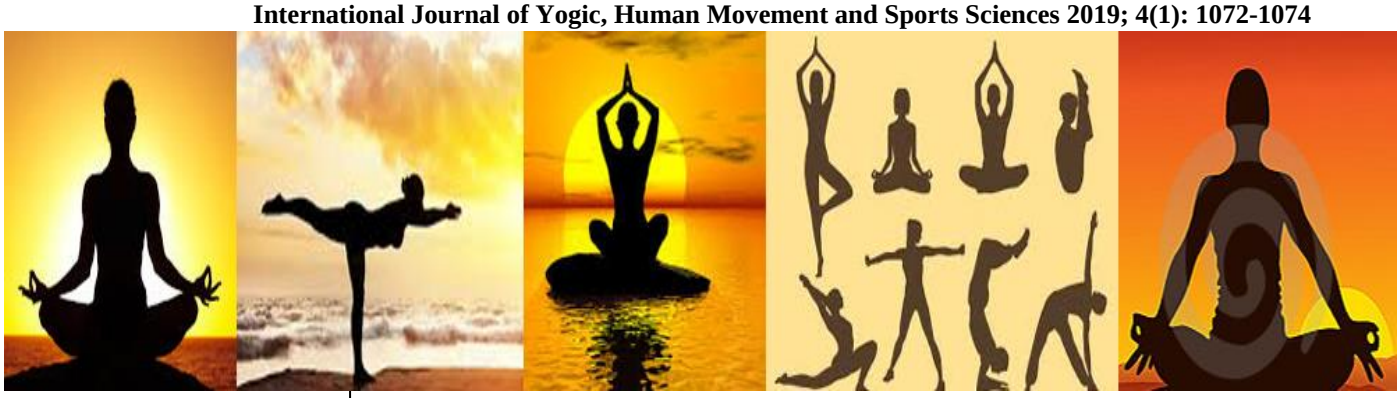
International Journal of Yogic, Human Movement and Sports Sciences 2019; 4(1): 1072-1074



ISSN: 2456-4419
Impact Factor: (RJIF): 5.18
Yoga 2019; 4(1): 1072-1074

www.theyogicjournal.com
Received: 10-11-2018
Accepted: 12-12-2018

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Exploring relationship between measured and perceived flexibility of high school students

Rohan D' Costa and Dr. Gajanana Prabhu B

Abstract
World is the largest mixture of races and different types of customs and traditions are followed in this society. World health day was celebrated every seventh April because it gives us the consciousness regarding Health. Health is wealth and physical fitness is the key for the healthy life. Physical activities are bodily movements produced by skeletal muscles that result in energy expenditure. Physical activity may be our daily occupation, sports and other activities. Exercises are the set of programmers' that can be involved in physical activities. Health related Physical fitness are important for productive living of individuals. Health related physical fitness is necessary for every individual irrespective of age and sex. The knowledge of our own body mechanism, the merits demerits employs a good and healthy system which is the basic and primary need at this century to lead a happy and healthy life in the society. Knowing our own body mechanism, we can avoid many non-communicable diseases like obesity, hypertension, heart diseases and cancer. Flexibility is defined for a joint or a group of joints as its range of motion, or degree of extension, that its tissues are capable of. The purpose of the present investigation was to measure the correlation between measured and perceived flexibility of high school students. The subjects for the present study were four hundred high school students studying in various schools of Shivamogga district. The Sit and Reach Test is a measure to assess the flexibility of lower back and muscles of hamstring. Data on perceived endurance of subjects was measured using a five point likert scale. The test was conducted with due permission in the school premises during spare time of the subjects with prior consent. Apart from descriptive statistics like Mean and Standard Deviation, Pearson product moment correlation was applied to elicit association between measured and perceived flexibility. there is significant *weak* positive linear relationship between measured and perceived flexibility in girl's section. In boy's section, it is found that there is significant *moderate* positive linear relationship between measured and perceived flexibility.

Keywords: Flexibility, sit and reach, self-perception, physical fitness, health

Introduction
World is the largest mixture of races and different types of customs and traditions are followed in this society. The development of technology and other forms of scientific basement are up-coming in our society for the development of branches in science. Drastic changes are taking place in field of science and medical science or we can say development in different wings of science.

