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Comparative study on selected motor fitness component between different levels of kho-kho players

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Abstract

The purpose of the study was to find out the compare on selected motor fitness components between State and National levels male Kho-Kho players of West Bengal. 40 male kho-kho players (20 State level kho-kho players 20 National Level kho-kho players) of different districts in West Bengal. The average range between 18- 21 years. The Motor Fitness Components were selected -Speed, Flexibility, Agility and Muscular Strength Endurance for this study. In order to find out the significant difference on selected physiological variables between yoga practitioners and sedentary college girls Students “t” test were set at 0.05 level of confidence, which was considered as appropriate and adequate for the purpose of this study. The result reveled there was significant different was found on Speed, Flexibility and Agility but there was no significant different in Muscular Strength Endurance. The speed, Agility and Flexibility was noted that the National Kho-Kho Players were faster and more flexible than the State level Kho-Kho Players.

Keywords: motor fitness, speed, flexibility, agility, muscular endurance

Introduction

In these days of explosive population growth and advanced technology, considerable emphasis is being laid on educating a citizen to maintain optimum level of fitness for personal efficiency and national progress all over the world. The general definition of physical fitness is “a set of attributes that people have or achieve relating to their ability to perform physical activity” (U.S Department of health and Human Services [USDH, HS], 1996). Measureable components of physical fitness. Health –related physical fitness and skill-related physical fitness. Health-related physical fitness relates to functional health It is believed that all students can improved their health status through daily physical activity. On the other hand, skill related physical fitness refers to physical performance related to athletic ability. It is performance oriented and influenced by genetic traits and abilities.

Motor fitness also termed motor ability refers to person’s performance abilities as affected by the factors of agility speed explosive strength. And flexibility Motor Fitness refers to the factor ability of an athlete to perform successfully at their sport. Motor fitness might be referred as an efficient performance in such basic requirements as running, jumping, dodging, climbing, swimming with sustained efforts in variety of situation and therefore, would involve such element as power, speed, agility, blance. If there is life, there is movement. All living being are instinctively active; they move the live: they live because they move. All functions of the organism are function of movement. Movement is the cosmic principle of the matter and mind. Physical activity and healthy sports are essential for our health and wellbeing.

With advancement of age, there has been a surge of interest in the growth and motor development of children. Physical Educationist, other scholars and others like psychologists, physiologists, physicians, coaches, etc. have become more aware of the need for accurate information about the process of growth and motor development and its influence on the developing child.

The term motor fitness is most often used synonymously with physical fitness by the coaches but it is very important for the physical education students to understand the basic difference between physical fitness and motor fitness. Physical is used to denote only the five basic fitness components (muscular strength, muscular endurance, cardiovascular endurance,

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freedom from obesity and flexibility.) whereas motor is a more comprehensive term, which includes all the ten fitness components including additional five more performance components (power, speed, agility, balance and reaction time) important mainly for success in sports. In other word, motor fitness refers to the efficiency of basic movement in addition to the physical fitness. (D.K.KANSAL, 1996)^[15].

The importance of motor fitness for the proper growth and development of an individual can never be questioned. The organic system of a totally fit person function well. Motor fitness permits greater freedom of body movement and is helpful for the maintenance of working capacity for longer time. It helps in preventing injuries and in increasing coordination of movement and shortening the pace for acquiring and perfecting movement. It constitutes to the formation of concepts and ideas and development of confidence. "A readiness or preparedness with special regard for big muscle activity without undue fatigue".

Motor fitness is an important component of physical fitness; it may be defined as a readiness of the body for performance with special regard to big muscle activities without undue fatigue. It is concerned with the capacity to move the body efficiently with force over a reasonable length of time. It is limited in scope than physical fitness or total fitness. Motor fitness is a standard measured by performance and this performance is based on a composite of many factors or components such as speed, agility, power, co-ordination, balance and reaction time.

Motor ability extensively includes a combination of abilities that contribute to motor skill or motor performance. Continued practice brings about changes in the combination of these abilities. Motor abilities become more important in task performance than non-motor abilities and task specific factors emerge with practice.

