cancer, and is also among the risk factors for arterial hypertension or obesity. Although the majority of these alarming states concern adults, some of them – overweight and obesity – occur already from the youngest age. Hence, at present, a greater emphasis is placed on the monitoring of the H-RF level in the groups of children and adolescents.

 Preventive actions also concern the implementation into practice the recommendations for an everyday, moderate physical activity for at least 60 minutes daily, limitation of passively spent time, as well as making parents and their children aware of the importance of adequate nutrition and skillful shaping of the psychomotor potential as early as from the youngest age. Many epidemiological and intervention studies emphasize that strong relationships between the level of H-RF, physical activity, BMI, and sedentary forms of leisure are observed already in childhood. Inactive forms of leisure (watching television, computer games, etc.)

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are responsible for the reduction in the level of physical activity and, together with inadequate nutrition, constitute an important predictor of increased frequency of overweight and obese children, and decreased physical activity. In turn, a high level of physical activity considerably reduces body weight and unfavorable height-weight ratio, limits the time devoted to sedentary behavior; sand favors the attaining of an optimum physical fitness, its general indicators and individual components. The relationships observed are the cause of changes in the shaping of the future image of the health of society; therefore, negative relationships evoke justifiable concerns, and cause not only instant, but also long-term health and psycho-social consequences. Many parents are interested in elite sports, at the national and international levels. Millions of parents and coaches are hoping that the education of their children, the future of the world's best athletes is. Progress from basic to elite levels in sport is a complex process. This process requires that identifying and selecting talented people is a necessary condition of physical, skills and behavioral to be successful in a particular sport. The process of discovering talented athletes to participate in a training program organized by one of the most important issues that are raised today in sports everyone can sing, paint and learn playing an instrument, but people are a little high level of skill and courage. So in the sport as in art, talent, and explore their options early, then guidance, control and evaluate them in the climb to the highest level of skill is extremely important. BMI measurement programs in schools may be conducted for surveillance and screening purposes. BMI surveillance programs assess the weight status of a specific population (e.g., students in an individual school, school district, or state) to identify the percentage of students who are potentially at risk for weight- related health problems. Surveillance data are typically anonymous and can be used for many purposes, including identifying population trends and monitoring the outcomes of interventions. BMI screening programs assess the weight status of individual students to identify those at risk and provide parents with information to help them take appropriate action. BMI screening meets some of the criteria established by the AAP for determining whether school-based screening should be implemented for any pediatric health condition obesity is an important and highly prevalent condition; BMI is an acceptable measure; and schools are a logical measurement site because they reach virtually all youth. However, BMI screening programs typically do not meet other AAP criteria effective treatments for obesity are not available, research has not established the effectiveness and cost-effectiveness of BMI screening programs, and communities typically do not have resources in place to help at-risk individual's access treatment 10services. More evaluation is needed to determine whether BMI screening programs are a promising approach for addressing obesity among children and adolescents.

The boys of specifically 10-14 years age group are mainly concerned about the making of future. In other words the boys and girls of this age start giving more concentration on studies only and mainly preparing for board and competitive examination. At that time it is very important to assess the health related fitness components of this age group and to make them realize that the heath components are important.

Another use of this test is to convince the age group about importance of fitness and make them aware of their own fitness level and giving them the general ideas of evaluating one's fitness level. To assess the fitness components to giving the proper general conditioning for the improvement of performance in sport is not the only motto of this study. One should know about his or her health status so that he or she can work accordingly. To lead a healthy life, a general health is the only base and strongest way to the life.

So physical fitness is one's richest possession. It cannot be purchased, it has to earned through a daily routine of physical exercise, since the concern for positive heath extend to all age it is recommended that all persons be test periodically on health related fitness for the high school boys of Trivandrum district. Personality is affected by overall physical appearance of individual and this finally is the overall pattern of psychological characteristics that make each person a unique individual having a good concept of their personality and efforts one has to make their physic better and attractive.

In this content there is no/few health related fitness norms in the country for particularly, age group 10 to 14 years, which is necessary for parents, teachers and the student himself. Thus an attempt has been made by investigator to determine the health related fitness for the students aged 10 to 14 years of Trivandrum district.

Methodology
The investigator was randomly selected 200 children from Trivandrum district, age ranging between 10 to 14 years. The students selected based on their willingness to participate in the study. Body Mass Index and AAHPER Fitness Test score are the selected variables for the collection of data. Descriptive statistics and coefficient of correlation is used to analyses the data. The AAHPER performance of each subject was converted to a standard score using the AAHPER score conversion table. AAHPER scores were correlated with the score of Body Mass Index score using Pearson's Product Moment Correlation.

Findings
The coefficient of correlation obtained between AAHPER score and BMI score has been presented in table 1.

Table 1: Coefficient of Correlation between AAHPER Score and BMI Score of Boys

Variables	Mean	Standard Deviations	Coefficient of correlation	Significance (p)
AAHPER	221.3800	69.19520	-.094	.175
BMI	19.3900	1.80999		

It is observed from, table 1 that the Correlation coefficient showed there is no significant relationship (.094, P< .05) between AAHPER score and BMI score for boys.

The coefficient of correlation obtained between AAHPER score and BMI score has been presented in table 2.

Table 2: Coefficient Of Correlation between AAHPER Score and BMI Score of Girls

Variables	Mean	Standard Deviations	Coefficient of correlation	Significance (p)
AAHPER	226.7000	69.09670	-.083	.205
BMI	18.9570	2.88456		

It is observed from, table 2 that the Correlation coefficient showed no significant relationship (.083, P<.05) between AAHPER scores and BMI score for girls.

Discussion of Findings

The result of study showed that the BMI score of school children aged 10-14 years have no significant correlation with the AAHPER score.

It is evident from the table 1 and 2 that the BMI score of school children aged 10- 14 years (both boys and girls), showed no significant relationship with the AAHPER scores.

The present study was carried out to find out whether any relationship existed between AAHPER tests to the BMI scores.

Purpose of the study was to use BMI scores as a screening test if at all a relationship exist between these two tests.

But the present study revealed that no significant relationship existed between BMI and AAHPER test scores. Therefore BMI cannot be considered as a preliminary screening test for talent identification.

Conclusions

It is clear that the BMI score of school children aged 10-14 years (both boys and girls), showed no significant relationship with the AAHPER scores.

Purpose of the study was to use BMI scores as a screening test if at all a relationship exist between these two tests.

But the present study revealed that no significant relationship existed between BMI and AAHPER test scores. Therefore BMI cannot be considered as a preliminary screening test for talent identification.

Recommendation

In the light of conclusion drawn, the following recommendations are made.

1. For general screening purpose we can use BMI not for Sports Talent Identification.
2. Similar study can conduct in rural and urban areas.
3. Similar study can conduct on different age level boys and girls.

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