

COMPARISON OF VISUAL AND AUDIO REACTION TIME BETWEEN ELITE BOXERS AND TAEKWONDO PLAYERS

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Abstract:

The purpose of the study was to compare the audio and visual reaction time of boxers and taekwondo players. The subject selected for this study were 21 boxers and taekwondo players from junior national coaching camp held at L.N.C.P.E and Pirappancode hostel respectively. They all are either national medalist or international players. The age groups of the subject were from 14- 17 years. The subjects were selected randomly. The variables selected for this study was reaction ability components i.e. visual and auditory. For measuring the components of reaction ability whole body type II equipment was used. Independent 't' test was employed to see the dominance of one group over the other on each of the variable. The level of significance set will be 0.5 % level.

The aim of the study is to enable the coaches and physical educators to know the capacities and weakness of the athletes and thereby help them to improve further performance on related traits.

KEYWORDS:

Reaction time, Boxing, Taekwondo

INTRODUCTION

Various physical, physiological and psychological factors affect the performance of a player. Reaction ability is an important measure of performance indicating the speed and effectiveness of decision making. In almost all sports and games reaction time plays an important role. In sports performance reaction time is the ability to respond quickly with proper posture and control to a stimulus such as sound or sight. Reaction time is an important measure of performance indicating the speed and effectiveness of decision making. Reaction time is the interval time between presentation of stimulus and the initiation of the muscular response to that stimulus. Taekwondo, boxing and karate develop many physical and mental skills and draw out talent which might otherwise remain hidden or repressed. These games will give physical strength, joint flexibility, speed of movement, and anticipation and alertness in both confrontation situation and in everyday activities. An increase in self confidence and control of nervousness in threatening situation improved body composition, improved breathing and muscle control and many other advantages.

In visual reaction, the stimuli that register as light in our eyes are actually electromagnetic radio waves to which our bodies' visual apparatus happens to be sensitive and capable of responding to the particular stimulus with the help of the eye. In auditory reaction time means by hearing. If you throw a stone into a quiet pond, a circle of waves will spread in all direction, in much the same way travels as a series of invisible waves of compression and rarefactions in the air. Both visual and auditory reaction time will affect the sport performance especially in boxing and taekwondo. The study was hypothesized that there may be difference in visual and auditory reaction time of boxers and taekwondo players. The results of the study may also enable the coaches and physical educators to know capacities and weakness of the athletes and thereby help them to improve further performance on related traits. The findings of the study

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also may add to the knowledge of coaches and experts with regard to reaction time of boxers and taekwondo players.

METHODOLOGY

The subjects for the study were 21 elite boxers and taekwondo players between the age group of 14 to 17 years. All the subjects were assessed by whole body type II equipment. The components were visual and audio reaction time. The collected data was analyzed by Independent t- test. The instrument can produce three acoustic and three optical signals. When a subject is given these signals, he is required to react to the signal by push a reaction button corresponding to the stimulus. Her reaction time is indicated in digits. The level of significance was fixed at 0.05 as applicable.

RESULTS & DISCUSSION

Table- 1: Significance of difference between mean scores of boxers and taekwondo players on visual reaction ability

Groups	N	Mean	S.D	't' Value
Boxers	21	1.058	0.54	0.099*
Taekwondo Players	21	1.041	0.58	

*significance at 0.05 level

Table 1 depicts the mean, standard deviation of boxers [n=21] were 1.058 and 0.54 respectively. The mean and standard deviation of taekwondo players [n=21] were 1.041 and 0.58 respectively. The 't' value obtained (0.099) showed no significant difference(p>0.05) between boxers and taekwondo players on their visual reaction ability scores.

Table 2: Significance of difference between mean scores of boxers and taekwondo players on auditory reaction ability

Groups	N	Mean	S.D	't' Value
Boxers	21	9.15	0.29	-30.32*
Taekwondo Players	21	11.97	0.31	

*significance at 0.05 level

Table 2 depicts the mean, standard deviation of boxers [n=21] were 9.15 and 0.29 respectively. The mean and standard deviation of taekwondo players [n=21] were 11.97 and 0.31 respectively. The 't' value obtained (-30.32) showed significant difference(p<0.05) between boxers and taekwondo players on their auditory reaction ability scores.

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Figure 1: comparison of mean scores of Boxers and Taekwondo players on their visual reaction ability

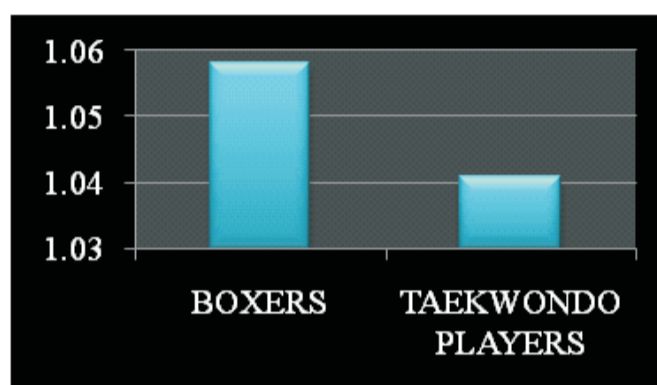
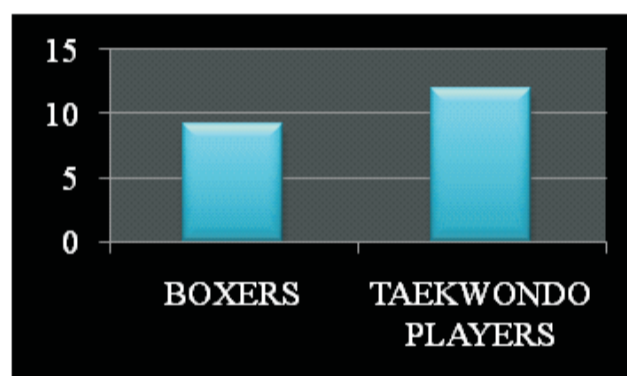


Figure 2: comparison of mean scores of Boxers and Taekwondo players on their and auditory reaction ability



CONCLUSIONS

Within the limits and limitations of the national level Boxers and Taekwondo players visual and auditory reaction ability study and on the basis of the results, the following conclusions drawn.

1. Comparatively Taekwondo players have good reaction time in the aspect of auditory reaction
2. There is significant difference in Boxers and Taekwondo player's auditory reaction ability
3. Comparatively Boxers have good reaction time in the aspect of visual reaction.

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