

Abstracts

geographic misclassification of cases. Differences in incidence ratios by sex could reflect occupational exposures. Estimates from the random effects model did not differ significantly from the standard estimates, indicating that the amount of heterogeneity in incidence ratios by changes population distribution was minimal.

Oral Session 11 – Musculoskeletal Disorders 1

O11-1 ERGONOMIC AND SAFETY RISKS AMONG SMALL SCALE MINNERS IN THE PHILIPPINES

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Worldwide, small-scale mining (SSM) provides employment to about 13 million people and affects the livelihood of 80–100 million. This study investigated the ergonomic and safety hazards of small scale miners in one of the largest small scale mining area in the Philippines which is the area of Itogon, Benguet. There were 93 small scale miners who were included in the study as they complied with the inclusion criteria. The methods consisted of survey questionnaires, health physical examination guide, individual interviews, and work process observation tool. The results showed that the small-scale miners worked for an average of 10.7 years, and a maximum work year of 40. The most widely employed mining technique was the dog-hole mining consisting of several sub-processes -tunnelling, ball milling and gravity concentration, cyanide leaching, and smelting. The ergonomic and safety hazards identified were noise exposure from the dynamite blast, temperature extremes, and exposure to dust from dynamite blasting. The miners experienced prolonged crouching and bending, prolonged handling of tools, and carrying heavy sacks filled with mineral ores. There were no standard work protection and safety measures followed by the miners. In the ball milling and gravity concentration process, machine-related accidents were noted such as experiencing cuts from the crusher. In the cyanide leaching which uses massive amounts of cyanide, the most prevalent hazards were heat, dust, and chemicals such as cyanide fumes. Burn injuries were reported among miners. A third (31.2%) of miners have experienced accidents. The most common injury was laceration at 47.8%, followed by methane inhalation, fracture of hand digits, and contusion at 17.4%. It is suggested that intervention programs for ergonomics and safety measures be implemented by the local government for the small scale miners.

O11-2 ASSOCIATIONS BETWEEN PHYSICAL WORKLOAD AND EARLY EXITS FROM LABOUR MARKET DUE TO LONG-TERM SICKNESS ABSENCE, DISABILITY PENSION AND LONG-TERM UNEMPLOYMENT DURING A 7-YEAR FOLLOW-UP IN A GENERAL WORKING POPULATION

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Background In Sweden, approximately 50% of the men and 60% of the women entering retirement pension have had other subsistence than paid employment the years before retirement. Associations between heavy physical workload and musculoskeletal disorders are well-documented. This study investigates the role of heavy physical work for reduced work ability and early exits from the labour market. Socioeconomic position (SEP) is a potential confounder as it both influences the choice of occupation and is a determinant of health and work ability. The aim of this study was to investigate the associations between heavy physical workload, awkward work postures and long-term sickness absence, disability pension and long-term unemployment.

Methods The study is based on the Stockholm Public Health Cohort, a population-based cohort of randomly selected residents in the Stockholm county. A total of 11 041 employed women and men, who answered a baseline questionnaire in 2002, were followed in national registers on sickness absence, disability pension and unemployment until 2010. The questionnaire contained questions on physical workload, work below knees, work above shoulder height and occupation.

Results Heavy physical workload increased the risk of long-term sickness absence (HR 2.21, CI: 95% 1.83–2.68), disability pension (HR 2.06, CI: 95% 1.27–3.35), and long-term unemployment (HR 1.49, CI: 95% 1.15–1.93). Exposure for daily work below knees and above shoulder height were also associated with the three outcomes, with slightly lower hazard ratios. The associations were clearly attenuated after adjustments for SEP.

Conclusions The results imply that heavy physical work contribute to reduced work ability and early exits from labour market manifested in long-term sickness absence, disability pension and long-term unemployment. The effects were partly explained by SEP. However, the associations were probably over-adjusted to some extent as SEP is closely related to occupational exposures, and to high physical workload in particular.

O11-3 LOW BACK PAIN AMONG OFFICE WORKERS IN COSTA RICA, NICARAGUA AND SPAIN

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Objectives To determine the prevalence and incidence of LBP in Costa Rica and Nicaragua, middle-income countries, and Spain, a high income economy.

Methods A secondary analysis of office workers from baseline (Costa Rica: n = 224, 91%; Nicaragua: n = 285, 100%; Spain: n = 438, 98%) and a 12-month follow-up (92%, 89% and 90%, respectively) data collected as part of the Cultural and Psychosocial Influences in Disability (CUPID) study from the three participating Spanish-speaking countries. We examined three outcomes measures at baseline: (1) prevalence of LBP in last 12 months, (2) prevalence of LBP in past month, and (3) prevalence of disabling LBP; and three at follow-up: (4) incidence of LBP in past month, (5) incidence of disabling LBP, and (6) persistence of LBP. We used logistic regression to estimate the association, odd ratios (OR) and their corresponding 95% confidence intervals (95%

CI), between country and these outcome measures. Models were adjusted for socio-demographic, job and health variables.

