

The Study of Rapid Entire Body Assessment and Quick Exposure Check Correlation in an Engine Oil Company

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Abstract : Rapid Entire Body Assessment (REBA) and Quick Exposure Check (QEC) are two general methods to assess the risk factors of work-related musculoskeletal disorders (WMSDs). This study aimed to compare ergonomic risk assessment outputs from QEC and REBA in terms of agreement in distribution of postural loading scores based on analysis of working postures. This cross-sectional study was conducted in an engine oil company in which 40 jobs were studied. A trained occupational health practitioner observed all jobs. Job information was collected to ensure the completion of ergonomic risk assessment tools, including QEC, and REBA. The result revealed that there was a significant correlation between final scores ($r=0.731$) and the action levels ($r =0.893$) of two applied methods. Comparison between the action levels and final scores of two methods showed that there was no significant difference among working departments. Most of the studied postures acquired low and moderate risk level in QEC assessment (low risk=20%, moderate risk=50% and High risk=30%) and in REBA assessment (low risk=15%, moderate risk=60% and high risk=25%). There is a significant correlation between two methods. They have a strong correlation in identifying risky jobs and determining the potential risk for incidence of WMSDs. Therefore, there is a possibility for researchers to apply interchangeably both methods, for postural risk assessment in appropriate working environments.

Keywords : observational method, QEC, REBA, musculoskeletal disorders

Conference Title : ICAE 2016 : International Conference on Applied Ergonomics

Conference Location : Berlin, Germany

Conference Dates : May 19-20, 2016