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A comparative study on coordinative abilities among male softball players and cricketers

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Abstract

The aim of this study is to find out the significant difference of coordinative abilities between male Softball players and Cricketers. A group of forty(N=40) male subject aged between 18-25 years, who participated in interuniversity competitions from Jiwaji University volunteered to participate in this study were selected for this study. The purposive sampling technique was used to attain the objectives of the study. All subject, after having been informed objective of the study, gave their consent and volunteered to participate in this study. They were further divided into two groups of 20 each (i.e., N1=20; Cricket players and N2=20; softball players). The independent sample t – test was applied to find out the significant difference of coordinative abilities between male softball players and cricketers. To test the hypotheses, level of significance was set at 0.05. The result revealed significant difference between cricket players and softball players on the sub variables i.e. reaction ability, orientation ability and differentiation ability. However insignificant differences were noticed with regard to the sub- variable i.e. rhythmic ability.

Keywords: Softball players, Cricketers, reaction ability, orientation ability, differentiation ability and rhythmic ability.

1. Introduction

Cricket and Softball are the best known members of a family of related bat and ball games, despite their similarities, the two sports also have many differences. Though these games are similar in nature and are both derived from England, they have various differences among them including rules, regulations, game play, bat, ball etc. while the principle is same, the two games differ in their rules, terminology, playing equipment, number of players, field size etc. In sports today best performance can only be achieved through accurately planned, executed and controlled training system loosed on scientific knowledge, theoretical and methodical fundamental of sports training. A sportsman can compete effectively only by a certain coordinative mastery of the technique. Coordination ability means an ability to quickly and purposefully perform difficult spatiotemporal movement structure. Within this context, coordination abilities are understood as an externally visible manifestation of the control and regulation process of motor activity of central nervous system. Coordinative abilities enable the sportsman to do a group of movements with better quality and effect.

The speed of learning of skill and its stability is directly dependent on level of various coordinative abilities. Coordinative abilities are needed for maximal utilization of conditional abilities, technical skills and tactical skills. In different sports requirement of coordinative abilities are different and these abilities ensures higher movement efficiency and movement economy, where as in sports events they helps in higher movement frequency and high explosiveness and force application. In sports seven Coordinative abilities are of key importance. In different sports the relative importance of these abilities is however different.

Differentiation ability enables the sportsman to perceive micro difference regarding the temporal, dynamic, spatial aspect of movement execution and differentiation can be in regards to an implement or movement. Orientation permits the sportsman to determine the position and movement of his own body and of a moving object with regard to space. Coupling and combination movement allows the sportsman to coordinate partial movement of his body with regard to space, time, and dynamics. Reaction ability permits the sportsman to effective action quickly and purposefully according to a signal and for a sudden change in situation.

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Rhythmic ability enables the sportsman to perceive the externally given rhythm and to reproduce it in a motor action. It also denotes the ability to reproduce a rhythm, existing in motor memory in motor action. The optimally developed coordinative ability especially in childhood is an individual asset for learning of complex technique in advancement stage is dependent upon the level of required Coordinative ability. They are prerequisite of sports and game performance.

Material and methods

Selection of subjects

forty(N=40) male subject aged between 18-25 years, who participated in interuniversity competitions from Lakshmibai national institute of physical education volunteered to participate in this study were selected for this study. The purposive sampling technique was used to attain the objectives of the study. All subject, after having been informed objective of the study, gave their consent and volunteered to participate in this study. They were further divided into two groups of 20 each (i.e., N1=20; cricket players and N2=20; softball players).

Criterion measures

1. Reaction ability: reaction ability was the distance measured in centimeters from the top of the planks to the point where the subject stopped the ball. Three trials were given and the best was recorded as the score.
2. Orientation ability: Orientation ability was noted in seconds. Three trials were given and the best was recorded as the score.
3. Differentiation ability: Differentiation ability judged through 1kg medicine ball touching the mat- 1 point, 1 kg medicine ball touching the circle line- 2 points, 1kg medicine ball touching inside the circle-3 points, 1 kg medicine ball touching the 2kg medicine ball – 4 points.
4. Rhythmic ability: Rhythmic ability was scored as difference between the timing of the first and second attempt was taken as a score.

