

# THE EFFECTIVENESS OF COLD AND WARM TEMPERATURE THERAPY IN OVERCOMING BADMINTON ATHLETE'S STRENGTH

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## ABSTRACT

This study aims to test and determine the differences in the influence and effectiveness of cold temperature therapy and warm temperature therapy on fatigue in badminton athletes. This research uses a quasi experimental designs research method with a one group time series (pretest one post test) design. In this design, the first observation (pretest) is carried out after that the posttest observation. The treatment group was measured by providing cold temperature therapy and warm temperature therapy for fatigue which will be known to consist of three (3) indicators, namely: (1) Pulse Rate (DN) (2) Rating of Perceive Exertion (RPE) and (3) Blood Lactate Levels (LD). The research sample was taken from the existing population using a purposive sampling method with a total of 20 samples. Data collection is obtained through tests and measurements. The test instruments used to measure fatigue are stop time, questionnaires and Accutrend Lactate. The analysis technique uses the t test "paired sample t test and independent sample t test". The research results show that there is a significant difference between cold temperature therapy and warm temperature therapy on fatigue consisting of pulse rate, Rating of Perceive Exertion and blood lactate with a significance value of  $<0.05$  using the paired t-test, a DN value of 0.049 , the RPE value is 0.003 and the LD value is 0.006. So it can be interpreted that there is a significant influence on the treatment given with cold temperature therapy and warm temperature therapy on the fatigue variable for badminton athletes. Based on the percentage results obtained, it can be said that cold temperature therapy is more effective in reducing DN and LD. Meanwhile, warm temperature therapy is more effective in reducing RPE.

Kata Kunci: *therapy, cold, warm, fatigue, badminton*