ORIGINAL RESEARCH PAPER

Physical Education

KEY WORDS:

A COMPARATIVE STUDY OF PHYSIOLOGICAL VARIABLES AMONG RURAL AND URBAN FOOTBALL PLAYERS OF MURSHIDABAD DISTRICT.

Avijit Deb* SACT Reacher r, Krishnath College, Berhampore, Murshidabad. *Corresponding Author

Dr. Amit Banerjee Assistant Professor, Post Graduate Government institute for Physical Education, Banipur, India.

ABSTRACT

Fitness is the term, which is universally used in the present-day health responsive society. The people have realized the importance of fitness in day-to-day routines and also in achieving sports of high quality. The main purpose of the study was to find out some Physiological Variables of Rural and Urban Football Players Only college level male subjects were selected the age groups of the subjects were above 18 to 22 years. Some physiological variables (Vital capacity, Blood pressure, Pulse rate, Resting Heart rate, Haemoglobin, Breath holding Capacity) were measured. For the present study 20 subjects from each group were selected as subjects. The result shows that rural football players are larger than urban football players in terms of physiological variables.

INTRODUCTION

Fitness represents a person's physique in relation to its physical attainments. The latest scientific evidence also edict the fact that for internal or physiological accuracy physical fitness is required. Modern physical educators divided the factor of fitness into skill related and Health related physical fitness. It is also an unwanted fact, that the health related physical fitness, which is the main anxiety for physical educationists, is dependent on the skill related physical fitness of an individual.

Historically, the following meaning of physiology is well exemplified by the way in which the word is used in the two following citations. The first is from 1704 (J. Harris, Lexicon Technical) Physiology, is by some also reported a Part of Physic' (i.e. Medicine), that teaches the Structure of the Body so far as it is sound, or in its Natural State; and endeavours to find Motives for its Functions and Operations, by the Help of Anatomy and Natural Philosophy". Physiological fitness can be defined as fitness relating to the physical aspects of the human body. Other than psychological and emotional fitness assessments, physiological fitness assessments involve testing a client's cardio-vascular fitness, muscular strength, flexibility, gait, and others. The second (a definition of Charles Darwin's colleague T. H. Huxley), 150 years later, is virtually identical to current usage: 'whereas that part of biological science which deals with form and structure is called Morphology; that which concerns itself with function is Physiology'.

Statement Of The Problem

The determination of the study is to limit the physiological variables of Rural and Urban Football Players. Therefore, the problem has been stated as "A Comparative study of Physiological Variables among Rural and Urban Football Players of Murshidabad District,".

Objectives Of The Study

The objectives of the study are as follows:

- To provide a basic groundwork in those features of physiology that will be vital for further studies in exercise physiology.
- To bring students with a variety of life science background, to a common level of consideration of the physiological principles important in the responses of the human body to sport and exercise.
- Increase their understanding of how physiological factors influence participation and performance in sport, exercise, and physical education settings.
- Increase their understanding of how participation in sport, exercise, and physical education contributes to individual growth and development.
- Exercising can help to improve mood, self-esteem, and brain function, resulting in a decrease in anxiety and depression. This can be especially important when having a client who is trying to rehabilitate, drop weight, or recover from a medical procedure.

Methodology

Selection of the subject

The subjects for this study will be selected by purposive sampling technique from Rural and Urban football players, Total of 20 male subjects will be selected (20 from each group i.e. Rural and Urban School football players of Jaipur District.

The age of the subjects will be 18 to 22 years.

Tools To Be Used

Tools Used for measuring Physiological variables are:

- Resting Heart Rate will be measured by counting the number of heart beats in ten seconds and multiply by six and will be recorded in numbers.
- Pulse Rate will be measured by counting the number of heart beats in ten seconds multiplied by six and will be recorded in numbers.
- Vital Capacity will be measured by a wet Spirometer and will be recorded in litters.
- Blood pressure will be measured by a Sphygmomanometer.
- Haemoglobin content (gm%) will be measured by HB Haemoglobin testing apparatus.
- Common clinical methods of measuring physical activity include heart rate monitoring, questionnaires, accelerometers, and pedometers.
- Breath holding capacity will be measured by stop watch.
- A physical fitness assessment includes measures of body composition, cardiorespiratory endurance, muscular fitness, and musculoskeletal flexibility. The three common techniques for assessing body composition are hydrostatic weighing, and skinfold measurements, and anthropometric measurements.

Statistical Procedure Used

The values of mean, standard deviations of all the variables were computed on SPSS and 't' test was applied to find out significance of differences between the scores of the selected variables and groups. To test the hypothesis the significance level will be set at 0.05 percent.

A Comparative Study of Physiological Variables among Rural and Urban Football Players of Murshidabad District.

