

**Objectives** This study assessed the impact of 1) within-individual improvements, and 2) within-individual deteriorations in working conditions, health behaviour and BMI on changes in work ability and self-rated health among workers.

**Methods** The Dutch Study on Transitions in Employment, Ability and Motivation (STREAM) was used to identify participants whose working conditions, health behaviour, and BMI improved (N=14,045) or deteriorated (N=14,066) at least once during seven year follow-up (2010–2017). The impact of within-individual improvements and deteriorations in health behaviour (moderate- and vigorous physical activity, smoking status), BMI, psychosocial (psychological- and emotional job demands, autonomy, social support) and physical working conditions in a given year on changes in work ability (0–10 scale) and self-rated health (1–5 scale) in the same year were analysed with fixed-effects regression models.

**Results** Workers with deteriorated physical or psychosocial working conditions decreased in work ability ( $\beta$ 's: -0.21 (95% CI: -0.25;-0.18) to -0.28 (95%CI: -0.33;-0.24)) and health ( $\beta$ 's: -0.07 (95%CI: -0.09;-0.06) to -0.10 (95%CI: -0.12;-0.08)), whereas improvements in working conditions were to a lesser extent associated with increased work ability ( $\beta$ 's: 0.06 (95%CI: 0.02;0.09) to 0.11 (95%CI: 0.06;0.16)) and health ( $\beta$ 's: 0.02 (95%CI: 0.00;0.03) to 0.04 (95%CI: 0.02;0.06)). Workers with increased BMI or decreased physical activity had reduced work ability and health. Likewise, decreased BMI or increased vigorous physical activity was associated with improved health. An increase in moderate or vigorous physical activity was modestly associated with a reduced work ability. Quitting smoking was associated with reduced work ability and health.

**Conclusion** Preventing deteriorations in working conditions, health behaviour and BMI could be of importance for sustainable employability.

0-357

#### EXAMINING VARIATIONS IN WORK DISABILITY DURATION BY FIRM SIZE: A COMPARATIVE STUDY OF WORKERS' COMPENSATION CLAIMS IN CANADA AND AUSTRALIA

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**Introduction** Small firms, while more numerous than large firms, often face greater challenges in implementing effective occupational health and safety and return-to-work programs. Research has rarely looked at firm size as a determinant of work disability duration and has been limited to single jurisdictions.

**Objectives** To identify whether there were differences in work disability duration between injured workers employed by small, medium and large firms and whether these differences varied between workers' compensation jurisdictions in Canada (CAN) and Australia (AUS).

**Methods** Workers' compensation data were used to identify comparable lost-time, work-related injury and musculoskeletal disorder claims in five Canadian and five Australian jurisdictions between 2011 and 2015. Work disability duration was measured using cumulative days in receipt of disability benefit payments up to one-year post-injury. Jurisdiction-specific

quantile regression models were used to compare cumulative disability days paid from small (< 20 full-time equivalents (FTEs), medium (20–199 FTEs), large (200+ FTEs) firms at 25th, 50th, and 75th percentiles in the disability distribution, adjusting for confounders.

**Results** Differences in work disability duration by firm size were observed in all jurisdictions except the Northern Territories (AUS). Compared to large firms, small firms were paid the most disability days at each percentile, particularly in Victoria (AUS), Saskatchewan (CAN), the Australian Capital Territory, and Tasmania (AUS), where an additional 63.0, 31.1, 37.0, and 27.4 days were paid at the 75th percentiles of the distributions, respectively. Claims from medium-sized firms were generally paid more disability days than large firms except in Western Australia and Tasmania, where they were paid less.

**Conclusions** Small firms were shown to have the longest work disability durations in 9 of the 10 study jurisdictions. Claims management processes need to be sensitive to the challenges that small firms face in accommodating and returning injured workers back to work.

## Oral

0-366

#### VACCINE HESITANCY AMONG CANADIAN PARAMEDICS DURING THE COVID-19 PANDEMIC

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**Introduction** Paramedics may be at an increased risk of interacting with COVID-19-positive individuals, making understanding the factors that influence paramedics' vaccination decisions increasingly important.

**Objectives** We aim to investigate factors that may influence paramedics' likelihood of COVID-19 vaccination.

**Methods** Canadian paramedics from five provinces (Alberta, British Columbia, Manitoba, Ontario, Saskatchewan) working during the COVID-19 pandemic were voluntarily recruited through posters, social media, and emails from collaborating paramedic organizations. Participants completed online questionnaires between January and May of 2021 that assessed COVID-19 vaccine status, vaccine hesitancy, and intent to be vaccinated. Differences in proportions tests were used to compare agreement scores, calculated by combining proportions of participants who responded 'strongly agree' and 'agree' to questionnaire items.

**Results** Of the 2178 paramedics recruited, 95.7% completed the questionnaire (76.6% vaccinated). While most participants (89.4%) agreed that people should be vaccinated against COVID-19 and that vaccinations are necessary (94.7%), fewer participants agreed that COVID-19 vaccines are safe (78.5%) as compared to routine vaccines (86.1%,  $p < 0.001$ ), such as influenza vaccinations. However, vaccinated participants were more likely than unvaccinated participants to agree that routine vaccines are safe (90.5% vs. 76.2%,  $p < 0.001$ ) and that COVID-19 vaccines are safe (87.3% vs. 52.4%,  $p < 0.001$ ). Unvaccinated participants were more likely than vaccinated participants to report no intention of being vaccinated (14.2% vs. 0.1%,  $p < 0.001$ ), to report that they would get vaccinated but would wait (22.5% vs. 9.4%,  $p < 0.001$ ), and to report

competing priorities were preventing them from getting vaccinated (9.0% vs. 2.4%,  $p < 0.001$ ). Vaccinated participants were more likely to report that they would get a COVID-19 vaccine if recommended by public health experts (90.5% vs. 55.9%,  $p < 0.001$ ).

