0318 AN EPIDEMIOLOGIC STUDY OF ACUTE CORONARY SYNDROME IN THE WORKING POPULATION

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10.1136/oemed-2014-102362.335

Objectives Some of cardiovascular diseases, like stroke and acute coronary syndrome (ACS), are compensable diseases in Taiwan as well as Japan and Korea. The number of compensated cases in the disease has increased from 13 in 2006 to 92 in 2012. The information on workplace risk factors before onset of disease is rare, and this aim of this study is to conduct a case control study for analysing the association between ACS and work stress, using hospital-based study.

Method The study population was the patients in a medical centre. Questionnaire was designed based on literatures about non-work-related and work-related risk factors of cardiovascular diseases. The work-related factors included working time, working pattern, burnout scale, mental stress. The inclusion criteria of case group were workers more than 20 year-old, diagnosed with acute coronary syndrome and having job at onset. The inclusion criteria of control group were diagnosed without acute coronary syndrome and having job at recruitment.

Results There were 47 cases and 121 controls recruited. The results shows case group had larger percentage of male, alcohol intake, no intake of any healthy diet, and higher education level than control group. In addition, family history of premature AMI, history of diabetes, and history of current URI were more prevalent in case group. Multivariate logistic regression shows that smoking and night work were statistical significant factors associated with occurrence of acute coronary syndrome (OR=6.11, 3.59).

Conclusions When we think about the strategy on preventing cardiovascular diseases for working population, work-related factor, like night work, should be considering.

0319 BIOMECHANICAL COMPARISON OF LUMBAR RISK ASSESSMENT IN MANUAL MATERIAL HANDLING WORK

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10.1136/oemed-2014-102362.336

Objectives In this study, lifting index (LI) by NIOSH lifting equation (NLE) and biomechanical load by lumbar motion monitor (LMM) were determined to assess low-back disorder (LBD) risk associated with manual material handling (MMH) task in manufacturing workers.

Method Thirty-five (28 male and 7 female) workers in 13 MMH processes in 6 manufacturing companies were investigated. For each worker, LMM measurement and video recording were done simultaneously for 30 min, and LBD risk probability and LI based on recommended weight limit (RWL) were calculated using NLE.

Results Biomechanical load assessment related with lumbar risk assessment in MMH workers enabled us to identify risks by task characteristics. However, degree of risk of tasks appeared different by assessment tool.

Conclusions Application of assessment tools suitable to work situation is needed. There may be also problems arising from application of foreign assessment tools to Korean workers, and future studies are warranted.

0325 WORKERS' HEALTH OUTCOMES, WORK ORGANISATION AND VIOLENCE FACTORS. ARGENTINA, 2012

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10.1136/oemed-2014-102362.337

Objectives To evaluate workers' health outcomes and their association with work organisation (WOF) and violence (WV) factors among sectors of the economy in Argentina.

Method We used data from the first Employment, Working conditions and Health Survey with face-to-face interviews. We selected 7200 sample cases representative of 3 000 000 workers from different economic sectors across Argentina. Multi-stage methods were applied. Sex and age were considered. The dependent variables were: reported work-injuries, occupational disease, health care visits and symptoms from the workers' perspective. Psychosocial factors were classified as: work organisation factors, violence and harassment factors. To determine the association between health outcomes and risk factors, prevalence and Odds Ratios with 95% confidence intervals (OR) were estimated using and Logistic Regression.

Results Exposed workers to WOF and WV had highest prevalence of injuries (18%, 17% vs. 9 and 11%), diseases (6.6, 7.5% vs. 3.5 y 3.8%) and health care visits, for both WOF and WF respectively ($p < 0.001$). Related symptoms, cardiovascular, gastrointestinal were more expressed in exposed men, OR 1.20, 1.13–1.26; in women the risk of having symptoms were 2 times more compared to non-exposed ones (OR 2.10; 1.93–2.28). Exposed workers to both factors WOF and WV, increased 2–3 times the risk of having health outcomes.

Conclusions Is increasing the evidence of health outcomes related to work organisation factors, therefore, for designing and targeting preventive strategies, and for a comprehensive understanding of health outcomes in the working population, it is necessary to include variables from a psychosocial and gender point of view.

0327 ERYTHROCYTOSIS AND NEUROPSYCHOLOGICAL ALTERATIONS BY CHRONIC EXPOSURE TO LOW CONCENTRATIONS OF CARBON MONOXIDE IN HIGHWAY WORKERS OF MEXICO

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10.1136/oemed-2014-102362.338

Objectives Identify erythrocytosis and neuropsychological alterations in highway workers exposed chronically to low concentrations of CO.

Method Cross-sectional study that included 72 workers of the Mexico-Puebla Highway cabins (guards); 60 cashiers and 12 workers in charge of the shift, in which socio- demographic, clinical and occupational variables were explored; haemoglobin (Hb), hematocrit (HCT) and carboxyhemoglobin (COHb) was determined in their blood, and it was applied the CONSB for CO. The workers who are in charge of the full shift integrated the less exposed to CO group, while the cashiers would shape the greater exposure group.