Physical educators, exercise physiologists, and physicians have proposed many tests to demonstrate the effect of such programs. These tests have generally been labeled "Motor Fitness Test" "Physical Fitness Tests" and "Cardiovascular Tests". Additional tests have been developed by many colleges and universities. With so many groups and individuals promoting different fitness test, the practitioner may easily become confused especially when the same items appears in both motor and physical fitness tests. Thus one might ask whether there is a difference between motor fitness and physical fitness. Are the dimensions of fitness equally relevant to all the people of all ages? Obviously, the nature of fitness- what it means to the participant the type of fitness activities selected, the intensity and duration of exercise- varies with aging among school children through adulthood, the middle age, and old age. In other words, fitnesses is specific to the needs of different populations. This is reflected in the perennial question. "Fitness for what?"

The importance of an optimal level of physical fitness as a reflection of certain aspects of health was demonstrated by the

work of Kraus and Raab (1961) on hypo-kinetic diseases, or diseases directly related to a lack of exercise. These physicians identified low back pain, foot problems, abdominal posies, obesity, hypertension, and degenerative cardiovascular diseases as conditions produced by sedentary lifestyles in our affluent, tension-producing society. Thus the concept of physical fitness does convey a meaning of healthful living. Because heart disease, stroke and circulatory disorders are still primary causes of poor fitness is highly relevant for all people. Sedentary people suffer a higher incidence of coronary heart diseases than active persons.

Thus attaining a desirable level of physical fitness is an important Paffenbarger aspect of preventive medicine because physical inactivity appears to be related to the coronary heart disease. Recent longitudinal data shows that Harvard alumni who expend 2000 calories a week in vigorous exercise during their life span will increase the quality of life as well as live one or more years longer than sedentary persons. For most young participants however a physical fitness test is one that attempts to measure the efficiency of both the muscular and cardiovascular systems

Statement of the Problem

The purpose of the study was to investigate the comparative study on selected motor fitness component between State and National levels male of kho-kho players.

Methodology

The proposed of study 40 Kho-Kho players out of 20 were selected purposively from Purba Medinipur District (Those who represents District Senior Team) and 20 were selected purposively from Burdwan, North 24pgs and Nadia district (Those who represents State Senior Team) West Bengal as subjects for this study. The average range between 18- 21 years.

Administration of Physical Fitness Test

1. For speed the students were asked to run as fast as they can up to 50 yards and the result were recorded to the nearest 1/10th seconds.
2. 4×10yds shuttle run test were administered to measure agility and the results were recorder to the nearest 1/10th seconds,
3. Flexibility was measured with the help of sit and reach test and the results were recorded in inch
4. Abdominal strength and endurance was measured through Bend knee sit up test for one minute and the number of legal sit up was considered as a result

Statistical Procedure

In order to find out the significant difference on selected Physical Fitness variables Physical Education students "t" test were set at 0.05 level of confidence, which was considered as appropriate and adequate for the purpose of this study.

Finding

Table 1: Mean Standard deviation and ‘t’ test in Speed, Agility, Abdominal Strength Endurance, and Flexibility between State and National Level male Kho-Kho players

Variable	Mean		Std- Deviation		‘t’ ratio
	State Level	National Level	State Level	National Level	
Speed(sec)	7.14	6.40	.308	.295	4.631*
Agility(sec)	9.95	9.02	.90	.81	2.76*
Abdominal Strength Endurance (Number)	42.55	39	7.11	9.29	0.182*
Flexibility (inch)	18.48	23.23	1.85	1.95	8.78*

