

ASSESSMENT AND RECONSTRUCTION OF AAHPER TEST FOR SRI LANKAN YOUTH AGED 10 – 17

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Abstract - The physical fitness is the ability to carry out daily tasks with vigorous and alertness without undue fatigue. A fit and healthy person will live longer and Youth are backbone to nation. Therefore, the research question raised to assess the fitness level of the Sri Lankan youth and objective of the study was to construct a new fitness test norms for Sri Lankan age 11, 12, 13, 14, 15 and 16 years old youth boys and girls based on AAHPER test.

To achieve the purpose of this study 1000 girls and boys (age 10-17 years) selected from various provinces in Sri Lanka by random sampling method. The data were collected using the AAHPER test batteries which consist with six test items 50-yard run, standing broad jump, shuttle run, pull-up for boys and flex arm hang for girls, sit up and 600 yards run respectively and was analyzed by using SPSS. From the results, following percentile norms were created 5th 10th 15th 20th 25th 30th 35th 40th 45th 50th 55th 60th 65th 70th 75th 80th 85th 90th 95th 100th. From the results it was concluded that, newly constructed norms are slightly lower than AAHPER youth fitness test battery. Hence it was recommended that, newly constructed fitness norms are appropriate to categorize fitness level of the Sri Lankan youth. Further studies are essential to enhance the reliability and validity of the newly constructed norms.

Key words - Physical fitness, Youth age, AAHPER

1. INTRODUCTION

Physical fitness is defined as the ability of an individual to competently and capably perform everyday tasks without excessive fatigue, and with enough energy remaining to enjoy spending free

time, as well as to resolve unusual situations of sudden and unforeseen emergency. The expression "Physical Fitness" is used nowadays to describe a person's ability to utilize the machinery of his body in sports and exercise. (COUNCIL1983)

Health and fitness are important for all individuals throughout life span. To achieve and maintain those qualities, an individual need to effectively handle disease and illness. Everybody desires a long and healthy life and exercise has a part to play in this. In one aspect, the body can be said to commence ageing from the moment it is born, However difference systems of the body age at a different rate. Many people continue a very active life both physically and mentally well up to their old age.

A. Objective of the study

The objective of this study was to design a youth fitness test model for Sri Lankan youth aged 10 – 17, to assess the fitness level of Sri Lankan youth aged 10-17 and to study the feasibility of AAHPER youth fitness test in 10-17 years old. The research mainly based on "Assessment and reconstruction of AAHPER test for Sri Lankan youth aged 10 -17.

The researcher designs the research under the youth physical fitness of Sri Lanka. To measure the physical fitness of youth, use more standard tests in many countries. The AAHPER test is one of famous test for assess the youth physical fitness. As a Sri Lankan youth, still don't have the standard test specific percentile norms' value to measure the youth physical fitness. The revised AAHPER Youth Fitness Test is a battery of six test items designed to give a measure of physical fitness for both boys and girls

in grades 5-12. The tests were selected to evaluate specific aspects of physical status.

The tests are: pull-up (with flexed-arm hang for girls)for judging arm and shoulder girdle strength; flexed leg sit-up for judging efficiency of abdominal and hip flexor muscles; shuttle run for judging speed and change of direction; standing long jump for judging explosive muscle power of leg extensors; 50-yard dash for judging speed; and 600-yard run (with optional runs of 1 mile or 9 minutes for ages 10-12 or 1h miles or 12 minutes for age 13 and older) for judging endurance.(Hunsicker and Reiff, 1976)

When consider more about this, could assess and reconstruct the youth fitness test model based on AAHPER test. The age category is 10-17 years old based on AAHPER test.

2. METHODOLOGY

To achieve the purpose of this study 1000 girls and boys (age 10-17 years) selected from various provinces in Sri Lanka by random sampling method. Field based research design used for this research design.

The data were collected using the AAHPER test batteries which consist with six test items 50 yard run, standing broad jump, shuttle run, pull-up for boys and flex arm hang for girls, sit up and 600 yard run respectively and was analyzed by using SPSS.

3. RESULT AND DISSCUSSION

Below all tables indicates that the final outcome of the study 11 years old,12 years old,13 years old,14 years old,15 years old,16 years old girls and boys percentiles norms' value separately. These percentile norms' values were less than the AAHPER test percentile norms' values.

