

Ergonomic Design of Silken Tofu (Taho) Vendors' Equipment and Work Method for Improved Safety and Productivity

Michelle R. Andrews, Yasmin B. Angeles, Jesus C. Gallegos IV, Rosemary Seva*

*Human Factors and Ergonomics Center - Department of Industrial Engineering
De La Salle University-Manila
rosemary.seva@dlsu.edu.ph*

Abstract

The re-design of the taho vendor apparatus arose in order to address the ergonomic needs and potential occupational hazards of carrying the yoke apparatus. The aim of the study was not to alleviate but to reduce the dangers of musculoskeletal disorders and injuries (MSD/MSI) experienced by the taho vendor with the present equipment. To analyze the current design, biomechanical analysis and subjective analysis were conducted. The current design was not found to be ergonomically designed. Four alternatives were generated based on ergonomic improvements for both load carrying and service procedure. Using Pugh's method of screening and selection, the best alternative was chosen and improved further. The criteria included in this selection were founded on the previous method of analysis as well as manufacturability, cost and bulkiness. The design developed was eventually selected to be the Bucket Stand Design. Iterations were done to refine the design accordingly. A final evaluation was done on the use of the prototype. The prototype was a total improvement over the present equipment.