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THE PREVALENCE AND RISK EXPOSURE LEVELS OF WORK RELATED MUSCULOSKELETAL DISORDERS IN A CHINESE SHIPYARD

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Work-related musculoskeletal disorders (WMSDs) are major causes of disability in the workplace. It is unclear whether the exposure to risk factors and types of work play an important role in the occurrence of WMSDs. To determine the relationship between the prevalence of WMSDs and exposure level of risk factors among employees from different types of work, a cross-sectional study was performed among shipbuilding employees. 801 randomly selected shipbuilding workers from 6 major types of work with at least one year of work experience at a shipyard were studied. The prevalence and working condition data were collected using a self-designed ergonomics questionnaire modified based on Nordic musculoskeletal questionnaire (NMQ), and the exposure level was determined by standard quick exposure check (QEC) in Chinese version. WMSD positive cases were identified according to the definition employed by National Institute for Occupational Safety and Health (NIOSH). It was found that both WMSD prevalence and exposure levels at various body regions among shipbuilding workers were very high. This could be attributable to the awkward and prolonged bending postures adopted in the manufacturing processes. It was found that WMSD positive workers got higher QEC scores and identified as higher exposure levels compared with WMSD negative workers, and a weak correlation between WMSD prevalence and QEC score as well as that between WMSD prevalence and exposure levels were exist at back, shoulder/arm and wrist/hand. Both the prevalence of WMSDs and the exposure levels varied among workers of different type of works. In conclusion, there was a high WMSD prevalence and serious exposure risks at various body regions among shipbuilding workers. It seems that a higher exposure risk would lead to an increase

in the prevalence of WMSD slightly. And there were exposure distribution differences between workers from six major types of work in the same shipyard.

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4. Qu Y et al. (2011) full assessment of fate and physiological behavior of quantum dots utilizing *Caenorhabditis elegans* as a model organism. *Nano Lett.* 11(8):3174-3183.

Biography

Ying Qu has completed her PhD from Chinese Academy of Sciences, P R China. She is a Research Associate Professor of National Institute of Occupational Health and Poison Control - Chinese Center for Disease Control and Prevention (China CDC). She has published more than 5 papers in reputed journals.

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