they cause occupational illness. The widespread use of FeNO level measurement will be beneficial for the protection and development of workers' health.

Poster Presentation

Ageing Workforce

0093

WORK STRESS MEASURES ARE ASSOCIATED WITH HEALTH AND PHYSICAL FUNCTION AROUND THE AGE OF RETIREMENT: FINDINGS FROM THE HERTFORDSHIRE COHORT STUDY

Martin Stevens*, Holly Syddall, Catherine Linaker, Stefania D'Angelo, Karen Walker-Bone.
MRC Lifecourse Epidemiology Unit, University of Southampton, Hampshire, UK

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Background Studies such as Whitehall II have shown that poor psychosocial work conditions are associated with ill health among employees; it is unclear whether these effects persist and affect health in later life. We have addressed this question using data from the Hertfordshire Cohort Study (HCS).

Method 1021 men and 753 women (59–73 years of age) underwent a home interview and clinical examination and completed a social health questionnaire detailing job-strain (JS) and effort-reward imbalance (ERI) in the current or most recent job.

Logistic and linear regression were used to compare the health of participants who reported JS and/or ERI with those who reported neither.

Results 61% reported neither JS or ERI whilst 10% reported both. 72% were no longer working. JS/ERI was not associated with cardiovascular outcomes (stroke, ischaemic heart disease, hypertension) or type II diabetes. However, participants who reported both JS and ERI had increased odds of poor physical function (SF-36) in comparison with those who reported neither (odds ratios: 2.3 [95%CI 1.5,3.7] men; 2.0 [95%CI 1.2,3.6] women). Average grip strength was 1.7 kg [95% CI 0.2,3.3] lower among men who reported both JS and ERI compared to those reporting neither.

Similarly, participants reporting both JS and ERI had poorer SF-36 mental health in comparison with those reporting neither (odds ratios: 2.8 [95%CI 1.8,4.4] men; 3.1 [95% CI 1.8,5.3] women).

Conclusions JS and ERI in combination are associated with poor physical and mental health outcomes in later life.

Further prospective research is required to determine the causal chain of these associations.

Poster Presentation

Ageing Workforce

0096

BODY MASS INDEX (BMI), CHRONIC MUSCULOSKELETAL PAIN AND ADVERSE EMPLOYMENT OUTCOMES IN OLDER WORKERS: THE HEALTH AND EMPLOYMENT AFTER FIFTY (HEAF) STUDY

^{1,2}Stefania D'Angelo*, ^{1,2}Keith Palmer, ^{1,2}Karen Walker-Bone, ^{1,2}Clare Harris, ^{1,2}David Coggon, ^{1,2}Cathy Linaker. ¹MRC Lifecourse Epidemiology Unit University Of Southampton, Southampton, UK; ²Arthritis Research UK/MRC Centre for Musculoskeletal Health and Work, Southampton, UK

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Introduction The combination of an ageing population and an obesity epidemic has important health and economic implications, with growing numbers of older people remaining in work. Obesity is a risk factor for musculoskeletal disorders, which are often more common and severe at older ages and limit work capacity. As part of a longitudinal cohort study on the impact of health on employment in later life, we explored the relation between BMI, chronic musculoskeletal pain and employment outcomes.

Methods Some 8,000 50–64 year-olds recruited from 24 English general practices completed a baseline postal questionnaire about work, home circumstances and measures of health. Logistic regression was used to explore associations between BMI and pain (lasting >1 month in the past year and interfering with everyday activity) and work outcomes (health-related job loss, prolonged sickness absence, cutting down at work), adjusting for educational background and mental health.

Results A total of 7585 participants were included, 861 of whom were not in work for a health reason. More than a quarter (26%) of participants reported chronic pain and almost a quarter were obese. Adverse work outcomes were only weakly associated with obesity on its own but strongly associated with the combination of chronic pain and obesity (OR range 3.9–6.8). Significant associations were also seen in the underweight group (BMI <18.5) (OR range 3.9–14.1).

Conclusions Prevention of chronic pain and obesity is important, but weight control is of particular importance in older workers with musculoskeletal problems, in terms of work capability and job retention.

Poster Presentation

Musculoskeletal

0097 RISK FACTORS FOR OCCUPATIONAL LOW BACK PAIN (LBP), MEDICINE USE, AND SEEKING CARE FOR LBP: RESULTS FROM A PROSPECTIVE COHORT STUDY

¹Arun Garg*, ¹Jay Kapellusch, ²Kurt Hegmann. ¹UWM, Milwaukee, WI, USA; ²University of Utah, Salt Lake City, UT, USA

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Objective The aim of this study was to evaluate relationships between job physical demands and risk of low-back pain (LBP), using medication to treat LBP (M-LBP) and seeking care for LBP (SC-LBP).

Methods Worker demographics, LBP history, psychosocial factors, hobbies, job physical demands (using the Revised NIOSH Lifting Equation) were assessed at the time of enrollment (551 workers). There were 258 incident-eligible workers (a continuous pain-free period of at least 90 days at the time of enrollment) and were followed monthly for up to 4.5 years to determine new LBP, M-LBP, and SC-LBP cases. Changes in job physical demands were measured. Associations between risk factors and LBP outcomes were modelled using proportional hazards regression with time varying covariates.

