Research Paper Sport Science

COMPARISION BETWEEN AEROBIC AND ANAEROBIC CAPACITY AMONGS RURAL AND URBAN FOOTBALL PLAYERS OF WEST BENGAL SCHOOL.

Dr. Binod Chowdhary, Assistant Professor, Seva Bharati Mahavidyalaya, Kapgari, Paschim Medinipur.West Bengal.

ABSTRACT

Objective: The purpose of the study was to compare the aerobic and anaerobic capacity among rural and urban football players of west school. Bengal

Methods: The study was conducted on 20football players (10 urban and 10 rural Players) of Kapgari School and Jhargram school of Medinipur District. The ages of the players were 14 yrs to 19 yrs. The aerobic and anaerobic capacity was measured with help of cooper's 12 min. run/ walk test and 50 mts dash.

Statistical Analysis: Mean and standard deviation of variables was calculated and compared by using 't'- test and the level of significance was set at 0.05.

Result: From the result of the study it was Cleary visible that there is significance difference exists between rural and urban football players in relation to aerobic and anaerobic capacity.

KEYWORDS Aerobic, anaerobic, speed etc.

Introduction:

The world of sports and games has crossed many a milestones through sustained scientific research and application of research findings to human performance. The competitive sports have come to be valid in society towards the attainment of top performance. The physical educationists and coaches are trying to bring new innovation as they are deeply involved in the preparation of sportsman for the present and future. Physical education and sports have now become integral part of the total education process as it prepares an individual for real life.

The word aerobic meaning with oxygen to represent idea. Even so the dynamics of the idea are more complicated that implied by the definition. Aerobic can be viewed as an intricate system of bodily supply and demand. That is the body needs energy for any kind of activity and the need is filled by burning off the foods that eat. Oxygen is the spark the fuel needs to burn regardless aerobics is the word in general use. The fact is that cooper codified and organized what fitness means to many people. Aerobic fitness is a very good indicator of cardio respiratory fitness and exercise tolerance for everyday activities which are largely aerobic for general population (Zuluaga, (1995). Anaerobic exercise is used by used by athletes in non- endurance sports to build power and by body builders to build muscle mass. Muscles that are trained under anaerobic conditions develop biological differently giving them greater performance in sports duration high intensity activities.

The aerobic capacity of a person depends upon the factors as; amount of oxygen which can be extracted by the blood from the atmosphere, amount of oxygen that can be transported from the lungs to the working muscle, amount of oxygen taken up by the muscle cells from the blood, amount of glycogen stores in the muscles and liver.

Anaerobic exercise is an exercise intense enough to tigger lactate formation. It is used by athletes in non-endurance sports to promote strength, speed and power and by body builders to build muscle mass. Muscle energy system trained using anaerobic exercise develops differently compared to aerobic exercise, leading to greater performance in short duration, high intensity activities which last from mere seconds to up to 2 minutes. Any activity lasting longer than about two minutes has a aerobic metabolic components. Anaerobic capacity is the ability to mobilized energy during activities of intense nature i.e. executing intensive work with explosive action in short duration of time, such as kicking the football faster and for explosive take off in jumps, maximum rate for about two to three minutes, under water swimming etc. football and hockey players frequently performs different rapid and sudden movements as quick development of force, sprinting, jumping, changing direction, high power shooting, different body impacts etc. Therefore the players require high intensity anaerobic capacity to perform various burst actions in actual situations. Anaerobic capacity is the ability to perform at maximum capacity for short period of the time and to minimize the amount of lactic acid production in the working muscles at a level of insufficient oxygen availability.

Objective: The purpose of the study was to compare the aerobic and anaerobic capacity among rural and urban football players of west Bengal school.

Methods:

To achieve the purpose, 20football players (10 urban and 10 rural Players) of Kapgari School and Jhargram school of Medinipur District were selected for the current study. The ages of the players were 14 yrs to 19 yrs. The aerobic and anaerobic capacity of the students was measured with help of cooper's 12 min. run/ walk test and 50 mts dash.

Statistical Analysis: To compare the aerobic and anaerobic capacity between rural and urban football players of west Bengal school,'t' test was applied . The level of significance was set at 0.05.

Result and discussion of finding:

The mean and standard deviation of aerobic capacity between rural and urban football players of west Bengal school in 600 yards run and walk.

