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Comparative enquiry of selected motor abilities: Reaction ability and agility between Kho-Kho and kabaddi inter-university level male players

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Abstract

The purpose of the study was to find out the significant difference of Reaction time and agility between Kabaddi and Kho-Kho inter-university level male players. The researcher collected the data on total 100 (kabaddi =50 and Kho-Kho =50) players as subjects between the age group of 18-28 years. The Statistical Package for the Social Sciences (SPSS) was used for all analysis. To compare the subjects mean, standard deviation and unpaired t-test was employed. In all the analyses, the 0.05 critical levels were considered to indicate statistical significance. The outcome shows that visual Reaction time and Agility variable significant difference between Kabaddi and Kho-Kho inter-university level male players.

Keywords: Reaction time, Agility, Kho-Kho, Kabaddi etc.

Introduction

Physical actions are the essential part of our life, which help every individual in their proper and accurate development. Through it one can easily recognize his or her hidden talent and nurture it. The children perform a lot of activities such as running, jumping, throwing, catching, kicking and striking etc. The activities are known as natural or universal skills (Wilmore, 1982).

The concept that an athlete's ability to perform different motor skills is determined by one general ability. Thus, a person with high general motor ability would tend to learn motor skills more quickly than a person with low general motor ability. (Website)

Reaction time is the time interval between the application of a stimulus and the appearance of appropriate voluntary response by a subject as rapidly as possible (Teichner, W.H., 1954) [4]. Reaction time has been widely studied as its practical implications may be of great consequence, e.g., a slower than normal reaction time while driving can have grave results. Many factors such as physiological, psychological, pharmacological etc., have been shown to affect reaction times. They are age, sex, gender, handedness, physical fitness, sleep, fatigue, distraction, alcohol, caffeine, diabetes, personality type and whether the stimulus is auditory or visual (Nikam and Gadkari, 2012) [3].

Agility is the ability to move and change direction and position of the body quickly and efficiently while under control. It requires quick reflexes, coordination, balance, speed, and correct response to the changing situation. To be agile, you are responding to what is going on around you, taking in that information and translating it into body positioning that will maintain balance and control. You are moving to the best position to take the next action, such as catching a ball or making a tackle. You are moving in a way that your body and sports equipment are in the right position to take the next action effectively. (website²)

Materials and Methods

The subjects for the present study consist of Kabaddi and Kho-Kho male players, who had participated in Inter-University level competition. Total 100 players have been selected for the research (50 kabaddi and 50 Kho-kho). The data was collected from different-different universities with the age group ranging from 18 to 25 years.

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Selection of variables

Following Motor abilities parameters were selected for the study:

- (a) Visual reaction time (b) Agility

Tools

Visual Reaction Timer, Stopwatch, wooden blocks etc.

Administrations of the tests

Visual Reaction Time

Purpose: This test was administered to measure the visual reaction ability of the subjects. **Equipment:** Visual Reaction Timer, Table and Chairs, Pencil, Papers.

Procedure: visual Reaction timer was kept on a table and started by plugging the plug. The subject was asked to sit on chair reachable to the table where reaction timer was placed opposite to the players' chair. On signal, the lights blinked, the subject reacts immediately to the lights pressing the buzzer in front of particular light for measuring reaction time. Each subject was given a practice trail before actual commencement of the test.

Instructions: Buzzer should be pressed only when light was shown on monitor of reaction timer. Press the buzzer in front of the light which blinks. Three trails were given to each subject and the best was considered.

Scoring: The score was the time taken in 1/100th seconds.

Agility (shuttle run, 10 x 4 yard)

Purpose: The purpose of the study was to assess agility.

Equipment: Measuring tape, stop watches, four blocks of wood (2" x 2" x 4"), clapper, line powder.

Procedure: Each subject started behind the starting line on the signal "ready go". The subject ran to the block, which were placed exactly 10 yards from the starting line and picked one of the blocks, returned to the starting line and placed the block behind the line. The same process was repeated with the second block. Two trials were permitted for each subject. Some rest was allowed between the two trials.

Scoring: The score was total time taken to complete the course recorded to 1/10th of a second. Best of the two was considered as the subjects score.

