

EFFECT OF SPECIFIC CONDITIONING PROGRAMME ON REACTION TIME OF TRIPURA CRICKETERS.

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ABSTRACT

Purpose of the study was to assess the effectiveness of 12 weeks specific conditioning programme on reaction time – hand & foot among selected Tripura cricketers. Pre test – post test randomized group design were undertaken for the present study which consist of an experimental group and control group. Equal number of subjects (n= 30) were assigned randomly to both the groups. The experimental group was exposed to 12 weeks specific conditioning programme whereas, no treatment was given to control group. For the purpose of the present research work a total of 60 Cricketers were randomly selected for the present research work. Reaction time was selected as a dependent variable and 12 weeks specific conditioning programme was considered as an independent variable. The data was analyzed by applying analysis of one tailed t- ratio was used to draw appropriate conclusions and to find out the effect of 12 weeks of specific conditioning programme on reaction time – hand & foot among selected Tripura cricketers. The significance level was set at 0.05. The results indicated that there was significant difference found in experimental group – A selected Tripura state cricketers on reaction time – hand & foot in comparison to control group. The findings of this study strongly reported that 12 weeks specific conditioning programme was an effective training programme to enhance cricketers' reaction ability.

Keywords: Specific, conditioning, programme, reaction time, cricketers

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INTRODUCTION

Several papers have been published focusing on the study of these post-exercise cognitive improvements by testing short-term and working memory; however, there have been fewer studies that have looked at the connection between cognitive and motor functions (Brisswalter et. al., 1997 and Keen et al., 1993). The studies that have looked at this "connection," have tested the reaction times of subjects following different types of physical activities. Reaction time, defined as being the time between the application of a stimulus and the beginning of an organism's response to it, has been shown to be a valid indicator of the central nervous system's ability to receive and synchronize movement expressed through the peripheral nervous system.

In sports, reaction time is the time it takes a cricketer to recognize a certain development, or information. Response time is the time it takes for the cricketer to process, decide, and then complete the action. You can be a very fast athlete, but if you are not reacting & responding quickly, that speed becomes void. Reaction time can be improved through external recognition drills and practicing predetermined responses to external cues. In many sports, maximum speed is rarely reached or needed, but explosive reaction is often necessary. Cricketers can improve reaction times by training to make the right choices reaction and response.

Hence, the main purpose of this study was to determine the effectiveness of 12 weeks specific conditioning programme on Tripura Cricketers' reaction time ability.

METHODOLOGY

Selection of Subjects

For the purpose of the present research study a total of 60 Cricketers were randomly selected. These subjects had represented Tripura Cricket Association (Affiliation to BCCI) in several national tournaments. The age of the subjects were ranging from 19 years to 31 years. The average age was being 25 years.

Instrumentation

Reaction Time – hand and reaction time – foot were selected as a dependent variable and 12 weeks specific conditioning programme was considered as an independent variable. The reaction time – hand and reaction time – foot were measured in centimeters rounded off 0.1 centimeter by using reaction timer scale. To test reaction time of Tripura cricketers the nelson reaction time test – hand & foot (reaction time) were respectively administered. Specific conditioning training was administered six times a week on experimental group – A at M.B.B. Stadium in Agartala for a period of 12 weeks (84 days) while the control group – B underwent general training and regular cricketing practice.

Before the administration of specific conditioning programme training, nelson reaction time test – hand & foot (reaction time) were respectively administered at same venue on both the groups namely experimental group – A and control group – B respectively to collect pre test data. After the completion of specific conditioning programme again the same reaction time tests were conducted to collect the post training data. One tailed t-ratio was computed to analyze the data and the significance level was set at 0.05.

Research Design

For the present study pre test – post test randomized group design which consisted of experimental group (n = 30) and control group (n = 30). Equal numbers of subjects were

assigned randomly to both the groups. One group served as experimental group – A on which treatment was administered. The other group served as the control group – B.