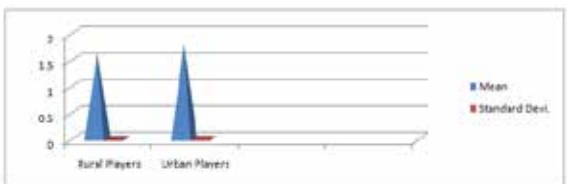
TABLE-1

S.No	Groups	N	Mean (min.)	Standard Deviation	Standard Error Mean	't' value
1	Rural Players	10	1.64	0.039	0.012	8.11*
2	Urban Players	10	1.78	0.050	0.015	

*significant at 0.05 level of confidence t.05 (18) = 2.101

From the table -1, shows mean and standard deviation of football players of rural and urban area were 1.64, 0.039 and 1.78, 0.050 respectively in relation to aerobic capacity. And it is also clearly evidence that the calculated 't' value (8.11*) is higher than tabulated value 't' 0.5 (18) 2.101, so we can say that in case of aerobic capacity there were significant difference was found between rural and urban football players. The rural players are having better aerobic capacity i.e. 1.64 minutes as compare to rural players i.e. 1.78.

Graphical representation of mean and standard deviation of aerobic capacity of rural and urban football players of west Bengal.



The mean and standard deviation of anaerobic capacity between rural and urban football players of west Bengal school in 50 yards dash.

TABLE-2

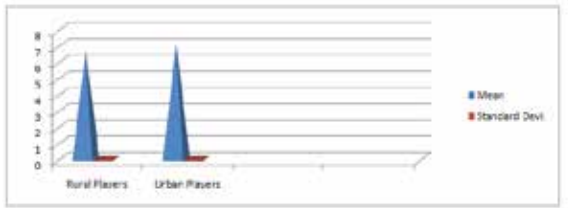
S.No	Groups	N	Mean (sec.)	Standard Deviation	Standard Error Mean	df	't' value
1	Rural Players	10	6.72	0.079	0.025	18	5.25*
2	Urban Players	10	7.11	0.071	0.024		

*significant at 0.05 level of confidence

t.05 (18) = 2.101

From the table -2, shows mean and standard deviation of football players of rural and urban area were 6.72, 0.079 and 7.11, 0.071 respectively in relation to aerobic capacity. And it is also clearly evidence that the calculated 't' value (5.25*) is higher than tabulated value 't' 0.5 (18) 2.101, so we can say that in case of aerobic capacity there were significant difference was found between rural and urban football players. The rural players are having better anaerobic capacity i.e. 6.72 sec. minutes as compare to rural players i.e. 7.11sec.

Graphical representation of mean and standard deviation of aerobic capacity of rural and urban football players of west Bengal.



The possible explanations for this result may be due to the fact that the food habits of the rural and urban players are different. Urban players usually take cold drinks, fast and junk foods regularly whereas rural players take their usual foods. That is why urban players gains fat and becomes heavier than rural players. Again rural players in our country engaged in family works but urban players were not too much engaged themselves in such works rather watch television programme, read magazine, work on computer which do not permit any physical activity. That was probably the cause behind getting such result.

Conclusion: From the result of the present study it was concluded that:

Significant difference was found in aerobic capacity between rural and urban players of west Bengal School.

Significant difference was found in anaerobic capacity between rural and urban players of west Bengal School.

REFERENCES

1. Barrow, H.M. and McGee, R.M. (1979), A Practical Measurement for Evaluation in Physical Education, Lea & Fibiger, Philadelphia. | 2. Bulbulian R, Jeong JW, Murphy M, (2001), Comparison of Anaerobic Components of the Wingate and Critical Power Tests in Male and Females. Medicine & Science in sports & exercise. 28; 1336-41. | 3. Haque A, & Ghosh S.S (2014). A Comparative Study of Aerobic And Anaerobic Fitness Between Indigenous and Non- Indigenous Games Players in West Bengal. International journal of multidisciplinary and current research. March/April. 203-206. | 4. R. Kunwar, Comparative Study of Aerobic and Anaerobic Capacity Between Football and Hockey Players. Global Excellence in Fitness and Sports Science. Proceeding of International Conference on Physical Education and Sports science, 6-7 jan-2015.421-424. | 5. Reilly Thomas, Science of soccer, London: E&FN Spon. 2003. | 6. Sanze J. Rico. Soccer Elite Players, ww.SportsSci.org/ ency/ draft/Soccerdite.doc. |