



ISSN: 2456-0057

IJPNE 2022; 7(1): 95-98

© 2022 IJPNE

www.journalofsports.com

Received: 21-11-2021

Accepted: 23-12-2021

Shobha R

Research Scholar, DOS in
Physical Education and Sports
Sciences, KSAWU, Vijayapura,
Karnataka, India

Dr. DM Jyoti

Professor and Dean, DOS in
Physical Education and Sports
Sciences, KSAWU, Vijayapura,
Karnataka, India

Comparison of reaction ability among state, university and sub junior national level female Kabaddi players of Bengaluru

Shobha R and Dr. DM Jyoti

Abstract

The purpose of the current study was to determine the Comparison of Reaction Ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru. The present study had a sample size of, 20 State level, 20 University level and 20 Sub Junior National Level Female Kabaddi Players were selected at random basis, and the subjects were divided according to their level of Performance wise, their chronological age was 14 years to 25years. To find out the difference in the reaction ability, a "Ball Reaction Exercise test" by Hirtz was used. To determine the significant difference between the three groups the one way Analysis of Variance (ANOVA) was used. Furthermore, since the 'F' ratio was significant, the LSD (Least Significant Difference) was calculated to find out the paired mean difference. Results of the study showed that, there was a significant difference found in reaction ability, among the State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru. As the Sub junior and University level female Kabaddi players have better reaction ability in comparison.

Keywords: Kabaddi, reaction ability, ball reaction exercise, ANOVA, LSD

Introduction

Kabaddi is a game which combines the actions of wrestling, judo, rugby and gymnastics. The important body movements in this game involve catching, holding, locking and jumping, thus the possession of desirable anthropometric and physiological characteristics will have a greater advantage in executing a better performance in competition. Functional preparation by sportsmen and women depends on the physiological demands of their particular sport. An evaluation of the exercise responses of high level sports competitors during competition can form a sound basis for the players' systematic development. Quick start and stops and quick changes in direction are fundamental for good performance in kabaddi, but it is an important factor in almost all court games it can result the difference in whether a performer is able to gain an advantage over his/her opponent. Players' existence and effectiveness depends upon his physical fitness. Even now, physical fitness really implies more than the ability to do a work without much efforts. Reaction time occurs in many areas of daily life. One of our features is necessary for the continuation of life. The fact that reaction time is short in many occupations from driving to traffic in daily life to kitchen works, healthcare, disaster management plays an important role in preventing many accidents and even saving lives. In addition, reaction time is one of the factors affecting the performance of athletes in competitions. According to Schmidt *et al.* (1991) [3] the reaction time is "Interval from The Start of The Response to the Unexpected Stimulus". According to Bompa (1998) it is the first muscular reaction or an inherited trait that determines the time between the realization of movement. Reaction time incorporates a number of elements in most sport branches. Since athletes are required to respond to various stimuli in different environments, reaction time is one of the determinants of a successful performance and the athletes with the same condition and technical capacities who have shorter reaction times and are more successful. Therefore, its importance varies from sport branch to sport branch. In terms of our perceptions, particularly in terms of stimuli, the shortness of reaction time is also important in enabling us to act before our competitors in combative games.

Corresponding Author:**Shobha R**

Research Scholar, DOS in
Physical Education and Sports
Sciences, KSAWU, Vijayapura,
Karnataka, India

Purpose of the study

The purpose of the current study was to determine the Comparison of Reaction Ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru.

Methodology

The purpose of the study was to determine the Comparison of Reaction Ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru. To achieve this purpose, 20 State level, 20 University level and 20 sub junior national level Players were selected randomly, the total Kabaddi Players were practicing at different clubs in Bangalore to serve as subjects for the study. The subjects thus selected were tested by the “Ball Reaction Exercise” test. These tests measure reaction ability of kabaddi players. The data collected were statistically analysed to find out the significant level among State level, university level and sub junior kabaddi players of reaction ability which is most essential for the game. The following test was used to measure the reaction ability.

Reaction Ability Test

This test was administered to measure the reaction ability of the subjects. Equipment used for measuring reaction ability of kabaddi players, namely Two wooden planks each of 4mts. Length, One inflated volleyball, A supporting stand, measuring steel tape, Pencil, paper and pad.

measuring steel tape, Pencil, paper and pad.

Description

Two wooden planks of four meters each kept in lined by a supporting stand having a height of one meter and twenty centimetres as shown in fig. 1, so that it could volleyball to roll freely from height of 1.20mts. The lower ends of wooden planks were kept at a distance of 1.5mts. away from the starting line outer side of one of the plank was graduated in centimetres. Volleyball was held by the tester at the top of the plank. The subjects were asked to stand behind the starting line, facing of opposite to the plank. On clapping, the subject took a turn and ran towards the planks and stopped the ball with both the hands which was dropped on the signal. Each subject was given a practice trial before actual commencement of the test.

