adjusted risk of low work unit social capital increased by OR=1.72, CI 95% 1.65–1.79.

Conclusion Managers' perception of job strain was strongly associated with independently measured workplace social capital. The direction of the causal pathway, if any, may be either way which points to a need for prospective studies and analyses of mediating and/or moderating factors.

Poster Presentation

Musculoskeletal

0357

MULTI-SITE MUSCULOSKELETAL PAIN IN SWEDISH POLICE AND ITS ASSOCIATION WITH USE OF MANDATORY EQUIPMENT

¹Louise Bæk Larsen*, ¹Elisabeth Elgmark Andersson, ²Roy Tranberg, ¹Nerrollyn Ramstrand. ¹Department of rehabilitation, School of Health and Welfare, Jönköping University, Jönköping, Sweden; ²Department of Orthopaedics, Institute of Clinical Sciences, University of Gothenburg, Gothenburg, Sweden

10.1136/oemed-2017-104636.292

Background Musculoskeletal disorders are a common problem among uniformed police with lower back pain being most frequently reported (Gyi and Porter, 1998). Wearing mandatory equipment (duty belt and body armour) and sitting for long periods of time in fleet vehicles are characteristic workload factors linked to musculoskeletal disorders in police (Filtner et al., 2014, Holmes et al., 2013).

Aim The aim of this study was to determine the prevalence of multi-site musculoskeletal pain among Swedish police and to explore the possible association to physical workload factors with a special focus on mandatory equipment.

Method A cross-sectional study was carried out with responses from 4185 uniformed police. Data was collected through a self-administered online survey including questions about work environment, physical workload factors, mandatory equipment and musculoskeletal pain. Multi-site musculoskeletal pain was determined by summing pain sites from four body regions. Binomial logistic regression was performed to explore the association between multi-site musculoskeletal pain and 1) use of mandatory equipment and 2) sitting for long periods in fleet vehicles.

Result The prevalence of multi-site musculoskeletal pain at least one day per week within the previous three months was 41.3%. A statistically significant association was found between multi-site musculoskeletal pain and mandatory equipment whereas sitting for long periods of time in fleet vehicles was not found to be significantly associated to multi-site musculoskeletal pain.

Conclusion Multi-site musculoskeletal pain is a considerable problem among Swedish police and the association to mandatory equipment should therefore be further investigated including psychosocial factors.

Poster Presentation

Exposure Assessment

0358

RHINITIS SYMPTOMS AND IMMUNOLOGICAL RESPONSE AFTER OCCUPATIONAL EXPOSURE TO SHRIMP SHELL POWDER

^{1,2}Björg Eli Hollund*, ^{1,2}Jorunn Kirkeleit, ^{1,2}Cecilie Svanes, ¹Morten Langeland, ^{1,2}Randi Bertelsen. ¹Department of Occupational Medicine, Bergen, Norway; ²University of Bergen, Bergen, Norway

10.1136/oemed-2017-104636.293

Occupational bioaerosol exposure may cause a range of temporary or permanent health effects, depending on host factors and the type and duration of exposure.

In the present study, we investigated rhinitis and immunological markers in all employees in a shrimp shell powder production factory, before and after exposure to shrimp shell powder.

Material and methods The study population comprised 11 employees. Personal exposure to inhalable dust (fullshift) was measured in the breathing zone of the employees during production of shrimp shell powder. All employees answered a self-administered questionnaire before and after exposure, about working tasks, airways symptoms, and smoking habits. Blood samples were collected before and after the work shift, and analysed for leukocyte counts, tryptase, total IgE, IgA, IgM, IgG.

Results Shrimp shell powder workers were exposed to 12 mg/m³ inhalable dust (mean 11.8 mg/m³, median 8.2 mg/m³, n=16), the exposure level for unexposed group was less than 1 mg/m³ inhalable dust (mean 0.4 mg/m³, median 0.4 mg/m³, n=10).

Employees working with shrimp shell powder had more rhinitis symptoms (stuffy nose and runny nose) than employees working with fish.

Although not statistically significant, the peripheral levels of tryptase, leucocytes and neutrophils in peripheral blood appeared to be highest among exposed workers, increasing after exposure.

Conclusions Shrimp shell powder workers are exposed to high level of inhalable dust compared to the occupational exposure limit of organic dust (5 mg/m³).

Exposure was related to more rhinitis symptoms and indicated (non-significantly) higher immunological parameters

Follow-up of this industry and more study is needed.

Oral Presentation

Other

0359

SYSTEMATIC REVIEW OF OCCUPATIONAL CHEMICAL EXPOSURES AND CARDIOVASCULAR DISEASES

¹Christer Hogstedt*, ¹Maria Albin, ²Charlotte Hall, ¹Bengt Sjögren, ^{1,3}Töres Theorell. ¹Karolinska Institutet, Stockholm, Sweden; ²SBU, Stockholm, Sweden; ³Stockholm University, Stockholm, Sweden

10.1136/oemed-2017-104636.294