household members in discussion through a process derived from motivational interviewing. The materials for both sessions include an introduction, behavior scoring sheet, behavior wheel, and action plan. Facilitators and participants discuss strategies to prevent take-home lead, identify barriers participants (and their coworkers or families) experience when trying to change their behaviors, and ultimately prioritize a prevention goal.

Conclusion The materials for both educational sessions were developed based on current literature on take-home lead and behavioral theories and in partnership with lead and construction experts from multiple organizations. Using feedback from participants, project stakeholders, and session facilitators, we evaluate the feasibility and efficacy of these educational interventions.

0-352 EVALUATING PROGRAM EFFECTIVENESS ON RETURN-TO-WORK AFTER WORK-RELATED INJURY IN THE CONSTRUCTION SECTOR

Robert Macpherson, Ailin He, Mieke Koehoorn, Benjamin C Amick, ¹Chris McLeod.
¹University of British Columbia, Canada

10.1136/OEM-2021-EPI.68

Introduction Return-to-work (RTW) in the construction sector is more challenging than in many other sectors. Between 2010 and 2011, the Ontario Workplace Safety Insurable Board (WSIB) introduced the Work Reintegration (WR) program in an attempt to improve RTW outcomes for injured workers.

Objective To determine whether the WR program was associated with reducing work disability duration in the Ontario construction sector.

Methods WSIB claims data were extracted for construction workers compensated for time off work following work-related injuries between the years 2009 and 2015 (n=27,131). Claims receiving referrals to return-to-work (RTW) and vocational rehabilitation (VR) specialists were propensity score matched with claims receiving no referrals. Multivariable quantile regression models were used to examine differences in the cumulative disability days paid during two-years post-injury between the groups of claims before and after the WR intervention period and the differences in these differences.

Results Prior to the WR program, cumulative disability days paid was greatest among claims referred to VR specialists, followed by claims referred to RTW specialists (390 and 109 additional days than claims with no referrals, respectively). Following the WR program intervention, cumulative disability days paid reduced for all claims but most notably among longer duration claims referred to RTW specialists (reduction of 274 days at the 90th percentile in the disability distribution) and shorter duration claims referred to VR specialists (reductions of 255 and 214 days at the 25th and 50th percentiles in the disability distribution, respectively).

Conclusion The WR program intervention was effective in reducing the cumulative disability days paid for construction worker claims targeted under the various referrals. While the effects varied at different percentiles in the disability distribution, and by specialist referral, future research should examine the type and timing of services received to more fully understand what may be driving the overall findings.

0-423 EVALUATING CHANGES TO SICKNESS ABSENCE IN PRISON STAFF FOLLOWING THE IMPLEMENTATION OF A NATIONAL PRISON SMOKEFREE POLICY

¹Evangelia Demou, Daniel Mackay, Peter Craig, Alastair Leyland, Stuart Brown, Vasos Makris, Kathleen Boyd, Ashley Brown, Philip Conaglen, Lesley Graham, Nicola McMeekin, Jill Pell, Helen Sweeting, Emily Tweed, Kate Hunt. ¹University of Glasgow, United Kingdom

10.1136/OEM-2021-EPI.69

Objective Sickness absence (SA) is a significant problem for many workplaces, due to loss of productivity, increased workload on other staff, and resources spent to cover incapacity to work and restore health. To date, research on prison staff SA is still limited. High levels of SA related to mental health problems, including job-related stress, anxiety and depression have been reported for UK prison staff. In conjunction with stressful and often challenging working conditions which prison staff experience, organisational change can also impact on SA. In 2018 the Scottish Prison Service introduced comprehensive smoking restrictions across all prisons to protect prison staff and people in custody from second-hand smoke (SHS) exposure. The multi-phase, multi-methods Tobacco in Prisons (TIPs) study has evaluated this process and the impacts of the implementation of the smokefree policy; one part of this evaluation was to assess whether the smokefree policy impacted on prison staff SA rates and duration.

Methods and Results Box-Jenkins Autoregressive Integrated Moving Average (ARIMA) time series is used to analyse potential changes to sickness absence rates before and after the introduction of the smokefree policy. Change in absence duration before and after the implementation of the smokefree policy are analysed using Kaplan-Meier survival curves and Cox's proportional hazards models for all sickness absence events and by cause. Results from each methodology will be presented for the entire prison service, by cause of sickness absence event and by SHS exposure levels.