Tab_{0.05}-(38) = 2.021, *= Significant

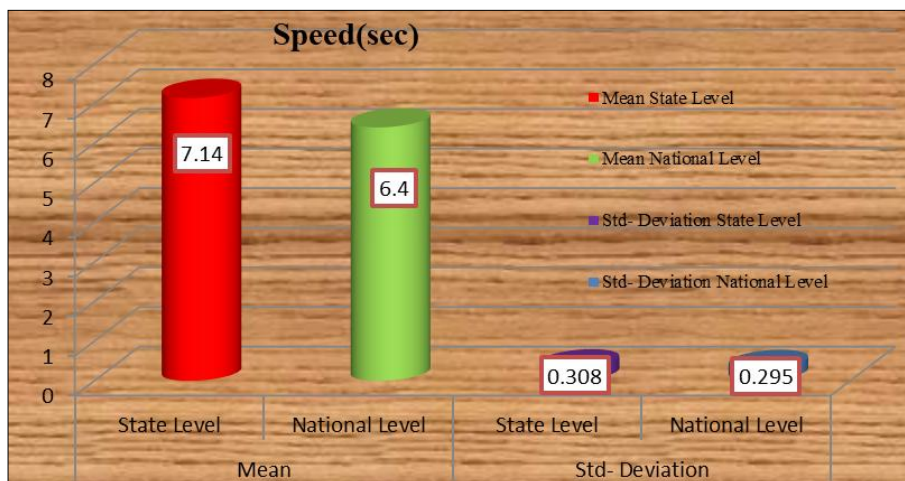


Fig 1: Comparison of Speed between State and National Level male Kho-Kho players

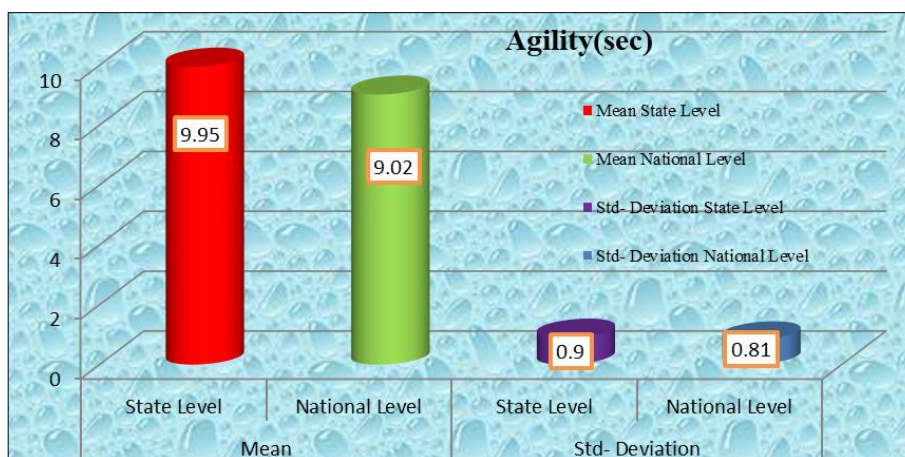


Fig 2: Comparison of Agility between State and National Level male Kho-Kho players

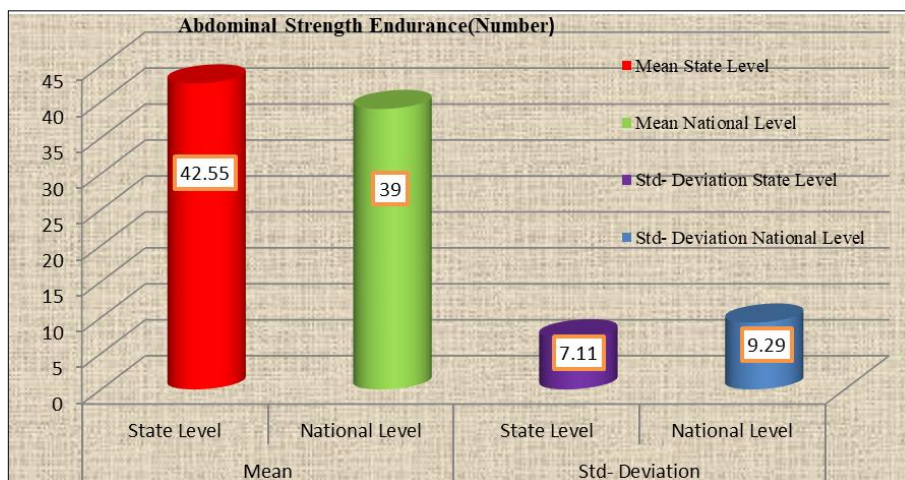


Fig 3: Comparison of Abdominal Strength Endurance between State and National Level male Kho-Kho players

