

## ABSTRACT

The purpose of this research is to investigate an effect of the exercise of jumping leftward and rightward using Morse code on the reaction times.

This is an experimental and laboratory-based research with *Randomized Pretest-Posttest Control Group Design*. The sample includes twenty four male students of the 2005 generation. They are divided into two groups, namely the control group of 12 students and experimental group of 12 students where they undergo the exercise of jumping leftward and rightward using Morse code.

The exercise is carried out for 6 weeks, three times a week. The exercise load uses maximum capacity and each exercise requires 2-4 sets with rhythm of 12 time jumps. Capacity of reaction time is measured using Whole Body Reaction Type II with second unit. The second posttest (second test) is undertaken after the next three weeks (19 time exercise). The Whole Body Reaction Type II is used to take reaction times. The data are analyzed using Anacova with significance level of 5%.

The results show a difference in reaction time between the two groups. In the second pretest-posttest observation, there is a very significant difference in the reaction times ( $p = 0.000$ ). There is a very significant difference in the reaction time between the control and experimental groups ( $p = 0.000$ ).

In the control group, the difference in initial and final reaction times is not significant ( $p = 0.505$ ), while in the experimental group, there is a significant difference in initial and final reaction times ( $p = 0.000$ ). Additionally, the body mass index (BMI) as the moderating variable doesn't generate effect since  $p = 0.782$  ( $p > 0.05$ ).

It can be concluded that the exercise of jumping leftward and rightward using Morse code can shorten reaction times.