

**~~D~~EVELOPMENT OF A SELF EVALUATION APPLICATION FOR
IDENTIFYING ERGONOMIC RISKS OF WORKERS**

Undergraduate Thesis
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree
Bachelor of Science in Industrial Engineering



00077143

*Development of self evaluation application
for identifying ergonomic risks of workers*
620.8 P12 2018
T-7433

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April 2018

ABSTRACT

PACIFICO, JESSICA ANNE R. and RUPIDO, RIC JAYSON T. Development of a Self Evaluation Application for Identifying Ergonomic Risks of Workers. Undergraduate Thesis. Bachelor of Science in Industrial Engineering. Cavite State University, Indang, Cavite. May 2018. Adviser: Engr. Willie C. Buclatin.

Ergonomic interventions are known as the preferred engineering approach and technique for preventing work related musculoskeletal disorders in the work place. The research entitled “Development of A Self Evaluation Application For Identifying Ergonomic Risks of Workers” covered the analysis of both the present analyst and worker assessment on ergonomic risk factor, the identification of the critical points in the present ergonomic assessment, the determination of disadvantages of current assessment tools, the determination of the possible features to be included in the mobile application, the designing of the system and the evaluation with regards to the developed system. The research was conducted in areas in Cavite where workers were available for the study. On the other hand, one of the leading causes of injuries to workers is the presence of musculoskeletal disorders and ergonomic risk in their jobs. In general, OSH in the Philippines requires further improvements and provisions are necessary tools in achieving economic productivity through productive and healthy workers (Lu, 2011).

The research design used by the researchers in this study was the developmental research. Moreover, the study used the Define-Measure-Analyze-Design-Verify (DMADV) method as its research method and as a way to present the results based on the objectives.

In define phase, it was found out that the present ergonomic assessment was a manual system such as paper checklists and the problems arises in the part of observation and recommendation. There were disadvantages found in the present assessment tools while 10 workplace problems were found based on the initial survey. In measure phase, the problems were changed into percentage of occurrences based on the initial survey. Included in the analyze phase were the technical requirements and the final list of the features included in the self evaluation application. The design phase of the process involved the development of the product that correlated with the customer's needs. The verify phase of the system was basically lifted from the usability requirement in International Organization for Standardization (ISO) 9126 and based on the results, the proposed product met its intended purpose.

My Ergo Doctor has been developed as an easy to use and quick ergonomic self evaluation application. With this purpose in mind, MED could be used as a problem-solving tool for workers in order to know their own risk in their work routine, and for the ergonomic analysis of the workplace. This software can be offered to manufacturing industries as a tool that enables early detection and prevention of work-related musculoskeletal disorders.

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