"Health is wealth" reveals the importance of health. To be fit physically, mentally and socially we should always take care of one's health. World health day was celebrated every seventh April because it gives us the consciousness regarding Health. This day is celebrated world-wide because it focuses mainly on the health. It emphasizes on the initiatives to be taken by the every individual regarding obesity and its ill effects.

Health is wealth and physical fitness is the key for the healthy life. To do the routine activities we need good health, to be fit and fine and perform daily activities which may be our sporting activity or one professional duties or it may be daily routine work in our home. Proper nutrition, physical exercise and adequate rest is the key to maintain good physical fitness.

The term Physical fitness, exercise and physical activities are often confusing terms. Physical activities are bodily movements produced by skeletal muscles that result in energy expenditure. Physical activity may be our daily occupation, sports and other activities. Exercises are the set of programmers' that can be involved in physical activities.

Lastly physical fitness means a set of trait that are either skill related or the health related and which features can be measured through specific tests (Caspersen, Powell and Christenson, 1985) [2].

Health related Physical fitness are important for productive living of individuals. Health related physical fitness is necessary for every individual irrespective of age and sex. There are five components of health related physical fitness: Cardiovascular Endurance, Muscular Endurance, Muscular Strength, Flexibility and Body Composition.

The knowledge of our own body mechanism, the merits demerits employs a good and healthy system which is the basic and primary need at this century to lead a happy and healthy life in the society. Knowing our own body mechanism, we can avoid many non-communicable diseases like obesity, hypertension, heart diseases and cancer. The knowledge of one's own health formulated in the earlier life can give good result in the future days. The basic idea regarding attitude of weight control, eating disorders are very important to know our health and fitness very clearly. Self-body image or self- appearance play a vital role in uplifting our state of physical, mental as well as social health behavior. Psychological factors like negative self-body images may spoil our life which leads to denial impression while we get older and older.

Flexibility is defined for a joint or a group of joints as its range of motion, or degree of extension, that its tissues are capable of. Flexibility prevents injuries in day to day living and as well as in sports. It improves posture flexibility is very important. It aids in stretching muscle for any activity flexibility is important. It facilitates in performing better in sports Coordination of muscle and nerve can be improved by flexibility.

The objective of study

The purpose of the present investigation was to measure the correlation between measured and perceived flexibility of high school students

Methodology

The subjects for the present study were four hundred high school students studying in various schools of Shivamogga district. The subjects were studying in 8th to 10th standard. Both male (N=200) and female (N=200) subjects were included in the study. The Sit and Reach Test is a measure to assess the flexibility of lower back and muscles of hamstring. Wells and Dillon in 1952 was first to introduce this to measure flexibility. It helpful to examine the flexibility of forward pelvis tilt and lower back. Sit and reach box (Baseline 12-1086 Sit and Reach Trunk Flexibility Box, Deluxe) was used in the present investigation. The subjects removed the shoes and sat flat on the floor with legs stretched out and joined together in front with knees straight and feet flat facing the front of the flexibility box. Head and back were placed against the wall. In a slow and steady movement, the subject was asked to lean forward as much as possible. The subjects were instructed to keep their knees straight and slide hand with the palm facing downward as far as possible by holding the position for three to four seconds. No jerky movement were allowed and the result was recorded in centimeters. And return to the same relaxed position and take rest for ten to fifteen seconds and repeat for three times. The distance reached by the was recorded in terms of centimeters or in the inch. Data on perceived endurance of subjects was measured using a five point Likert scale. The subject was asked to rate their endurance on a questionnaire wherein they were given to tick one of the five options viz a) exceptionally flexible b) Quiet flexible or c) Quiet normal d) Quiet less flexible e) abnormally too low. The response given by the subject was purely based on the perception of the subject under investigation (Rahmani-Nia, *et al*., 2011) [5]. The tests were conducted with due permission in the school premises during spare time of the subjects with prior consent. Apart from descriptive statistics like Mean and Standard Deviation, Pearson product moment correlation was applied to elicit association between measured and perceived flexibility.

