



COMPARISON OF SELECTED PHYSICAL FITNESS COMPONENTS BETWEEN RURAL SCHOOL KABADDI AND KHO-KHO PLAYERS

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Abstract:

The purpose of the study was to compare the muscular endurance and cardio respiratory endurance between rural school kabaddi and kho-kho players. To achieve this purpose of the study, sixty players studying in the rural schools in Karnataka state, India were selected as subjects at random. Among them, thirty kabaddi players and thirty kho-kho players were selected. Among the physical fitness components, the following variables namely muscular endurance and cardio respiratory endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using bend knee sit ups and cooper's 12 min run / walk test. The independent 't' ratio was used to analyze the significant difference, if any between groups. The .05 level of confidence was fixed as the level of significance to test the 't' ratio obtained, which was considered as an appropriate. The results of the study showed that there was a significant difference between kabaddi players and kho-kho players on muscular endurance and cardio respiratory endurance.

Key Words: Muscular Endurance, Cardio Respiratory Endurance, Rural School Kabaddi Players, Kho-Kho Players

Introduction:

Muscular endurance and cardiorespiratory endurance are vital for rural school kabaddi and kho-kho players, helping them sustain their performance throughout the duration of the games. Kabaddi involves a lot of grappling, pushing, and pulling. Therefore, players need good muscular endurance in their arms, shoulders, chest, and back muscles to engage in these physical activities repeatedly. Muscular endurance in the legs is crucial for maintaining agility and stability during raids and defenses. Players need endurance to execute swift movements and lunges.

Kabaddi is a high-intensity sport that demands continuous movement and short bursts of intense activity during raids and defenses. Good cardiorespiratory endurance enables players to recover quickly between rounds, maintain stamina, and endure the fast-paced nature of the game. Kho-kho requires players to frequently squat, change direction rapidly, and maintain balance. Therefore, lower body muscular endurance, particularly in the quadriceps, hamstrings, and calf muscles, is essential for prolonged periods of play. Muscular endurance in the core and upper body helps players maintain stability, control, and agility during defensive maneuvers and while evading opponents.

Kho-kho involves continuous running, dodging, and tagging opponents, which places significant demands on the cardiovascular system. Good cardiorespiratory endurance allows players to sustain their energy levels, recover efficiently, and perform optimally throughout the game's duration. Resistance training using bodyweight exercises, such as squats, lunges, push-ups, and pull-ups, can help develop muscular endurance in both kabaddi and kho-kho players. Incorporating circuit training, plyometric exercises, and agility drills can enhance overall muscular endurance and functional strength required for the sports. Interval training, such as shuttle runs, sprint drills, and high-intensity interval training (HIIT), can improve cardiorespiratory endurance while simulating the stop-and-go nature of kabaddi and kho-kho.

Endurance-based activities like long-distance running, cycling, and swimming can also complement cardiovascular fitness and help players build stamina and endurance over time. In developing muscular endurance and cardiorespiratory endurance is crucial for rural school kabaddi and kho-kho players to excel in their respective sports. A well-rounded training program that incorporates strength training, conditioning, and sport-specific drills can help enhance their physical capabilities and overall performance on the field.

Methodology:

The purpose of the study was to compare the muscular endurance and cardio respiratory endurance between rural school kabaddi and kho-kho players. To achieve this purpose of the study, sixty players studying in the rural schools in Karnataka state, India were selected as subjects at random. Among them, thirty kabaddi players and thirty kho-kho players were selected. Among the physical fitness components, the following variables namely muscular endurance and cardio respiratory endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using bend knee sit ups and cooper's 12 min run / walk test. The independent 't' ratio was used to analyze the significant difference, if any between

groups. The .05 level of confidence was fixed as the level of significance to test the 't' ratio obtained, which was considered as an appropriate.

Analysis of the Data:

Muscular Endurance:

The mean, standard deviation and 't' ratio values on muscular endurance of kabaddi players and kho-kho players have been analyzed and presented in table 1.

Table 1: The Mean, Standard Deviation and 't' Ratio Values Between Kabaddi and Kho-Kho Players on Muscular Endurance

| Groups | Mean | Standard Deviation | 't' Ratio Value |
|-----------------|-------|--------------------|-----------------|
| Kabaddi Players | 37.33 | 0.98 | 19.66* |
| Kho-kho Players | 32.65 | 0.86 | |

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence with df 58 was 2.002).

The table 1 shows that the mean values on muscular endurance for kabaddi players and kho-kho players were 37.33 and 32.65 respectively. The obtained 't' ratio value on muscular endurance 19.66 which was greater than the table value required for significance with df 58 was 2.002.

The results of the study showed that there was a significant difference between rural school kabaddi players and kho-kho players on muscular endurance.

Cardio Respiratory Endurance:

The mean, standard deviation and 't' ratio values on cardio respiratory endurance of kabaddi players and kho-kho players have been analyzed and presented in table 2.

Table 2: The Mean, Standard Deviation and 't' Ratio Values Between Kabaddi and Kho-Kho Players on Cardio Respiratory Endurance

| Groups | Mean | Standard Deviation | 't' Ratio Value |
|-----------------|---------|--------------------|-----------------|
| Kabaddi Players | 1152.38 | 35.47 | 14.52* |
| Kho-kho Players | 1014.14 | 38.25 | |

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence with df 58 was 2.002).

The table 2 shows that the mean values on cardio respiratory endurance for kabaddi players and kho-kho players were 1152.38 and 1014.14 respectively. The obtained 't' ratio value on cardio respiratory endurance 14.52 which was greater than the table value required for significance with df 58 was 2.002.

The results of the study showed that there was a significant difference between rural school kabaddi players and kho-kho players on cardio respiratory endurance.

Conclusions:

- There was a significant difference between kabaddi players and kho-kho players on muscular endurance.
- There was a significant difference between kabaddi players and kho-kho players on cardio respiratory endurance.

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