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THE DIFFERENCES OF PULSE, CORE BODY TEMPERATURE, AND WEIGHT: BEFORE AND AFTER WORK IN THE HEAT STRESS ENVIRONMENT AT A TEA COMPANY - FILLING PROCESS

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Statement of the Problem: Heat stress in the work environment affects worker's physical condition; the blood vessel capacity increases and dilates. Also, heat stress can trigger the heart to pump more blood to the skin to release heat. This leads to an increased pulse rate. Furthermore, it affects the evaporation mechanism of the body and causes changes in body temperature and continuous sweating affects the composition of body fluids. The purpose of this study was to determine the differences in pulse, core body temperature, weight of the workers before and after work in the heat stress environment of a Tea filling process at 30.8 degrees Celsius room temperature in average. The design of this study utilized cross-sectional methods. 15 tea workers were samples of a total workforce of 20. The data was analyzed using a Paired t-Test and Wilcoxon Signed Ranked Test.

Findings: The results showed that 80% of respondents experienced an increasing of pulse rate, 100% of respondents experienced an increasing of the core body temperature, and 66.7% of respondents experienced weight loss.

Conclusion & significant: The results of the Paired t-Test revealed there was a significant difference in pulse rate before and after working in the hot environment (p=0.007), there was also a significant difference in body core temperature before and after work in the hot environment (p=0.001). However, there was no significant difference in weight loss before and after working in the hot environment (p=0.630).