risk due to an interaction between disability and age (reference = age 24 and under) was greatest amongst employees age 40–44 years in the harassment model (interaction contrast (IC)=8.19%, 95% CI: 7.22%–9.13%) and 45–59 years in the discrimination model (IC=13.32%, 95% CI: 7.25%–18.34%). In the discrimination model, excess risk due to an interaction between disability and ethnicity (reference = not a visible minority) was observed for employees who identified as visible minorities (IC=4.49%, 95% CI: 1.53=7.51%) and as Aboriginal (IC=6.00%, 95% CI: 2.85%–9.21%).

Conclusion In the current Canadian labour market disabled employees experience high levels of workplace harassment and discrimination despite policy and legislation to prevent this. Additional efforts to address workplace harassment and discrimination are needed, especially for vulnerable groups.

Poster Presentation

Psychosocial

0188 TRAJECTORIES OF WELL-BEING: TIME-VARYING EFFECTS OF PSYCHOSOCIAL DETERMINANTS OF HEALTH AT WORK

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Objective To analyse a simplified model of psychosocial work environment in order to estimate how changes over time in factors related to psychological working conditions, work-life interface and personal characteristics influence workers well-being trajectory.

Methods The simplified model, which includes working conditions (Job Demands, Job Control, Supervisor Support and Co-workers Support), Work-Family Conflict (Conflict based on Strain and Conflict based on Time) and Sense of Coherence, was examined in a three time points longitudinal survey including 1691 workers using latent growth curves models (LGCM) with time-varying effects through a structural equations modelling approach.

Results Group level individual trajectories of Time-Varying Covariates (TVC) showed that Job Demands and Time-based Conflict decreased, Co-Workers Support increased and Supervisor Support remained stable. Only Time-based Conflict and Supervisor Support showed individual workers variation across change. Job Control and Sense of Coherence individual trajectories had no acceptable fit to the data. Well-being trajectory showed a significantly increase over time and this growth was conditioned significantly by Job Demands, Time-based Conflict and Sense of Coherence in the three moments, by Job Control and Supervisor Support in two moments, but not by Co-Workers Support time-specific effects.

Conclusions Working environment factors have differentiated intervention regardless of their isolated trajectories in a dynamic compatible with a systemic mechanism of homeostatic and adaptive type, with the ability to activate resources necessary to maintain the highest possible Well-Being level.

Knowledge of this adaptive dynamics is a critical issue to the adoption of company's policies favourable to employees Well-Being and individual resources improvement.

Poster Presentation

Injuries

0189 WORK-RELATED SNAKE BITES INJURIES AMONG FARMERS IN BRAZIL

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Objective To estimate annual incidence of work-related snake bites injuries, WSBI, among farmers in Brazil from 2007 to 2015.

Methods This study was carried out with data from the Information System for Notifiable Diseases and injuries, SINAN, which includes records of work-related injuries caused by poisonous animals. Population estimates are from the Brazilian Institute of Geography and Statistics, IBGE.

Results In 2007 the WSBI incidence was 5.3/100,000 and 5.2/100,000 in 2015, a reduction of –2.4% among farmers in Brazil. The highest WSBI incidence was estimated for Roraima and Espírito Santo, in 2007 (29.5/100,000 and 24.7/100,000, respectively) and 2015 (40.7/100,000 and 16.1/100,000). Over the study time, the WSBI annual incidence increased in the North (52.3%) and Northeast (14.6%). In the remaining regions there was a decrease of –66.8% (Middle West), –40.8% (Southeast) and –32.0% (South).

Conclusions There are deep regional disparities in the risk of WSBI among farmers in the country, approximately 15 million. Epidemiological data for them are scarce leaving invisible these severe, potentially disabling or fatal preventable work-related injury with simple safe shoes like rubber boots.

Financing source Ministry of Science and Technology/Universidade Federal da Bahia

Oral Presentation

Methodology

0190 OCCUPATIONAL EXPOSURE TO CRYSTALLINE SILICA AND DEATH FROM LUNG CANCER: G-ESTIMATION OF STRUCTURAL ACCELERATED FAILURE TIME MODELS

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Background Occupational exposure to crystalline silica has been linked to mortality risk for lung cancer. The healthy worker survivor effect may bias effect estimates downward unless special methods are used to adjust for employment status, time off work, and co-exposures. Unlike traditional regression, g-estimation adjusts correctly for such time-varying confounders.

Methods We applied g-estimation of structural accelerated failure time models to estimate the number of years of life that could have been saved for mortality from all natural causes and from lung cancer if exposure to crystalline silica had been prevented among 2342 white male workers in the diatomaceous earth industry (1942–2011). Exposures were lagged 17 years because exposure data were only available through 1994; this also accounts for disease latency. Analyses adjusted for calendar year, age, Latino ethnicity, smoking status, duration of employment in the diatomaceous earth industry and exposure to crystalline silica before entering follow-up, prior exposure to crystalline silica, prior cumulative exposure to dust and asbestos, time taken off work, and employment status.

Results If all workers had been unexposed to crystalline silica, we estimated that workers who died of natural causes would have survived, on average, 1.1 years longer (95% CI: 0.3, 2.3) overall. Workers who died from lung cancer would have survived an estimated average of 9.0 years longer (95% CI: 4.4, 16.2) if they had been unexposed.

Conclusions A ban on exposure to crystalline silica in this cohort would have resulted in longer survival for workers, particularly those who died of lung cancer.

Poster Presentation

Psychosocial

0193 ALCOHOL AND OTHER DRUGS AMONG WORKERS: PREVALENCE AND JOB RELATED CONSEQUENCES

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Few data on the use of alcohol and other drugs in workers and possible effects on job performance are available. In 2016 an anonymized questionnaire was distributed among Belgian employees while waiting for a periodical medical examination. AUDIT-C and One Single Questions were used to measure prevalence of substance use. Effects on absenteeism, lost productivity, workplace accidents, conflicts with co-workers and sanctions by employers respectively experienced by the workers and observed among colleagues were investigated.

5367 workers completed the questionnaires. 83% drank at least one standard unit in the 12 months preceding the survey; 7.5% had used cannabis or other illegal drugs, 9.3% hypnotics, 5.5% tranquilizers and 7.9% antidepressants; 11.3% took prescribed drugs for nonmedical reasons. 11.4% of current drinkers had an average consumption of 5 to 6 units a day, which was significantly higher among employees <35 year; 8.5% exhibited binge drinking at least once a week.

39.1% of last year drinkers had an indication of problem drinking and 12.2% experienced consequences on the job. 27.8% observed negative effects among their colleagues, especially being late at work (18.3%), irregular job performances (18%) and absenteeism (15.7%) Due to illicit drug use, 1.2% of the respondents experienced some negative effects on the job, 7.2% observed negative effects among their colleagues. Regarding the use of psychoactive medication, significantly more used by women, this was respectively 3% and 10.7%.

As the negative impact of work related substance use, especially of alcohol, is obvious, a tailored and multicomponent alcohol and drug policy is appropriate.