**Conclusion** Most paramedics believe COVID-19 vaccines to be safe and necessary. However, a sizeable proportion of paramedics reported no intention of getting vaccinated. Further analyses are needed to determine which factors influence their vaccination decisions.

**0-403** VALIDITY AND RELIABILITY PROPERTIES OF THE MULTIFACETED ORGANIZATIONAL HEALTH CLIMATE ASSESSMENT FOR MEASURING ORGANIZATIONAL HEALTH CLIMATE IN SERVICE, CLERICAL, AND HEALTH CARE WORKERS

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**Introduction** Total Worker Health<sup>®</sup> programs aim to improve health climate, or employees' perceptions of support for physical and mental health from coworkers, supervisors, and upper management. Health climate is linked to physical and mental health outcomes. The recently developed Multifaceted Organizational Health Climate Assessment (MOHCA) assesses general health climate and three subfactors of workgroup, supervisor, and organizational health climate in working adults and correctional employees. There is little evidence of the MOHCA's validity and reliability properties among service, clerical, and health care workers in a large hospital system.

**Objectives** To investigate validity and reliability properties of the MOHCA in this sample, we examined: 1) the structural validity of the MOHCA's general and subfactor scales and 2) targeting of items to persons and measurement invariance of items among racial, sex, and income subgroups.

**Methods** We recruited 1,283 employees (45.9% Caucasian; 67.7% female; 77.9% <Bachelor's degree; 32.2% annual household income <\$30,000). We applied exploratory and confirmatory factor analyses to assess structural validity and Rasch models to assess targeting of items and measurement invariance.

**Results** A revised general and four-subfactor structure with workgroup, supervisor, organizational, and organizational responsiveness health climate subscales explained 73.7% of response variation with adequate reliability (Cronbach's  $\alpha = 0.60-0.91$ ). Compared with the original structure's fit, this revised structure's fit was superior (Chi-square = 33.245,  $df = 16$ ; Root Mean Square Error Approximation = 0.029; Comparative Fit Index = 0.997). One item demonstrated misfit to Rasch models (Infit Mean Square > 1.5). Male and Non-Caucasian workers were less likely to report a workgroup supportive of recovery ( $p < .01$ ). High-income and Caucasian workers were less likely to report a workgroup that encourages use of sick days ( $p < .01$ ).

**Conclusions** A revised four-subfactor MOHCA structure with a new organizational responsiveness health climate subscale demonstrated adequate validity and reliability properties to assess health climate scores among service, clerical, and health care workers in a large hospital system.

## Work-Related Stress

**0-17** ALL-CAUSE MORTALITY AND THE TIME-VARYING EFFECTS OF PSYCHOSOCIAL WORK STRESSORS

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**Introduction** The effects of poor-quality work (characterised by high job demands, low job control, job insecurity, and effort-reward imbalance) are known to be harmful to health but it isn't clear whether exposure to these psychosocial work stressors over time translates into an increased risk of mortality.

**Objectives** To examine the effect of time-varying exposures and covariates on mortality, including the effects of unemployment, not in the workforce and retirement and to investigate if gender is an effect-modifier on the relationship between long-term exposure to adverse psychosocial work stressors and mortality.

**Methods** Over 20,000 participants from the HILDA survey with self-reported repeated exposure measures were followed for up to 15 waves. Survival analysis models with baseline hazard specified by the Weibull distribution were used to examine the association between psychosocial work stressors over time and mortality.

**Results** Low job control (HR = 1.39; 95% CI: 1.06–1.83) and job insecurity (1.36; 1.06–1.74) were associated with increased risk of mortality. High job demands (1.01; 0.75–1.34) and effort-reward unfairness (1.20; 0.90–1.59) were not associated with mortality. The effect of job insecurity was attenuated (1.20; 0.93–1.54) after controlling for sociodemographic and health risk factors. Male participants exposed to low job control and job insecurity had an 81% and 39% increased risk of mortality, respectively, after adjustment for sociodemographic and health risk factors.

**Conclusions** Long-term exposure to low job control and low job security is associated with increased risk of all-cause mortality. Effects were largely restricted to males and persisted after adjustments for sociodemographic and health characteristics. Awareness of the implications of the adverse effects of psychosocial work stressors on health and mortality in workplaces, and interventions to improve job control and job security could contribute to better health and wellbeing, reducing the effect of psychosocial work stressors on mortality.

**0-74** WORK-RELATED PSYCHOSOCIAL RISK FACTORS FOR STRESS-RELATED DISORDERS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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**Introduction** Stress-related disorders are frequently reported in the working population, with varying incidence rates of 13% for psychological distress up to 22% for emotional exhaustion with even higher prevalence rates in specific professions and countries. The objective of this systematic review and meta-analysis is to examine which work-related psychosocial risk factors are associated with stress-related disorders (SRDs).