Results After adjusting for covariates, the prevalence of LBP in Costa Rica and Nicaragua was always higher than in Spain, but only the prevalence of disabling LBP was simultaneously, and statistically significant, higher both in Costa Rica (27%) and Nicaragua (28%) than in Spain (15%). Compared to Spain, and after adjustment, the incidence of LBP was statistically significantly higher only in Nicaragua: LBP in the last month (OR = 2.38; 95% CI: 1.33–3.92), disabling pain (OR = 2.53; 95% CI: 1.38–4.62), persistence of pain (OR = 2.51; 95% CI: 1.36–4.66).

Conclusion LBP was common among office workers in all three countries, but with a higher prevalence in Costa Rica and Nicaragua than Spain. Incidence was higher only in Nicaragua. These differences persisted despite adjustments for sociodemographic, organisational, physical demands, and health-related factors. Future studies are needed to examine whether or not other working conditions (e.g., workplace ergonomics) and/or cultural determinants explain the remaining differences.

011-4 MUSCULOSKELETAL DISORDERS AMONG TEACHERS IN BULGARIA, QUESTIONS AND AREAS FOR ACTION

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Introduction Musculoskeletal disorders are in the forefront of Occupational medicine practice because they determine frequent and long-term sick leave from work and thus generate significant economic losses. They tend to increase which draws researchers, attention to their study and prevention.

Objective The objective of the study was to clarify the presence of musculoskeletal disorders among teachers in Bulgaria for a retrospective period of 12 months in 2012 and to investigate associated with them working conditions.

Methods An anonymous survey with the Eurostat questionnaire among 1030 Bulgarian teachers from primary schools and kindergartens was completed. Data were statistically analysed by SPSS 11.1.

Results The total number of teachers-respondents to the question 12.1 about the available problems with bones, joints and muscles within 2012 is 447. A positive response has been given by 215 teachers (48.1%) and 232 has answered negatively (51.9%) – $p > 0.05$. On the other hand the majority of teachers do not carry out activities related to difficult working postures or movements (question No19a question – $n = 987$, no such activities – 663 respondents, in percent's – 67.2%; yes, I have such activities – 222 teachers, or 22.5% of all; I cannot point – 102 respondents, or 10.3%) or handling of heavy loads (question No19b – $n = 986$, no such activities – 861, or 87.3%; yes, I have such activities – 53, or 5.4%). The lack of significant difference between teachers with and without musculoskeletal complaints and relatively small percentage of ergonomics risk working factors, directed to search beyond the ergonomic factors for these complaints.

Conclusion The high incidence and morbidity, generated by musculoskeletal disorders turn to in-depth study of the factors for their development among teachers and to the creation of complex preventive programs, leading place in which falls on the Occupational Medicine.

Oral Session 12 – Socioeconomic Status and Ethics

012-1 DO PSYCHOSOCIAL WORKING CONDITIONS MEDIATE SOCIAL INEQUALITIES IN MUSCULOSKELETAL AND PSYCHIATRIC SICKNESS ABSENCE IN A LIFE-COURSE PERSPECTIVE?

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Objectives Psychosocial working conditions are predictors of musculoskeletal and psychiatric sickness absence. Our objective was to examine whether these factors mediate socioeconomic inequalities in sickness absence in a life-course perspective, including indicators of both childhood and adult socioeconomic position (SEP).

Methods Our study sample was all employed individuals who partook in the HUNT study and who were born between 1967 and 1976 ($N = 4530$). Outcome was the risk of at least one sickness absence episode in 2009, with musculoskeletal and psychiatric diagnoses, respectively. Educational attainment (4 categories) served as indicator of adult SEP, whereas highest parental education level and father's average income during early childhood (0–6 years) were indicators of childhood SEP. Work factors were job control, job strain, social support and bullying. Risk ratios (RRs) were estimated using Poisson regression.

Results 10% among both women and men had musculoskeletal sickness absence during follow-up, whereas 7% of the women and 3% of the men had psychiatric sickness absence. There were strong social gradients according to adult SEP for both genders and both diagnoses, but strongest for musculoskeletal disorders. RRs for having a musculoskeletal sickness absence episode, comparing highest and lowest educational levels, were 5.4 for women and 7.2 for men, adjusted for age and childhood SEP, and 3.0 and 4.6, respectively, for psychiatric diagnoses. Including all work factors reduced the RRs, most for psychiatric sickness absence among men (20%), with largest impact for job strain (13%), job control (10%) and bullying (9%) in separate analyses. The largest RR reduction for musculoskeletal sickness absence was among women (10%), with largest impact for job control (10%) and job strain (8%).

Conclusions There were strong social gradients in sickness absence, which were somewhat attenuated when adjusting for psychosocial work factors, indicating that these factors may partly mediate the social gradients in a life-course perspective.

012-2 THE RELATIONSHIP BETWEEN SOCIO-ECONOMIC GROUP AND WORK-RELATED MENTAL ILL-HEALTH

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Introduction Inequalities in health have long been described showing an inverse relationship between social class and morbidity. However, analysis of work-related mental ill-health (WRMIH) and socio-economic group reported by General Practitioners (GPs) show incidence rates are greater amongst higher socio-economic groups. The Health & Occupation Research



O11-3 Low back pain among office workers in costa rica, nicaragua and spain

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