Results LBP and M-LBP were fairly common affecting 47.7% and 37% workers, respectively. SC-LBP much less common affecting 1 in 11 workers. Peak Lifting Index (PLI) and Peak Composite Lifting Index (PCLI) were associated with all three outcomes of LBP ($p < 0.05$). PLI and PCLI had peak Hazard Ratios of 4.3 and 4.2 for LBP, 3.8 and 4.3 for M-LBP, and 23.0 and 21.9 for SC-LBP, respectively. LBP history was associated with all three outcomes of LBP. Age, gender, BMI, hobbies, and psychosocial factors showed inconsistent relationships with the three outcomes of LBP.

Conclusion Job physical demands are associated with increased risk of LBP, M-LBP and SC-LBP. The PLI and PCLI are useful metrics for estimating job physical demands.

Poster Presentation

Shift Work

0098 EVALUATION OF SLEEP PROBLEMS AND SLEEP HYGIENE FOR SHIFT WORKERS IN KOREAN STEEL MANUFACTURING COMPANY

¹Ji-Won Lee*, ¹Hyoun-Ryoul Kim, ²Taewon Jang, ³Hye-Eun Lee, ¹Junsu Byun, ¹Seyoung Lee. ¹Department of Occupational and Environmental Medicine, College of Medicine, the Catholic University of Korea, Seoul, Republic of Korea; ²Department of Occupational and Environmental Medicine, Hanyang University Guri Hospital, Guri, Republic of Korea; ³Department of Occupational and Environmental Medicine, College of Medicine, Kyung Hee University, Seoul, Republic of Korea

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Objectives To estimate self-reported sleep health of shift workers and construct plans to minimise harm of the shiftwork.

Methods A cross-sectional survey was conducted by using structured questionnaires on workers who were employed in a steel company. They divided into 3 groups (daytime workers,

4 teams 3 shifts, and other shifts). The survey contains questionnaires about demographic characteristics, sleep hygiene, condition of their work place, Insomnia Severity Index (ISI) and the Epworth Sleepiness Scale (ESS) to evaluate workers' sleep disorder and daytime sleepiness. Among shift-workers, 'insomnia group' is compared to 'normal sleep group' with chi-square test. The multiple logistic regression analysis was performed to explore risk factors of 'severe insomnia'.

Results Workers with severe insomnia were 6.7% in other shifts group, and 2.3% in 4 teams 3 shifts group. There was no severe insomnia in daytime workers. Among 4 teams 3 shifts group, 12.9% workers complained severe daytime sleepiness. With the practice of sleep hygiene, generally the items for improving environment to sleep well showed higher rate in 'severe insomnia group' than 'normal sleep group'. It might be that the workers who suffered from insomnia tried to overcome it. The items which disrupt sleep were concordantly higher in 'insomnia group' than in 'normal sleep group', suggesting that such kind of adverse sleep habits are negatively affect sleep of shift workers.

Conclusion The results of present study suggest relationship between sleep hygiene and sleep disorders among shift workers. To minimise shift worker's sleep problem, proper sleep hygiene is necessary.

Poster Presentation

Psychosocial

0099 PSYCHOLOGICAL WORK ENVIRONMENT AND SUICIDAL IDEATION AMONG NURSES IN TAIWAN

¹Weishan Chin*, ²Juidth Shu-Chu Shiao, ^{3,4}Yue-Liang Leon Guo, ²Yu-Ju Li, ⁵Pei-Yi Hu, ⁵Jiune-Jye Ho. ¹Institute of Occupational Medicine and Industrial Hygiene, National Taiwan University School of Public Health, Taipei, Taiwan; ²Department of Nursing, College of Medicine, National Taiwan University (NTU) and NTU Hospital, Taipei, Taiwan; ³National Institute of Environmental Health Science, National Health Research Institutes, Zhunan, Taiwan; ⁴Department of Environmental and Occupational Medicine, National Taiwan University (NTU) and NTU Hospital, Taipei, Taiwan; ⁵Institute of Labour, Occupational safety and Health, Ministry of Labour, Taipei, Taiwan

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Background Nurses are exposed to poor psychological work environment which in turn may cause poor mental health. Poor mental health is a risk factor for suicidal ideation.

We intended to understand the association between psychosocial work environment and suicidal ideation among hospital nurses in Taiwan.

Method A self-reported questionnaire including demographic data, psychological work environment, and the question of suicidal ideation was sent to our participants- female nurses working in hospitals. Multiple logistic regression and population attributable risks (PARs) were performed to assess the effect of psychological work environment on reporting having suicidal ideation.

Results A total of 2492 (72.6%) returned the questionnaires and were eligible for final analysis. The prevalence of reporting suicidal ideation was 18.3%. Higher risk of suicidal ideation was found associated with age between 36 and 40, educational level of Junior college or below, working for more than 60 hours per week, higher personal burnout, higher client-related burnout, and always felt stressed at job.