Results In 49 workers, Hb: 18.1 ± 1.9 mg/dL and Hcto: 55.3 ± 8.7 without significant differences in the presence or absence of erythrocytosis between exposure groups ($p = 0.82$). In the neuropsychological tests of 72 workers, greater alteration was identified in the exposed group, only in the test of symbol and digits ($p = 0.001$), trail making B ($p = 0.002$), and test of digits ($p = 0.003$); the test of building with blocks resulted borderline ($p = 0.07$). In all tests except in the test of learning of Rey, the non-exposed showed better performance.

Conclusions Despite what has been achieved, it is important to follow up the erythrocytosis and the neuropsychological effects on all workers, in addition to start treatment to prevent complications. The perception of innocuousness of chronic exposure to CO in these workers must avoid.

0328 PREVALENCE OF OBESITY AND RISK OF METABOLIC COMPLICATIONS AMONG WORKERS OF A HARNESS PLANT

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10.1136/oemed-2014-102362.339

Objectives To explore the prevalence of obesity and risk of metabolic complications among workers of a harness plant in Durango, Mexico.

Method A cross-sectional study was conducted on 300 workers. Measurements of body mass index (BMI) and waist hip ratio (WHR) were obtained. BMI (m/kg^2) was classified into underweight (<18.5), normal range (18.5–24.9), pre-obese (25.0–29.9), obese class I (30.0–34.9), obese class II (35.0–39.9), and obese class III (≥ 40.0). Risk of metabolic complications (RMC) was considered high when $\text{WHR} > 0.85$ for women, and > 0.95 for men; and moderated between 0.80–0.85 for women and 0.90–0.95 for men. Analysis of variance (ANOVA) was applied for continuous variables, and χ^2 test for categorical variables.

Results The mean age ($\pm$ SD) of the subjects was 28.7 (± 8.9) yrs. In the sample, 51.7% were male. According to the BMI, 47.3% of participants were in the normal range, 35.3% pre-obese, and 15.7% showed obesity. According to the WHR, 30% were at high risk, and 28.6% at moderate risk for developing metabolic complications. The RMC (high and moderate) was significant more prevalent in women than in men, 77.5% vs 49.3%, ($p < 0.0001$). ANOVA yielded significant variation in obesity according to age ($p < 0.001$). Post hoc Tukey test showed differences of obese class II with normal range ($p = 0.007$) and underweight ($p = 0.0169$).

Conclusions The prevalence of obesity and RMC are quite high in studied population. The risk is higher among women and increases with age.

0329 THE SHIFT WORK AND THE BURNOUT SYNDROME

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10.1136/oemed-2014-102362.340

Objectives This study aims to identify the presence of burnout in nursing workers of a intensive care skilled in children with heart disease.

Method This is an exploratory, transversal and quantitative study with 92 nursing workers of a children intensive care in a university hospital of Sao Paulo, skilled on cardiology. The data were collect by MBI - Maslach Burnout Inventory. The data were analysed statistically and were presented in graphs and tables.

Results The results showed that the subjects have on average 31 years old, 93.5% were female, 69, 3% worked less than 10 years in a paediatric and neonatal cardiology unit, and 79.3% have only one employment. It was observed that burnout levels were considered high in 8 (8,7%) of the participants and shows that 46 (50%) of workers have a high score for at least one of the three dimensions. The occurrence of burnout among workers in the study reveal the need for studies in the field of nursing paediatric proposed prevention and intervention to subsidise worker health nursing.

Conclusions These data suggest that shift work impacts the quality of life of this population, since living with physical and psychological changes, which may also influence the quality of nursing care. Therefore, it's necessary to recreate the work process with the implementation of protective measures the health of nursing.

0331 MENTAL HEALTH PROBLEMS OF SEAFARERS

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10.1136/oemed-2014-102362.341

Objectives Recent investigations have shown that workplace bullying as a long lasting traumatic experience with the symptoms of victimisation may lead to psychological distress. The objective of our study was to investigate the prevalence of workplace bullying among seafarers and the associations with psychological distress in Klaipeda, Lithuania.

Method In this observational study, totally 450 seafarers were investigated (response rate 68%). We used the anonymous questionnaire with demographical variables, Negative acts questionnaire and GHQ-12. The SPSS 17.0 was used in the statistical analysis. Logistic regression analysis was employed for the associations between workplace bullying and mental distress among seafarers, controlling for variety of demographical and psychosocial factors.

Results The prevalence of occasional bullying among seafarers was 10.1%, severe bullying 3.8%, mental distress 9.3%. The OR of occasional bullying for psychological distress was 2.92; 95% CI 0.99–8.61, of severe bullying 4.60; 95% CI 1.13–18.78. After adjustment for nationality, age, occupational position the OR of occasional bullying for psychological distress was 3.47; 95% CI 0.95–12.63, of severe bullying 6.52; 95% CI 1.34–31.76.

Conclusions The significant associations between workplace bullying and psychological distress implicate that the preventive measures should be directed towards the improvement of the psychological climate in the workplace for health promotion strategies in seafaring.