Findings of the study

The raw data on flexibility measured in terms of sit and reach were subjected to suitable descriptive statistical techniques. The results are given in table 1.

Table 1: Descriptive results on measured flexibility of high school students

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Girls	200	32.00	11.00	43.00	27.72	5.83
Boys	200	39.00	10.00	49.00	26.52	7.34

From table 1 it is clear that the flexibility of girls is 27.72±5.83 and boys is 26.52±7.34. The raw data on perceived flexibility expressed in terms of rating were subjected to suitable descriptive statistical techniques. The results are given in table 2.

Table 2: Descriptive results on perceived flexibility of high school students

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Girls	200	4.00	1.00	5.00	2.87	.73
Boys	200	4.00	1.00	5.00	2.93	.84

From table 2 it is evident that the perceived flexibility of girls is 2.87±0.73 and boys is 2.93±0.84. The correlation coefficient between measured and perceived flexibility were found out to understand the relationship between the two set of scores in both girls and boys section. The results are provided in table 3.

Table 3: Summary of correlation coefficient between measured and perceived flexibility in high school students

			Perceived flexibility
Girls	Measured flexibility	Pearson Correlation	.272**
		Sig. (2-tailed)	.000
		N	200
Boys	Measured flexibility	Pearson Correlation	.302**
		Sig. (2-tailed)	.000
		N	200

**Significant at .01 level (2 tailed)

From table 3 it becomes obvious that there is significant *weak* positive linear relationship between measured and perceived flexibility in girl's section. In boy's section, it is found that there is significant *moderate* positive linear relationship between measured and perceived flexibility.

Discussion

From the results of this study it can be inferred that there is significant positive correlation between measured and perceived flexibility of high school students under investigation. The correlation is weak in girls and moderate in boy's section. This means that the subjects under investigation are aware of their flexibility status. It has to be observed here that the boys are better aware than girls.

Haugen, *et al*. (2013) [3] investigated that if flexibility mediates the cross-sectional correlation between physical activity and physical self-perception in a sample of fifteen-year-old adolescents. There was an indirect outcome of physical activity on physical appearance through physical strength/power and flexibility in males. No indirect effects of physical activity on physical appearance through actual physical fitness indices were detected in females.

Brewer, and Olson (2015) [1] evaluated the bivariate and multivariate relationships among the sub domains of physical self-concept, self-esteem, and objective measures of physical fitness in young healthy female graduate students. No established relationship has been reported between physical self-concept and physical fitness for young women. Physical self-concept and physical activity has been shown to be lower in girls than boys and this pattern of reduced physical self-concept and physical activity persists into young adulthood. Rahmani-Nia, *et al*. (2011) [5] examined the associations between Self-perceived and measured physical fitness of male college students. In all subject, self- perceived scores higher than actual fitness scores. The results clearly indicated that non-athlete male student's did not sufficient skills to competently undertake self-perceived of their fitness. Monroe, *et al*. (2010) [4] investigated the relation of college students self-perceived and measured physical fitness.

Conclusion

There is weak positive linear relationship in high school girls; and moderate positive linear relationship in boys between measured as well as perceived flexibility.

References

1. Brewer WA, Olson SL. Are There Relationships between Perceived and Actual Measures of Physical Fitness and Health for Healthy Young Women?, comprehensive psychology, SAGE Journals, 2015, 4(2). ISSN-2165-2228.
2. Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise and physical fitness: definition and Distinction for health related research; Public Health Report; 1985; 100(2):126-131.
3. Haugen T, Ommundsen Y, Seiler S. The Relationship Between Physical Activity and Physical Self-Esteem in Adolescents: The Role of Physical Fitness Indices, Pediatric exercise science. 2013; 25(1):138-53.
4. Monroe CM, Thomas DQ. Lagally K, Cox A. Relation of college students' self-perceived and measured health-related physical fitness, PubMed, US National Library of Medicine National Institutes of Health, perceptual and motor skills. 2010; 111(1):229-39.
5. Rahmani-Nia F, Damitchi A, Azizi M, Hoseini R. Associations Between Self-Perceived and Measured Physical Fitness of Male College Students, World Applied Sciences Journal. 2011; 14 (9):1331-1338.