

# A Comparative Study of Male Combative Athletes on Reaction Ability



## Physical Education

**KEYWORDS :** Combative Athletes, Reaction Ability.

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### ABSTRACT

*The purpose of preset study was to compare Male Combative Athletes on Reaction ability. For this study, 30 subjects Ten (10) from each game, (Judo=10, Boxing=10 and Wrestling=10) were randomly selected from Department of Physical Education University of Allahabad. The reaction ability, among the groups was measured by ball reaction test (Hurtz,1985). To observe the differences among groups on their Reaction Ability, analysis of variance (ANOVA) was used at the significant level of 0.05 level. The results of the study have shown that the athletes of judo and wrestling & boxing and differed significantly on reaction ability. No significant differences were found between boxing and Judo players on their reaction ability*

### Introduction:

In the field of Physical Education and Sports, Coordinative abilities are pre-requisites of athletics performance; Athletes' coordinated abilities help them in learning and perfecting technical skills in the training period. The coordinative abilities determine the speed and quality of learning, stabilizing and applying the techniques in competition (Harre, 1989). There are seven coordinative abilities identified, these are: Orientation Ability, Differentiation Ability, Coupling Ability, Adaptation Ability, Rhythm Ability, Balance Ability and Reaction Ability. All the coordinative abilities are important for learning of sports techniques and for their continuous refinement and modifications during long-term training process. The motor learning ability depends to a large extent on the level of coordinative abilities ( Singh , 1982 ). Reaction ability can be characterized as ability to react to stimuli or to start motion / activity in response to a signal in the shortest possible time. This ability depends only on continuance of participating nerve processes. A wide variety of movement behaviors is encompassed in the psychomotor domain. The psychomotor domain is concerned with body movement and/or control. Such behaviors when performed in a general way represent a movement pattern or patterns, and when highly specific and task refined indicate a skill or sequence of skills. No reference is made in psychomotor task, for almost any kind of movement, oriented task could probably be considered a psychomotor task. For the most part in the literature psychomotor task are indicated by Laboratory created situation. Reaction time, coordination, positioning, speed etc. offer been referred to as psyc Proficiency in any sport requires the ideal combination and interaction of numerous abilities developed to an ideal degree. However, performance measures of these abilities vary from activity to activity. To be a good sportsman one has to develop various qualities within himself. A sportsman should have good kinesthetic perception ability; stability; speed; strength; suppleness; endurance and skill ( personal skill; rhythm; handling object etc.) For a sportsman it is extremely important to have information about what the muscles are doing and their position during a movement. It is also successfully argued that this muscle sense is called kinesthetic is equally necessary for the successful execution of well-learned skills. Kinesthetic a keenly developed sense required for beginners and experts alike for proficiency in many motor skills. Adequate perceptual development allows athlete to use his or her physical abilities at the optimum level for the highest possible level of performance. As it is well known and experienced that along with motor abilities, psycho-motor abilities also play a very important role in the performance of athletes in almost all types of activities. If we consider kinesthetic and perceptual variation of athlete we will first see to it that, whether these variables are having a relationship with other games and sports or not. These are influenced by quality of nerve tracks, size of the signal, kind of reflexes and the sensibility of the reporters, quick relation ability markedly influences performance in most of the sports. Coordina-

tion is important for successful execution of sports movements the coordinative abilities play a vital role during practice and competitive situations . In Judo, Boxing, and Wrestling, the performance is significantly based on coordinative abilities including reaction ability.

### Methodology:

The subjects for the present study were randomly selected from Department of Physical Education University of Allahabad in Judo, Boxing and Wrestling. The size of the sample was Thirty (30) subjects, (10) From each game (Judo = 10, Boxing =10 and Wrestling =10). Ball reaction test ( Hurtz,1985) was used to measure the reaction ability among the groups. To observe the difference among three groups (Judo, Boxing and Wrestling) of combative athletes on their reaction ability, analysis of variance (ANOVA) was used at the significant level of 0.05 level.

### Results and Discussion:

**Table -1**  
**Analysis of Variance of Means of Reaction Ability among athletes of Three Different Combative Games**

Source of Variance	Df	Sum of Squares	Mean Square	F-Value
Within Groups	2	202.6	101.3	19.66*
Between Groups	27	113.4	5.5	

Tabulated F.05 (2, 27) =3.35      Calculated F= 25.3

It is evident from table-1 that significant differences exist among the combative athletes of three games, as the F- value of 19.66 is higher than the tabulated value of 3.35 at 0.05 level of significance. Since, one way ANOVA was found significant in relation to Reaction Ability , L.S.D. was applied to find out as to which of the differences of the means amongst three different groups were statistically significant.

**Table -2**  
**Post- Hoc Test for the Means of Judo, Boxing and Wrestling in relation to Reaction Ability**

Mean Value of reaction ability			Mean Difference	Critical Differences
Wrestling	Judo	Boxing		
5.8	12.5	-	6.7*	2.85
5.8	-	9.57	3.77*	2.91
-	12.5	9.57	2.93	3.09

\*Sigificat at .05 level.

It is evident from table that Significance differences between Wrestling, Judo and Wrestling, Boxing were found but there is no difference between Judo, Boxing players in reaction ability.

So according to the magnitude of mean it is calculated that Judo players having better Reaction ability but there is no difference in reaction ability between Judo players and Boxers.

**Conclusion:**

The (LSD) scores on reaction ability presented in the tables and suggested that the male athletes of Judo, Boxing and Wrestling differs significantly on reaction ability. Whereas boxers and Judokas did not differ significantly on reaction ability. The obtained mean values given in the tables have suggested that Judokas have higher level of reaction ability followed by Boxers and Wrestlers. Thus, it may be concluded that the Judokas react quickly than the wrestlers and boxers. It may be due to the complexity of movement difference in different combative sports as well as the degree of complexity of movement and reaction required to accomplish the task quickly.

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