Poster presentation

0009 ASBESTOSIS AND EXPOSURE LEVELS IN A CHINESE ASBESTOS WORKER COHORT
Xiaorong Wang, M比賽. N Courtice, Shiou Lin, Hong Qiu, Ignatius TS Yu. The Chinese University of Hong Kong, Hong Kong, China
10.1136/oemed-2014-102362.178

Objectives To assess the relationship between quantitative exposure levels and the development of asbestosis in a Chinese asbestosis worker cohort.

Method A cohort consisting of 577 male workers from an asbestos products factory in China was followed for 37-years. Personal information was collected, including date of hire, specific job types, duration of exposure, and smoking habits. There were 127 workers (22%) diagnosed as asbestosis by a specialised panel using Chinese radiographic Diagnostic Criteria for Pneumocystis (GB5908–86). Individual cumulative fibre exposures (f-1 yrs/ml) were estimated based on periodic dust/fibre measurements from different workshops and years of working at specific workshops, and then categorised into four levels (quartile). The relationship between the exposure levels and cumulative incidence of asbestosis was assessed with Cox Proportional Hazard Model, adjusting for age and smoking.

Results Workers at the four exposure levels were comparable in age at entry, exposure duration (around 25 yrs), and smoking rate. However, the proportion of asbestosis cases was grater with exposure levels, accounting for 9%, 27%, 29% and 36% from 1st quartile to 4th quartile, respectively. Hazard ratios for cumulative incidence of asbestosis showed a clear trend with the exposure levels, with a nearly three-fold increase (3.42. 95% CI 2.0, 5.9) at the highest exposure level, compared to at the lowest level.

Conclusions The study using quantitative estimate of exposures, which was seldom available in China, provides additional evidence for the exposure-response relationship between chrysotile exposure and the development of asbestosis in asbestosis workers.

0010 THE IMPORTANCE OF CONDUCTING REGULAR SAFETY INSPECTIONS IN SMALL AND MEDIUM SIZE ENTERPRISES
Behdin Nowrouzi, Basem Gohar, Behnam Nowrouzi, Martyna Garbaczewska, Olena Chapovalov, Lorraine Carter. Laurentian University, Sudbury, Canada; Center for Research in Occupational Safety and Health, Sudbury, Canada; University of Toronto, Toronto, Canada; Public Services Health & Safety Association, Toronto, Canada; Northern Ontario School of Medicine, Sudbury, Canada; Nipissing University, North Bay, Canada
10.1136/oemed-2014-102362.179

Objectives A considerable effort has been made to examine the health and safety of employees in large-sized enterprises. However, there has not been much attention given to the organisational work, occupational health and safety, and work disability prevention in small and medium enterprises (SME). The purpose of our study is to examine facilitators and barriers to occupational health and safety among SME in Ontario.

Method A cross-sectional design was used to examine the occupational health and safety culture of small and medium sized enterprises (SME) in the province of Ontario. The survey was conducted in 12 SME in Ontario. A stratified random sample of 500 small and medium sized enterprises was selected.

Results A total of 153 questionnaires were returned. Most of the respondents were female (84.2%) with a mean age of 49.8 years (SD = 10.6). Multivariable logistic regression modelling revealed the odds of a safe work environment for SME who conducted regular safety inspections were estimated to be 2.88 (95% CI, 1.57–5.27) greater than the odds of a safe work environment for SME who did not conduct regular safety inspections.

Conclusions This study profiled the work and safety among small and medium enterprises in Ontario. Moreover, better implementation and training strategies that focus on adapting occupational health and safety legislation to the nature and diversity of SMEs is warranted.

0011 WORK ABILITY AND WORK-RELATED STRESS: A CROSS-SECTIONAL STUDY OF OBSTETRICAL NURSES IN URBAN NORTHEASTERN ONTARIO
Robert Schinke, Diane Belanger-Gardner. Laurentian University, Sudbury, Canada; Health Sciences North, Sudbury, Canada
10.1136/oemed-2014-102362.180

Objectives The aim of this study was to determine: 1) if quality of work life (QWL), location of cross-training, stress variables, and various demographic factors in nurses are associated with work ability, and 2) nursing occupational stress, QWL, and various associated factors are related with nurses’ work ability.

Method This cross sectional study was conducted in 2012 in four hospitals in northeastern Ontario, Canada. A stratified random sample of registered nurses (n = 111) were selected.

Results The majority of participants were female (94.6%) ranging in age from 24 to 64 years (M= 41.9, s.d.=10.2). For the stress and QWL model, one variable: QWL (home-work support) (p = 0.015), cross-trained nurses (p = 0.048), and having more than 4 patients per shift (p = 0.024) significantly contributed to the variance in work ability scores. In the logistic regression model, the odds of a higher work ability for nurses who received home-work support were estimated to be 1.32 (95% CI, 1.06 to 1.66) times the odds of a higher work ability for nurses who did not receive home-work support.

Conclusions Work ability in the work environment of obstetrical nursing is important. To be high functioning, workplaces should maximise the use of their employees’ actual and potential skills.

0013 SALIVARY CORTISOL RESPONSE TO A HIGH-PROTEIN CHALLENGE AND METABOLIC SYNDROME IN POLICE OFFICERS
Penelope Baughman, Michael Andrew, Cecil Burchfield, Desta Fekedulegn, John Violanti, Diane Miller. National Institute for Occupational Safety and Health, Morgantown, WV, USA; School of Public Health and Health Professions, University at Buffalo, Buffalo, NY, USA
10.1136/oemed-2014-102362.181

Objectives Policing is considered a high-stress occupation and officers have elevated cardiovascular morbidity and mortality. We evaluated the association between salivary cortisol response to a standardised challenge and the metabolic syndrome (Met-Syn), an indicator of increased cardiovascular risk.

Method Cross-sectional data from the Buffalo Cardio-Metabolic Occupational Police Stress Study (2004–2009) were analysed. Met-Syn was defined as three or more of five components: abdominal obesity, hypertension, elevated triglycerides, reduced high-density lipoprotein cholesterol, and glucose intolerance. Officers provided five salivary cortisol samples, one before challenge (ingestion of a high-protein shake) and four at 15-minute intervals after challenge.

Results Among 368 police officers, higher Met-Syn scores were associated with lower cortisol responses in officers with high stress (p = 0.01). In the high-stress group, the cortisol response to the challenge was lower in those with Met-Syn compared to those without Met-Syn (p < 0.001).

Conclusions Salivary cortisol response to a high-protein challenge was associated with the metabolic syndrome in police officers, highlighting the importance of stress management in this high-risk occupation.