Results

The results pertaining to significant difference, if any between cricket players and softball players were assessed using the independent t-test and results are presented in table-1

Table 1: Mean, standard deviation, t-value, p- value of cricketers and softball players

Variables	mean		SD		t-value	p-value
	cricketers	Softball players	Cricketers	Softball players		
Reaction ability	20.97	19.21	3.52	2.54	2.31*	0.20
Orientation ability	7.45	9.13	0.87	0.78	2.48*	0.24
Differentiation ability	11.20	10.16	1.95	2.43	2.39*	0.29
Rhythmic ability	1.712	1.77	0.19	0.29	1.05	0.28

It is evident from table -1 that significant differences was found in reaction ability between the interuniversity level cricketers and softball players of Lakshmibai national institute of physical education, since the calculated ‘t’ value 2.31 was greater than tabulated ‘t’ value 2.021 at 0.05 level of significance.

Table-1 presents the results of interuniversity level cricketers and softball players of Lakshmibai national institute of physical education, with regards to orientation ability. The descriptive statistics shows the calculated ‘t’ value 2.48 was greater than tabulated ‘t’ value 2.021 at 0.05 level of

significance. Thus it was found statistically significant. Observed that cricket players have demonstrated significantly better on orientation ability than the softball players.

The results of interuniversity level cricketers and softball players of Lakshmibai national institute of physical education, with regards to differentiation ability. The descriptive statistics shows the calculated‘t’ value 2.39 was greater than tabulated‘t’ value 2.021 at 0.05 level of significance. Thus it was found statistically significant. Observed that cricket players have demonstrated significantly better on differentiation ability than the softball players

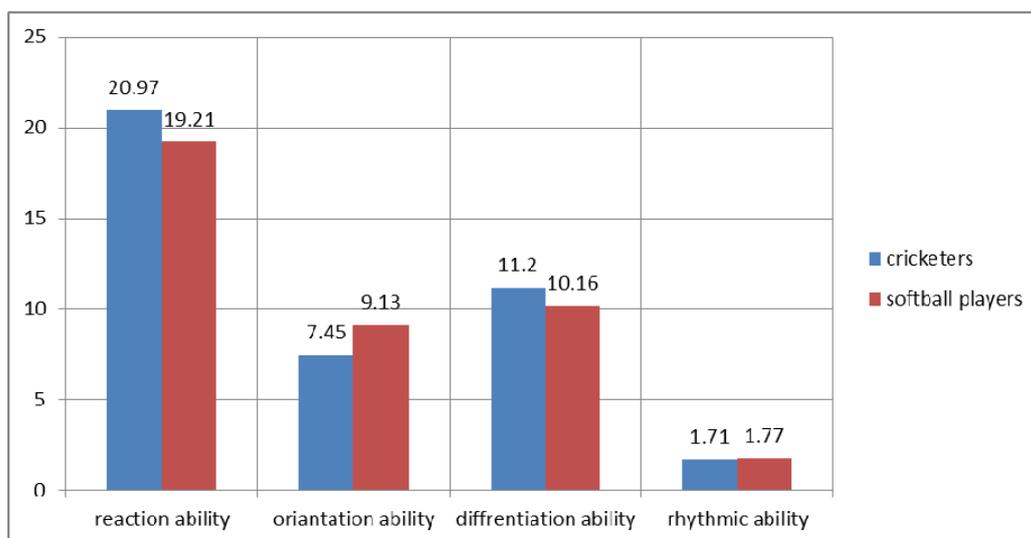


Fig 1: graphical representation of reaction ability, orientation ability, differentiation ability and rhythmic ability between cricketers and softball players

Discussion and conclusion

It is concluded from above finding that significant difference was found in reaction ability, orientation ability and

differentiation ability the cricketers had better reaction ability, orientation ability and differentiation ability in comparison to softball players. The insignificant difference was found in

rhythmic ability softball group had better rhythmic ability in comparison to cricket group.

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