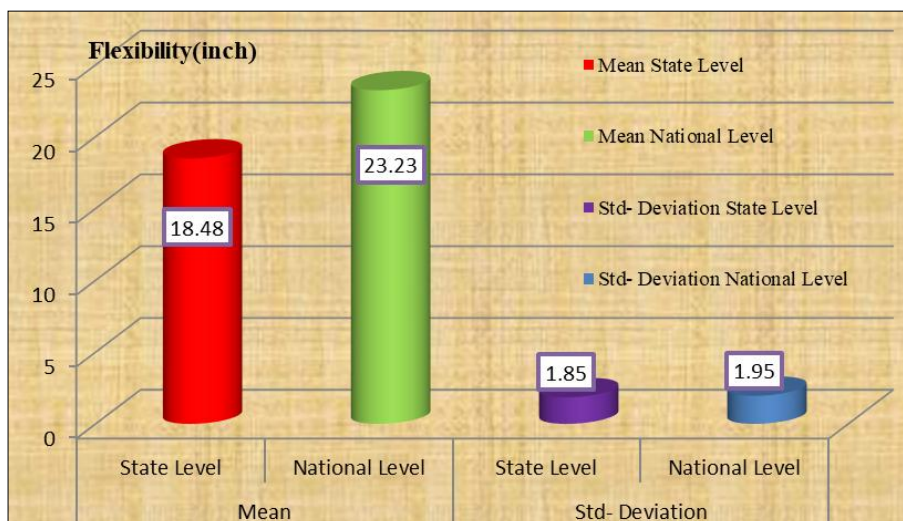


Fig 4: Comparison of Flexibility between State and National Level male Kho-Kho players

Discussion of Finding

The result (Table-1) shows that there were a significant difference in Speed, Agility and Flexibility but not significant difference on Abdominal Strength Endurance between State and National Level male Kho-Kho players.

In case of speed the researcher found that National level Kho-Kho player's shows superior sprinting performance compare to State level Kho-Kho players. It reveals that the National level Kho-Kho players are having better sprinting performance due to their adjustable ability with the environment and situation before competition. They are able to control their emotion and anxiety. Their nutritional status, blended demand with training for skill development in their training schedule and previous record in competition increase their confident level before test which much emphasis to this components which and reflected through the significant difference in the 50 Yard dash.

In case of agility researcher found that National level Kho-Kho player's shows superior agility performance compare to State level Kho-Kho players. It reveals that the National level Kho-Kho players are having better agility performance. Because the adjustable ability with the environment and situation before competition. They are able to control their emotion and anxiety. Their nutritional status, blended demand with training for skill development in their training schedule and previous record in competition increase their confident level and also greater speed than the State level Kho-Kho players which effects on the performance relate to agility, for this region the National level Kho-Kho players shows greater performance.

In case of Flexibility researcher found that National level Kho-Kho player's shows superior Flexibility performance compare to State level Kho-Kho players it may be due to that the back of the leg, the hamstrings are made up of three muscles with tendons that cross over both the knee and hip joints. Because the muscle attaches to two joints, any decreased joint mobility affects the length of the muscle. Because of our sedentary culture, we spend an inordinate amount of time sitting - with both the knees and hips bent. This position directly impacts the length of the hamstrings. Athletic activities, such as running and biking, further shorten the hamstrings. This tightening also affects the pelvis because the tendons attach to the sit bones (ischialtuberosities), the bottom hooks of the pelvic bowl. In sitting and even in standing, the shortening of the hamstrings can rock the pelvis backward, causing a rounded, slouchy position in the lower

back. This rounded position can stress the back muscles.

