

Thesis Title The Effects of WORK-HEAT LOAD on Recovery
Heart Rate

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ABSTRACT

The purpose of this Quasi-Experimental Research was to study the effects of working in hot environments on Recovery Heart Rate(RHR). This study was conducted in a group of moderate acclimatized beverage sale workers. Fourty of them with a range of 20 - 40 years of age were selected in this study. Two steps of Metabolic Rate(MR) (259.290 and 354.455 Kcal/hr). Two different working conditions emphasized on climatic responses of WBGT index(20.084 and 28.739 °c) were also designed in this experiments. Heart recovery time of the subjects were monitored during the test performances. Each condition of climatic

responses was arranged into 80 performance tests. Each test consisted of manual lifting beverage containers with a frequency of 10 times per minute for approximately 15 minutes until the subject reached steady state.

The experimental study revealed that the recovery time of subjects who had high MR were longer than those who had lower MR at level of significance 0.05. It was also found that there was a significant linear relationship between WBGT index and recovery time. The correlation coefficient(r) between low MR and RHR was 0.709-0.749 and between high MR and RHR was 0.636-0.785.

It is recommended from this study that recovery rate can use as a criteria to determine rest time during work in hot environments. In order to reduce and prevent the disorder or illness.