Data Analysis

Table- 1

Sl. No.	Samples	Variables	Mean	S.D.	t-value
1	Rural football player	B.P. Systolic	119.3	1.809	1.573
	Urban football player		117.1	6.448	
2	Rural football player	B.P. Diastolic	78.65	2.907	2.128
	Urban football player		73.9	8.663	
3	Rural football player	Pulse-rate	73.7	2.003	3.663
	Urban football player		77.25	3.683	
4	Rural football player	Resting Heart rate	53.95	4.763	-1.194
	Urban football player		56.05	5.266	
5	Rural football player	Hemoglobin	14.01	0.5119	2.630
	Urban football player		13.425	0.758	
6	Rural football player	Vital Capacity	3640	471.727	6.189
	Urban football player		2665	670.801	
7	Rural football player	Breath holding capacity	28.10	3.626	3.537
	Urban football player		22.60	5.642	

DISCUSSION & FINDING

The research showed a significant difference in blood pressure (diastolic), Resting Heart Rate, Haemoglobin, Vital capacity & Breath holding capacity among rural & urban football players.

It was settled from the result of the study that rural area football players were shown acceptable significance in physiological variables such as less pulse rate, greater breath holding capacity than urban area football players.

In judgement the results of the present study confirm that rural football players are relatively better than urban football players Murshidabad district. Rural football players are greater to urban football players in b.p. (diastolic), resting heart rate, haemoglobin & breath holding capacity whereas urban football players are greater to rural players in pulse rate.

This shows that regular spirited activity produces physical fitness improvement. Rural lifestyle is more active in nature than the live in urban areas which produced high levels of physical and physiological functioning in rural descendants.

A similar type of result was obtained in the work of Mehtap &Nihal (2005) who conducted a study on physical fitness in rural students compared with urban students in Turkey and found that students living in the urban area were more inactive and obedient than rural students.

REFERENCES

1. Andersen, K.L., Rutenfranz, V.S., Ilmarinen, J., Berndt, I., Keylian, H. & Ruppel, M. (1984). The growth of lung volumes affected by physical performance capacity in boys and girls during childhood and adolescence.Eur J Appl Physiol OccupPhysiol, 52, pp.380-384.
2. Bruner, M.W., Lawson, J., Pickett, W., Boyce, W. & Janssen, I. (2008). Rural Canadian adolescents are more likely to be obese compared with urban adolescents. International Journal of Pediatric Obesity. 3(4), pp.205-211.
3. Cameron, N., Kgamphe, J.S., Leschner, K.F. & Farrant, P.J. (1992). Urban-rural differences in the growth of South African black children. Ann Hum Biol, 19, pp.23-33.
4. Chatterjee, S., Mandal, A. & Das, N. (1993). Physical and motor fitness level of Indian school going boys J Sport Med Phys Fit, 33(3), pp.268-277.
5. Chaudhuri, S. (1990). Calcutta: The living city: The present and future. An article by S.C. Chakraborty.The growth of Calcutta in the twentieth century, pp.1-14. NewYork: Oxford University press,
6. Corbin, C.B. & Lindsey, R. (1994). Concepts of physical fitness with laboratories. 8th Ed. Madison, Wis.: Brown & Benchmark Publishers.
7. Corlett, J.T. & Mokgwathi, M.M. (1987). Running performance of Tswana children. Phys Educ Rev, 10, PP.110-113.
8. Corlett, J.T. (1988). Strength development of Tswana children.Hum Biol, 60, pp.569-577.
9. Dana, A., Habibi, Z., Hashemi, M. &Asghari, A. (2011). A Description and Comparison of Anthropometrical and Physical Fitness Characteristics in Urban and Rural 7-11 Years Old Boys and Girls in Golestan Province, Iran. Journal of Applied Sciences Research, 7(6), pp.826-832.
10. Dollman, J., Norton, K. & Tucker, G. (2002). Anthropometry, fitness and physical activity of urban and rural south Australian children. Pediatric Exercise Science, 14, pp.297-312.
11. Dubois, D. & Dubois, E.F. (1916). Clinical colorimetry. A formula to estimate the approximate surface area if weight and height is known. Arch Int Med, 17, pp.863-871.
12. Gill, P.S., Prasad, B.G &Srivastava, R.N. (1968). Nutritional status of primary school children in a rural area of Lucknow.Indian J. Pediatr, 35, pp.314.
13. Hodgkin, E., Hamlin, M.J., Ross, J.J. & Peters, F. (2010). Obesity, energy intake and physical activity in rural and urban New Zealand children. Rural and Remote Health, 10, pp.1336.
14. Mehtap Dzdirene&Nihal Geleck 2005. Physical fitness in rural children compared with urban children in Turkey, Pediatrics International, 47(1):26-31.