Reference

1. Kansal K. Devinder-Applied Measurement Evaluation & Sports selection (Second Edition).
2. Biddle S, Page A, Ashford B, Jennings D, Brooke R, Fox K. Assessment of children's physical perceptions. *International Journal of Adolescence and Youth*. 1993; 4:93-109.
3. Chin M, Wong A, So R, Siu O, Steininger K, Lo D. Sport specific fitness testing of elite badminton players. *British Journal of Sports Medicine*, 1995.
4. Chin MK, Wong AS, So RC, Siu OT, Steininger K, Lo DT. Sports specific fitness testing of elite badminton players. *British Journal of Sports Medicine*. 1995; S29(3):153-157.
5. Darla Castelli M, Julia Valley A. The Relationship of Physical Fitness and Motor Competence to Physical Activity, *Journal of Teaching in Physical Education*. 2007; 26:358-374. © 2007 Human Kinetics, Inc.
6. Elliott BC, Ackland TR, Blanksby BA, Hood KP, Bloomfield J. Morphological, physiological, and psychological normative data. *Australian Journal of Science and Medicine in Sport*, 1989.
7. Hrick Tadeu Prado, VagnerRaso, Renata Coelho Scharlach, Cristiane Akemi Kasse. Hatha yoga on body balance IJOY *International Journal of yoga* Volume. 2014; 7(2):133-137.
8. Filipcic A, Pisk L, Filipcic T. Relationship between the results of selected motor tests and competitive successfulness in tennis for different age categories. *Kinesiology*. 2010; 42(2):175-183.
9. Gabbett T, Kelly J, Pezet T. Relationship between physical fitness and playing ability in rugby league players. *The Journal of Strength and Conditioning Research*. 2007; 21(4):1126-1133.
10. Galantino ML, Bzdewka TM, Eissler-Russo JL, Holbrook ML, Mogck EP, Geigle P *et al*. The impact of modified Hatha yoga on chronic low back pain A pilot study. *Altern Ther Health Med*. 2004; 10:56-59.
11. GoliSrinivas, Singh Prashant K, Arokiasamy Perianayagam How Far Socio-Economic Determinants Affect The Demographic And Health Inequalities In Urban India: Evidences From Nfhs-3, 2004.
12. Hadi N. Effects of hatha yoga on well-being in healthy adults in Shiraz, Islamic Republic of Iran. *East Mediterr*.

- Health J. 2004; 13:829-837.
13. Johnson Barry L, Nelson Jack K. Practical Measurements for Evaluation in Physical Education (Third Edition). Surjeet Publications.
 14. Johnson L. Barry-Practical Measurement for Evaluation in physical education. (Third Edition). Surjeet publications.
 15. Kansal DK. Test and measurement in sports and Physical Education, DVS Publications, New Delhi, 1996.
 16. Lega Sushil. A Comparative Study of Selected Motor Abilities of Football and Handball Players www.ijobsms.in, 2016, 3(4).
 17. Lidell L. The Sivananda Companion to Yoga. New York, NY: Simon & Schuster Inc., 1983.
 18. Maja Petric, Renata Vauhnik, Miroljub Jakovljevic. The Impact of Hatha Yoga Practice on Flexibility: A Pilot Study *Alternative & Integrative Medicine*. 2327-5162.
 19. Mandeep Singh Nathial. Analysis of Set Shot in Basketball in Relation with Time to Perform the Course and Displacement of Center of Gravity. *American Journal of Sports Science*. 2014-2015; 2(5):122-126. DOI: 10.11648/j.ajss.20140205.13
 20. Mastrangelo MA, Galantino M, House L. Effects of yoga on quality of life and flexibility in menopausal women: a case series. *Explore*. 2007; 3:1.
 21. Nelson K. Jack- Practical Measurement for Evaluation in physical education. (Third Edition). Surjeet publications.
 22. Posadzki P, Parekh S. Yoga and physiotherapy: a speculative review and conceptual synthesis. *Chin J Integr Med*. 2009; 15:66-72.
 23. Selvamurthy W, Nayar HS, Joseph NT, Joseph S. Physiological effects of yogic practice. *Nimhans journal*, 1983, 71-80.
 24. Singh Ajmer *et al*. Essential of physical education. Kalyani Publishers, New Delhi.