Table 1.11 years old

PERCENTILE	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
BOYS																				
50 YD S	9	8.8	8.8	8.7	8.6	8.5	8.5	8.4	8.4	8.4	8.3	8.2	8.1	8	7.9	7.9	7.6	7.5	7.4	7.1
SBJ	4	4.1	4.1	4.1	4.2	4.4	4.6	4.7	4.8	4.8	4.9	5	5	5	5.2	5.2	5.4	5.6	5.9	6
SR	12.2	11.7	11.6	11.4	11.2	11	11	11	10.9	10.8	10.8	10.7	10.7	10.6	10.6	10.5	10.4	10.2	10.2	10
PU	0	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	5	7
SU	16	18	20	20	21	23	25	28	30	30	30	30	31	32	32	34	35	35	36	38
600 YDR	3.8	3.1	3.06	3.02	3	2.99	2.8	2.61	2.56	2.5	2.4	2.36	2.31	2.26	2.26	2.25	2.25	2.21	2.19	2.15
GIRLS																				
50 YD R	9	8.8	8.8	8.7	8.6	8.5	8.5	8.4	8.4	8.4	8.3	8.2	8.1	8	7.9	7.9	7.6	7.5	7.4	7.1
SBJ	4	4.1	4.1	4.1	4.2	4.4	4.6	4.7	4.8	4.8	4.9	5	5	5	5.2	5.2	5.4	5.6	5.9	6
SR	12.2	11.2	11.6	11.4	11.2	11.1	11	11	10.9	10.8	10.8	10.8	10.8	10.6	10.6	10.5	10.4	10.2	10.2	10.2
FAH	0	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	5	7
SU	16	18	20	20	21	23	25	28	30	30	30	30	31	32	32	34	35	35	36	38
600 YDR	3.8	3.1	3	3	3	2.99	2.8	2.61	2.56	2.5	2.4	2.36	2.31	2.26	2.26	2.25	2.21	2.19	2.18	2.15

Table 2.12 years old

PERCENTILE	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
BOYS																				
50 YD S	8.3	8.8	8.6	8.6	8.6	8.4	8.2	8.2	8.2	8.1	8.1	8	7.9	7.8	7.6	7.5	7.4	7.3	7.2	6.3
SBJ	4.1	4.1	4.4	4.6	4.8	4.8	4.9	5	5	5	5.1	5.2	5.2	5.3	5.4	5.4	5.6	5.6	5.8	5.8
SR	12.8	11.5	11.4	11.2	11.1	11	11	10.9	10.8	10.6	10.5	10.4	10.3	10.2	10.1	10	9.9	9.3	9.2	9.1
PU	1	2	3	3	4	4	4	5	6	6	6	7	7	8	10	11	12	13	14	15
SU	15	20	20	23	25	26	26	27	28	29	30	30	30	31	31	32	34	34	35	40
500 YDR	3.12	3.09	3	3	2.91	2.28	2.28	2.26	2.24	2.24	2.19	2.18	2.16	2.15	2.14	2.12	2.11	2.1	2.1	2.5
GIRLS																				
50 YD R	11.3	9.6	9.5	9.4	9.2	9.1	9	8.9	8.8	8.7	8.6	8.5	8.3	8.3	8.1	7.9	7.6	7.5	7.3	7
SBJ	4.1	4.1	4.2	4.3	4.4	4.5	4.5	4.6	4.8	4.8	4.9	5	5	5.1	5.2	5.2	5.3	5.4	5.6	6.3
SR	13.3	12.7	12.6	12.4	12.2	11.8	11.8	11.6	11.6	11.5	11.5	11.4	11.4	11.2	11.1	11.1	11.1	10.9	10.7	10.5
FAH	5	6	7	8	8	9	9	9	10	10	10	11	11	12	12	12	12	13	14	15
SU	14	15	15	18	18	20	20	21	21	22	24	24	25	25	27	28	29	30	33	36
500 YDR	3.2	3	3	3	3	2.74	2.64	2.6	2.5	2.44	2.42	2.41	2.4	2.4	2.4	2.4	2.38	2.35	2.32	2.5

5. CONCLUSION

This study was assessment and reconstruct of AAHPER test in Sri Lankan youth aged 10-17(n=1000). The test battery consist with six test items give a measure of physical fitness for both girls and boys also provide keen incentive to improve fitness level of youth .According to data analysis, there is norms' value of relevant percentiles to measure the youth physical fitness in Sri Lanka.