Statistical Procedure

After the collection of related data, it was processed and analyzed with descriptive statistics. To compare the subjects mean, standard deviation and unpaired t-test was employed with the help of statistical package of SPSS. The significance level was set at 0.05 percent.

Results

Table 1: Mean and standard deviation of Visual reaction time variable of Kabaddi and Kho-Kho inter-university level male players

| 0 | Number of subjects | Mean | Standard Deviation | t-value |
|---------|--------------------|------|--------------------|---------|
| Kabaddi | 50 | 2.05 | 0.63 | 6.30 |
| Kho-Kho | 50 | 1.44 | 0.22 | |

$t'_{0.05(98)}=1.98$

Table & figure 1 represent that the Mean and Standard Deviation value with regard to kabaddi inter-university Players is 2.05 and 0.63 whereas in the case of Kho-Kho inter-university Players is 1.44 and 0.22 respectively. The calculated t-value (6.30) which is more than tabulated t-value

(1.98) at .05 level. The output of finding indicates that there has been a significant difference between basketball and volleyball players inter-university level male players for their Visual reaction time variable.

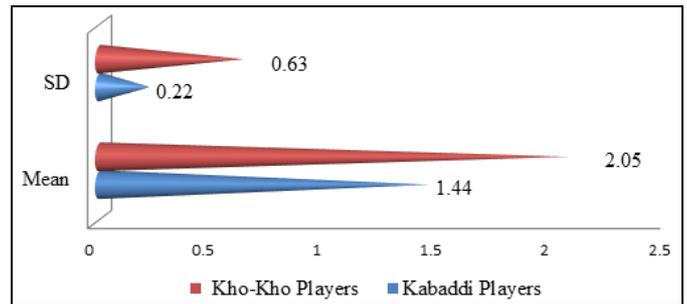


Fig 1: Shows that Mean and standard deviation of Visual reaction time variable of kabaddi and Kho-Kho inter-university level male players

Table 2: Mean and standard deviation of agility variable of Kabaddi and Kho-Kho inter-university level male players

| Group | Number of subjects | Mean | Standard Deviation | t-value |
|---------|--------------------|-------|--------------------|---------|
| Kabaddi | 50 | 11.85 | 1.00 | 11.64 |
| Kho-Kho | 50 | 10.06 | 0.42 | |

$t'_{0.05(98)}=1.98$

Table & figure 2 depict that the Mean and Standard Deviation value with regard to kabaddi inter-university Players is 11.85 and 1.00 whereas in the case of Kho-Kho inter-university Players is 10.06 and 0.42 respectively. The calculated t-value (11.64) which is more than tabulated t-value (1.98) at .05 level. The output of finding indicates that there has been a significant difference between basketball and volleyball players inter-university level male players for their **agility** variable.

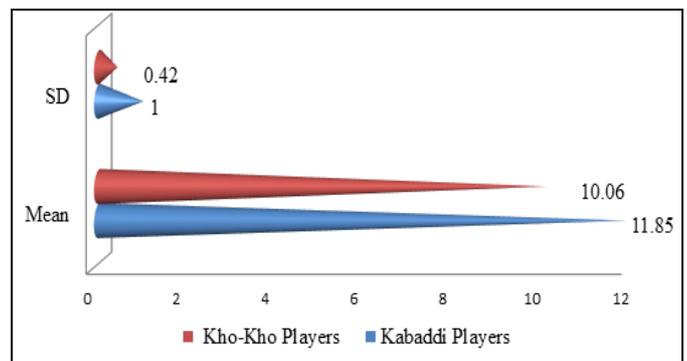


Fig 2: Shows that Mean and standard deviation of Agility variable of kabaddi and Kho-Kho inter-university level male players

Discussion of the study

The result of the study established that there is significance found in visual Reaction time and agility parameters of kabaddi and Kho-Kho inter-university level male players. While performing the reaction time test of players react differently to interval of time between the presentation of stimulus and the initiation of the response. Results represent that Kho-Kho players better then as compare with kabaddi players for their Reaction time variable. Same as in agility variable Kho-Kho players better then as compare with kabaddi players for their agility variable. Bhagat, (2015) [1] and Jain, *et al.* (2015) [2] supported the present study.

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