Instructions

The ball should be stopped with both hands, the ball should not be pushed upward while stopping

Scoring

The score was the distance measured in centimetres’ from the top of the planks to a point where the subject stopped the ball. Only two trials were given and the best one was recorded as the score of the subject.

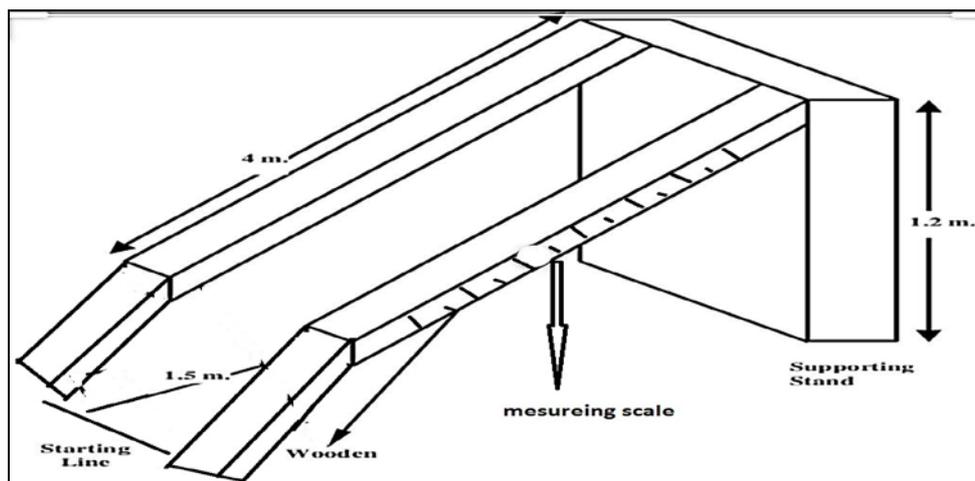


Fig 1: Ball Reaction Exercise Test

Statistical Procedure

To find out the significant difference between three groups the One way ANOVA was calculated. After the selection of the sample and conducted of Ball Reaction Exercise test to each subject. After this, the scoring was completed according to the scoring system prescribed by the author of the scale.

Then the data were tabulated according to their groups. A one way ANOVA test was used to compare reaction ability among three groups.

Results

Table 1: Mean and Standard Deviation of variables of Reaction ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru

Nature of level	State Level	University Level	Sub Junior National Level
Mean Value	0.92	1.67	1.71
Std. Dev.	0.30	0.22	0.17

n=60

Table one shows mean and standard deviation value of Reaction ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru.

Table 2: One way ANOVA for Reaction ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru

Source	Sum of squares	Degree of Freedom	Mean square	'F' ratio	p value
Treatments	7.79	2	3.89	67.37	.000
Error	3.29	57	.05		
Total	11.08	59			

The level of Significant 0.05

Table two shows that there was a significant difference found in Reaction ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru. Since the 'F'-ratio was significant further, to observe the difference between different levels belonging to State, University and

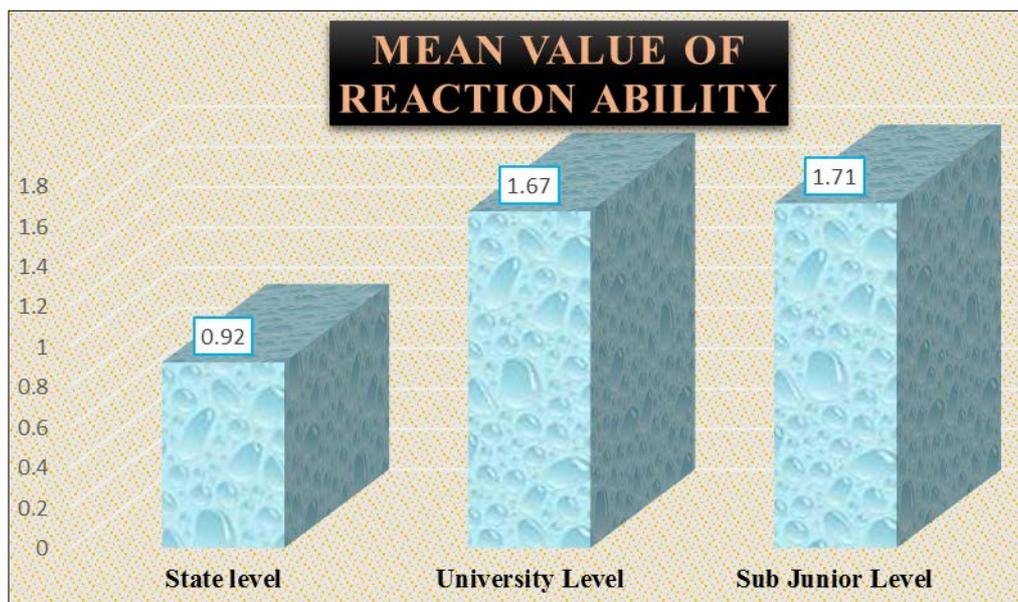
Sub Junior National Level Female Kabaddi Players of Bengaluru in reaction ability, the Least significant difference Post-hoc analysis was calculated to find out the paired mean difference was adopted for all groups and data pertaining to these have been presented in table three.