RESULTS

The findings of the study are given below:

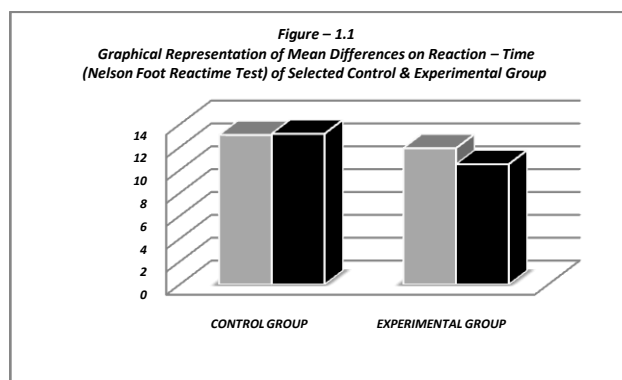
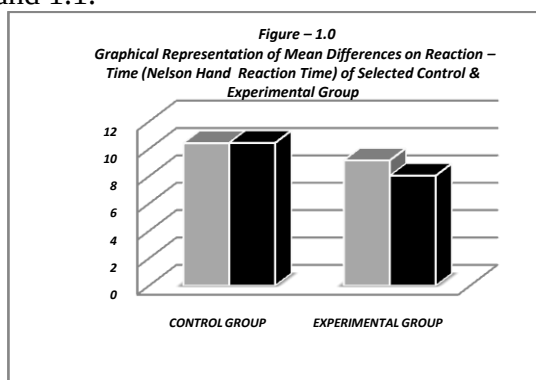
TABLE 1
ONE TAILED ‘T’ RATIO OF REACTION TIME (NELSON HAND & FOOT REACTION TIME TEST) FOR TRIPURA CRICKETERS

Reaction Time		df	Pre-test Mean	Post-test Mean	DM	‘t’
Reaction Time (Nelson hand reaction time test)	Control	29	10.42	10.44	0.02	0.34
	Experimental	29	9.16	8.04	-1.12	9.81*
Reaction Time (Nelson foot reaction time test)	Control	29	13.08	13.18	0.10	1.01
	Experimental	29	11.92	10.52	-1.40	13.83*

Significant at .05 level.

‘t’ 0.05 (29) = 1.70

Table 1 indicated the analysis of one tailed ‘t’ ratio of specific conditioning training on reaction time (Nelson hand reaction time test and Nelson foot reaction time test) of control group differs insignificantly, as obtained ‘t’ value of 0.34 and 1.01 were respectively lower than the tabulated value of 1.70 at 0.05 level. The graphical representations of pre and post test means of control group for reaction time (Nelson hand reaction time test and Nelson foot reaction time test) are presented in figure 1.0 and 1.1. Further, the analysis of one tailed ‘t’ ratio of specific conditioning training on reaction time (Nelson hand reaction time test and Nelson foot reaction time test) of experimental group differs significantly, as obtained ‘t’ value of 9.81 and 13.83 were greater than the tabulated value of 1.70 at 0.05 level. The graphical representations of pre and post test means of experimental group for reaction time (Nelson hand reaction time test and Nelson foot reaction time test) are presented in figure 1.0 and 1.1.



DISCUSSION

Research study findings were reported that selected reaction time hand and foot in experimental group - A Tripura cricketers had improved significantly by 12 weeks specific conditioning programme in contrast to control group. This significant difference was due to the fact that the experimental group were involved in practicing sports specific short

sprint drills with detailed distance and time; zig-zag runs, hexagon and ladder drills; upper and lower body plyometric exercises; phosphate recovery drill; core and stabilization training improvement of reaction time – hand & foot for 12 weeks as compared to control group – B. The results of the present study was supported by the findings of Brisswalter et. al., (1997) who identified that exercise programme improves physical function, strength, reaction time, neuro-muscular control and body sway in older people. Whereas, Keen et. al., (1994) investigated the influence of physical fitness and energy expenditure on a simple reaction time task performed during exercise and the findings of the study reported a significant effect of physical fitness on simple reaction time was noted during exercise. Another reason could be the fact that cricketers belonging to the experimental group were regularly in practice (six days a week) as per the designed specific programme and under the constant supervision of the researchers and support staff. In addition, they had access to modern infrastructure i.e., indoor stadium, ultra – modern fitness facilities than their counterparts belonging to different districts of the state. Whereas, Szymanski et. al., (2007) who evaluated the effect of 12 weeks of specific medicine ball training on high school baseball players and indicated that performing a 12-week medicine ball training program in addition to a stepwise periodized resistance training program with bat swings provided greater sport-specific training improvements for high school baseball players. The findings of the present study were also in consonance by the findings of Babault et. al., (2007), Calder et. al., 2009, Castagna et. al., (2009), and Herrero (2006). Thus, the results of present study showed that 12 week specific conditioning programme was an effective training technique to improve a cricketer's reaction time – hand and foot.

CONCLUSION

The findings reported that there was a significant improvement had exhibited by experimental group – A cricketers on reaction time – hand & foot after exposed to 12 weeks specific conditioning programme in comparison to control group subjects. Hence, it is concluded that specific exercise training regime programme was an effective training programme to improve a cricketers' reaction time ability.

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