The analysis norms' value of both girls and boys indicated a significant difference in comparison with the AAHPER test standard norms' value.

The statistically comparison of all test scores both girls and boys were actually decreases performance in 100th percentile norms' value. The reconstruction of AAHPER test in Sri Lanka represent an important innovation in the field of physical education and youth fitness it is dedicated to providing the best possible physical fitness assessment.

6. RECOMMENDATION

According to this research government should take process to assess the physical fitness level of youth aged 10-17 and conduct the physical fitness programmes. Ministry of Sports and Ministry of Education should consider the reconstruct percentile norms' values and when assess the fitness level use this relevant age and relevant test items percentile norms' value.

REFERENCES

- Baranowski, T., Bouchard, C., Bar- or, O., Bricker, T., Heath, G., Kimm, S. Y., Malina, R., Obrazend, E., Pate, & Strong, W.B (1992). Assessment, prevalence and cardiovascular benefits of physical activity and fitness in youth. *Med Sci Sports Exerc*, 24, S237-S247.
- Caspersen, C.J., Powell, K.E. and Christenson, G.M (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health related research. *Public health reports*, 100, 126.
- Castro- Pinero, J., Artero, E.G., Espana-Romero, V., Ortega, F.B., Sjostrom, M., Suni, J. & Ruiz, J. R. (2009). Criterion-related validity of field-based fitness test in youth: a systematic review. *British journal of sports medicine*.
- Clark, B.A. (1989). Test for fitness in older adults: AAHPERD Fitness Task Force. *Journal of Physical Education, Recreation & Dance*, 60, 66-71.
- Collingwood, T.R. (1997). Providing physical fitness programs to at-risk youth. *Quest*, 49, 67-84.
- Cooper, K.H., Everett, D., Meredith, M.D., Kloster, J., Rathbone, M. & Read, K. (2010). Preface: Texas statewide assessment of youth fitness. *Research quarterly for exercise and sport*, 81, 2-4.
- Hunsicker, P.A. and Reiff, G.G. (1976). AAHPER youth fitness test manual .
- Gaurav, V., Singh, A. and Singh, S. (1976). Comparison of physical fitness variables between individual games and team games athletes, *Indian Journal of Science and Technology*, 4, 547-549.
- Kwak, L., Kremers, S.P., Bergman, P., Rizzo, N.S. and Sjostrom, M. (2009). Associations between physical activity, fitness, and academic achievement. *The journal of pediatrics*, 155, 914-918.e1.
- Kumari, S. and Kumar, N. (2015). A comparative study of physical fitness components between kho-kho and kabaddi girls players of Haryana. *International Journal of Physical Education, Sports and Health*.
- Mahar, M.T. and Rowe, D.A. (2008). Practice guidelines for valid and reliable youth fitness testing. *Measurement in Physical Education and Exercise Science*, 12, 126-145.
- Plowman, S.A., Sterling, C.L., ORBIN, C.B., Meredith, M.D., Welk, G.J. & Morrow, J.R. (2006). The history of FITNESSGRAM. *Journal of Physical Activity and Health*, 3, S5-S20.
- Rikli, R.E. and Jones, C.J. (1999). Development and validation of a functional fitness test for community-residing older adults. *Journal of aging and physical activity*, 7, 129-161.
- Ruiz, J.R., Caastro-Pinero, J., Artero, E.G., Ortega, F.B., Sjostrom, M., Suni, J. and Castillo, M.J. (2009). Predictive validity of health-related fitness in youth: a systematic review. *British journal of sports medicine*.

Saint Romain, B. & Mahara, M.T. (2001). Norm-referenced and criterion-referenced reliability of the push-up. Measurement in physical education and exercise science, 5, 67-87.

Whitehead, J.R. and Carbin, C.B. (1991). Youth fitness testing : The effect of percentile-based evaluation feedback on intrinsic motivation. Research Quarterly for Exercise and Sports, 62, 225-231.

Yadav, S.K.S. (2016). A comparative study of speed and explosive strength of 14 to 20 years football players of rural and urban area of Bilaspur.

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