Abstract #: 306 **Presented by: Paola Prieto, Graduate Student**

Software Tools on Ergonomics Practices: A Users Perception

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Keywords: 3D SSPP, WorkPace, Win-OWAS

Objective: This research aims to analyze three software tools available to aid in the process of evaluation and control of occupational hazards.

Methods: The development of this study consists of an explicit review of ergonomic literature with a primary focus on examining three software technological tools that currently exist on the market. this study groups the information in two categories:, product characteristics and product research (paper and customer reviews). A search of Science Direct database was conducted using the keywords 3DSSPP, WORKPACE and WINOWAS. On the other hand, a Google search was performed to obtain information about the products, like customer reviews and software characteristics. The analysis of available information is present in a matrix, comparing 3 relevant characteristics for each software: improves the process, User Friendly and cost.

Results: 3D SSPP (University of Michigan) rapidly and easily evaluate workers postures improving cost effectiveness and time consuming. WorkPace (Wellnomics) helps to reduce pain in workers in contrast when no micropauses are used. Win-OWAS helps perform postural assessment effectively using an automated process.

Conclusion: 3D SSPP integrate a series of features that helps hygienist to rapidly and easily evaluate workers postures in a three-dimensional human model using algorithms. This improves cost effectiveness and time consuming. In this way can predict accurately static strength capabilities. WorkPace helps to reduce pain in workers in contrast when no micropauses are used. In addition, customer review reflect wide acceptance of this program. Although Win-OWAS requires a large number of input variables, helps perform postural assessment effectively using an automated process.

Research supported by: UPR Industrial Hygiene Program and USF Sunshine ERC

Abstract #: 307 **Presented by: Eric Reuther, MS, Recent Graduate**

Affects of Age and Experience On Injury Rates in Three Light Manufacturing Facilities

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Keywords: accidents, acute injury, age, manufacturing

Objective: The relationship between the personal injury rates among industries in the United States has been a major focus point for many years. The prime objective of this study was to review and analyze personal injury rates by age and experience at light manufacturing facilities to determine how these factors affect the rates and severity of injuries. The working hypothesis was that age and experience most influence personal injury rates and the severity of injuries, among workers in the selected manufacturing setting.

Methods: Data from three facilities between January 2009 and December 2011 were selected. All data was pulled from a company database for injuries and illnesses, and staffing records. Age was considered as <30, 30 to 50 and >50. Experience groups were <3, 3-7 and >7 years. Incident rates were computed and the rate ratios computed based on the younger group and the least experience group.

Results: The results of the data showed that workers >50 experienced more injuries for all severity types (RR = 4.9), and workers with 3-7 years of experience (RR = 2.1) had significantly higher rates of injuries than those with less experience.

Conclusion: Older age was the dominant effect, showing the older workers experienced the greatest risk. This finding was in contrast to other studies that showed the middle age group to be at greatest risk. The other studies may have been biased by a survivor effect due to higher demands than light manufacturing.

Research supported by: USF Sunshine ERC

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February 21st – 23rd, 2013