Table 3: Post-hoc analysis of the data on Reaction ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru

Different level Group			Mean Diff.	LSD	L. Con	U. Con	Significance Difference
State level	University level	Sub junior					
0.03	0.74	-	0.71	0.076	-0.93	-0.63	*
	0.74	0.78	0.04	0.076	-0.89	-0.59	NS
0.03	-	0.78	0.75	0.076	-0.11	0.18	*

It is evident from Table three that State level and University level, Sub Junior level and state level were found significant in Reaction ability of female Kabaddi players of Bengaluru. And the other hand University level and Sub Junior were not found significant in Reaction ability of female Kabaddi

players of Bengaluru. The graphical representation of Reaction ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru.



Graph 1: Average of Reaction Ability among State, University and Sub Junior National Level Female Kabaddi Players of Bengaluru.

Discussion and Findings

From the results of the study it is evident that, there was significant difference in the reaction ability of State level, University level and Sub junior level female Kabaddi players of Bengaluru. Reaction ability is the ability of an athlete to respond quickly and to perform a well-designed action following any kind of signals. An examination of the results pertaining in reaction ability was found better in case of Sub juniors and University level compare to State level female kabaddi players, this might be due to Sub juniors and University level react to a particular situation very fast, accordingly and take a decision as they have better training and match/competition experience compared to state level group. Sub juniors and University level players might have aware of simple and complex reaction abilities, so as to they have cope up the situations in during match and training

sessions. If the reaction is to a single stimulus, the time taken for the response is called simple reaction time. Typical reaction time for simple reactions is very quick. It generally takes 0.13 to 0.18sec. To react to a single stimulus. For e.g. During the course of a raid, While attacking a rider to defensive players, if defender holds raiders ankle to catch him, a raider reacts counter attack very quickly to the action of defensive player, and raider escapes from defenders hold in a rapidly and gain a point. Here the defenders hold/catch is the stimulus, and escapes from his holds is response. The time between the hold/catch and escaping towards reaching the midline and taking leap of the raid is the reaction time. Complex reaction time is also called choice reaction time or compound reaction time. It is the time you take to respond to the correct stimulus when presented with a number of stimuli

and respond in the best way possible. It is more than the simple one, because the brain has to receive, interpret, perceive and process a lot of information. It has to account for all factors and process the outcomes of all the possible responses before initiating a response. This makes the reaction to such stimuli considerable slower than singular stimuli. For e.g. in Kabaddi include the situations where the defender has to respond to the movement of the raider, position and signal of the other defenders, and the situation of the game and come up with a response/successful catch that would be the best for them. No matter what type it is, a swift reaction time can help you excel in your game, pursuing your exercise further while simultaneously improving your reaction time. Lack of training and competition experience also might be one of the pivotal cause for low reaction ability in rest of the group.

Conclusions

On the basis of findings of study it is concluded that the Sub junior and University level Kabaddi Players were found to have higher level of reaction ability. The state level Kabaddi players were found to have diminutive lower level of reaction ability when compared to the Sub junior and University level Kabaddi Players. As compare to their counter actions for signals Sub junior and University level Kabaddi players did not differ significantly. Reaction ability very much needed aspect for all games, state level players need more reaction ability as compare to other two groups players. Hence, the researcher recommends the coaches and physical education teachers must give some coordinative abilities training with regular practice for state level reached/reaching Players so they can improve their performance rapidly with better reaction abilities.

References

1. Slater H, Hammel K. Compression of Reaction Time Measures to Visual Stimulation and Arm Movement, *Research Quarterly*. 1995;26(2):470-71.
2. Nasreen and Uppal AK. Coordinative Abilities of Football and Cricket Players-a Comparative Study, *International Journal of Physical Education, Health and Sports Sciences*. 2012;1(2):7-10.
3. Schmidt RA, Wrisberg CA. *Motor Learning and Performance*. Champaign, IL: Human Kinetics. 2008.
4. Espenschade Anna. "Development of coordination in boys and girls" *Research Quarterly*. 1947;18(3)30-43.
5. Hirtz, Peter ed. *Coordinative Faehigbeitn Schlsport*. Verlag, Berlin: Volb and Wissen Volbseigner. 1985.
6. Singh Hardayal. *Science of sports training*. New Delhi, D.V.S Publication. 1991.
7. Sarkar Gourange. "Relationship f coordinative abilities to shooting performance in soccer" (Unpublished Master degree Thesis, LNIPE. 1999.
8. Sogut M. Gross motor coordination in junior tennis players, *J Sports Sci*. 2016;25970:1-4.