

Comparison of Aerobic and Anaerobic Capacity of Kho-Kho and Kabaddi Players

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Abstract:

The present study aims at finding out the Comparison of aerobic and anaerobic capacity of kho-kho and kabaddi players. For the present study the sample has been selected from district players of kabaddi and kho-kho from Vasai. Selected 60 subjects have been divided in two groups. The age of the subject range from 14-17 years. Test has been conducted on the both groups to collect the data of selected variables. Aerobic capacity and anaerobic capacity of subjects were selected as variables of the study. Aerobic capacity was measured by 12-minute cooper run and walk test. Anaerobic capacity was measured by 50 meter dash. The collected data were analyzed by using Independent Sample 't' Test to compare the aerobics and anaerobic capacity of Kho-Kho and Kabaddi Players. The statistical findings of the present study revealed that there were no significant differences in kabaddi and kho-kho in relation to aerobic capacity. The statistical findings revealed that there were significant differences among kabaddi and kho-kho in relation to anaerobic capacity.

Key Words: comparison, aerobic capacity and anaerobic capacity etc.

Introduction: Sport is a multidimensional activity. It has mainly physiological dimension as well as physical psychological social and Technical aspects, which plays a significant role to acquire zenith performance. In today's competitive world of sports the Physiological fitness of a team or player is required than any other aspect. Since every sports has a different physiological demands on the body depending upon the nature, intensity and duration of the games and activity, the kho-kho and kabaddi players fitness must be developed accordingly to bring out the best possible performance of a team or athlete.

The athlete is to be conditioned to adopt to work at given intensity for prolonged time which is known as aerobic training and he is also required to be conditioned to do explosive work of high intensity in short duration of time which is known as anaerobic training.

Aerobic capacity is the ability to mobilize energy for continuous of specific movement for prolonged time i.e. capacity for prolonged physiological functioning under continuous supply of required under conditions of required oxygen completely available. The glucose molecule is completely broken down to CO_2 and H_2O , and energy is made available as needed.

Anaerobic capacity is the ability to mobilize energy during activities of intensive nature i.e. executing intensive work with explosive action in short duration of time, such as, kicking the

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football faster and for explosive take off in jumps, maximum rate for about two to three minutes under water swimming.

The level of physical fitness indicates the amount of physical work that a person capable of doing besides the energy for desirable characteristics of muscle function for skillful movement as required in specific sports. The energy for doing work is derived from metabolizing the glucose available in blood as well as, glycogen store taken by breathing. The nutrition that the athlete takes is the sources for glucose and glycogen and the amount of oxygen, which the athlete can command at any time, depend on the efficiency of his cardiovascular system.

The physiological systems of the body interact to accomplish a variety of tasks. There inter dependence can be linked to a symphony orchestra whose different musical instrument represent various organ systems and whose conductor represents the higher Brain center.

Need of the study: This type of work was not done till known. There was no rapid development in kho-kho and kabaddi in these two games. There was very less research done. There will be development if these games are practiced from childhood. Therefore this research is useful for aerobic and anaerobic.

Significance of the problem:

1. A comparison about the Aerobic and anaerobic capacity of kho-kho and kabaddi players can be scanned out from this study.
2. The study may help in planning the training programmes of kho-kho and kabaddi players.
3. The study result may be helpful for self-assessment of kho-kho and kabaddi players.

Hypothesis:

H₀ Aerobic and anaerobic capacity of kabaddi and kho-kho players may not be equal.

Objectives of thy Study:

1. To collect data about aerobic and anaerobic capacity of kho-kho players.
2. To collect data about aerobic and anaerobic capacity of Kabbadi players.
3. Comparison of aerobic and anaerobic capacity of kho-kho and kabbadi players.

Delimitation:

1. The study was delimited to kho-kho and kabaddi players
2. The study delimited to Vasai district only.

Variorum Multi-Disciplinary e-Research Journal
Vol.,-03, Issue-III, February 2013

3. Subject age was delimited to 14-17 Boys years.
4. The study was delimited only 30 students in each group.

Limitation:

1. Diet, health, habits and style of day living of the subject cannot be controlled.
2. They would have been in activities of their own choice their timetables should not be controlled.

Methodology:

Design of the study: For the present study the sample has been selected from district players of vasai. Selected subject has been divided in two groups i.e., kabaddi and kho-kho. Test has been conducted on the both groups to collect the data of selected variables. The data has been collected after the test from both groups. To analyses of the data 't' ratio has been used.

Selection of the subject: These subjects for this study were randomly selected from kho-kho and kabaddi district players of vasai. A total number of 100 male players, 30 each from kho-kho and kabaddi were selected. The age of the subject range from 14-17 years.

Selection of the variables: Selected variables for the study were as follows: aerobic capacity and anaerobic capacity

Criterion measures: The following tests were selected and their course was considered as criterion measured for this investigation.

1. Aerobic capacity was measured by 12-minute cooper run and walk test. The scoring will be in meters and nearest to 25 meters.
2. Anaerobic capacity was measured by 50 meter dash. The score was that time elapsed in the nearest $1/10^{\text{th}}$ of a second.

Administration of the Test:

The data were collected for each variable by administering their respective tests. The tests were administered in the institute's track. Sufficient trails were given to each subject. The tests were explained to the subject. The tests were explained to the subjects prior to their administration.

Statistical Procedure:

The collected data were analyzed by using Independent Sample 't' Test to compare the aerobics and anaerobic capacity of Kho-Kho and Kabaddi Players.

Variorum Multi-Disciplinary e-Research Journal
Vol.,-03, Issue-III, February 2013

Conclusions:

Within the limitation of the study following conclusions may be drawn.

1. In relation to aerobic capacity no significant difference was found between kho-kho and kabaddi.
2. There was significant difference among kho-kho and kabaddi in relation to anaerobic capacity.

Discussion of Findings:

Aerobic capacity: The statistic findings of the present study revealed that there were no significant differences in kabaddi and kho-kho in relation to aerobic capacity. This can be attributed to the quantum of aerobic training done in preparatory phase. The aerobic training helps in improvement of oxygen supply to the muscles.

Anaerobic capacity: The statistical findings revealed that there were significant differences among kabaddi and kho-kho in relation to anaerobic capacity. By the help of post-hoc test it was found that there was a significant difference in anaerobic capacity of kabaddi and kho-kho. This difference can be attributed to the nature of the activity done by these groups. The kabaddi and kho-kho continuously perform the activity with high explosiveness for pretty longer period of time then players.

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