Conclusions The findings of this study cover a significant knowledge gap on sickness absence in an occupational cohort that often faces challenging and stressful working conditions. In the TIPs study we are able to model potential impacts on SA during organisational change. This information can help employers when developing policies and workplace interventions for employees in improving health and return-to-work times.

Job Control

0-42 THE MEDIATING ROLE OF UNHEALTHY BEHAVIORS AND BODY MASS INDEX IN THE RELATIONSHIP BETWEEN HIGH JOB STRAIN AND SELF-RATED POOR HEALTH AMONG LOWER EDUCATED WORKERS

¹Sandra van Oostrom, Karin Proper, Bette Loef. ¹National Institute for Public Health and the Environment, Netherlands

10.1136/OEM-2021-EPI.70

Introduction Poor psychosocial working conditions and unhealthy behaviors are known determinants of poor health. The objective of this study is to examine the mediating role of

unhealthy behaviors and body mass index (BMI) in the relationship between high job strain and self-rated poor health in workers with a low educational level.

Methods A total of 8,369 low educated workers, who participated in the Lifelines cohort study during the period 2012–2017, were included. Self-reported job strain, health behaviors (smoking, physical activity, fruit and vegetable consumption) and BMI were assessed at baseline, and self-rated health after 2 years. To assess mediation by the health behaviors and BMI, structural equation modeling with logistic and multinomial regression analyses were performed.

Results Workers with high job strain had a higher odds of poor health (OR 1.34; 95%CI 1.13–1.60) compared to those with low job strain. Workers with high job strain were more likely to have a lack of physical activity (OR 1.14; 95%CI 1.01–1.28), but were not more likely to smoke, to be overweight or obese, or to have a low fruit or vegetable consumption. Workers who smoked (OR 1.37; 95%CI 1.16–1.60), had a lack of physical activity (OR 1.25; 95%CI 1.08–1.43) or were overweight (OR 1.37; 95%CI 1.16–1.61) or obese (OR 2.25; 95%CI 1.86–2.72) were more likely to report poor health. Indirect (mediating) effects of unhealthy behaviors and BMI in the relationship between high job strain and poor health were small and not statistically significant.

Conclusion No mediating effects of unhealthy behaviors or BMI were found in the relationship between high job strain and self-rated poor health among workers with a low educational level.

0-43

CHANGES IN JOB CONTROL AND PERCEPTIONS OF GENERAL HEALTH: A LONGITUDINAL ANALYSIS OF AUSTRALIAN WORKERS, 2005–2017

¹Yamna Taouk, Matthew Spittal, George Disney, Anthony LaMontagne. ¹University of Melbourne, Australia

10.1136/OEM-2021-EPI.71

Introduction Low job control is associated with poor health outcomes. However, establishing the causal nature of this association is challenging mostly due to methodological biases across studies.

Objectives To examine whether changes in job control over time were associated with changes in perceptions of general health, using data from a nationally representative longitudinal study of Australian households.

Methods Our sample included 105,017 observations (18,574 persons) over 13 years from working age participants with information on job control, general health, and other sociodemographic and health factors. We used dynamic fixed-effects regression models to control for time-invariant confounding and reverse causation, and ordinary least squares regression with cumulative job control exposure to analyse cumulative exposure to low job control. Perceptions of general health, scores ranging from 0–100 points (higher scores indicating better health), were modelled in relation to self-reported job control.

Results There was a strong stepwise relationship between increasing job control and general health, with a 2.4-point increase in general health (95% CI 2.0–2.8) for participants in the highest job control quintile compared to those in the lowest quintile. The inclusion of a lagged effect of job control

supported a small prospective relationship ($\beta=0.17$; 95% CI 0.07–0.27) but the contemporaneous association was essentially unchanged. Going from the lowest to highest observed value of cumulative job control predicted an 8-point higher general health score supporting a prospective association between job control and general health over a period of 4 years ($\beta=0.47$; 95% CI 0.38–0.57).

Conclusion This analysis with improved causal inference over previous research showed that increased job control is strongly associated with increasing general health. The validation of job control as a potentially modifiable causal factor of general health has considerable public health implications, and substantial economic consequences. Appropriate work stress interventions might contribute to better health and well-being.

0-265

LATENT PROFILE ANALYSIS: AN ALTERNATIVE PERSPECTIVE ON JOB SUB-TYPES OF THE JOB DEMAND–CONTROL–SUPPORT MODEL

¹Igor Portoghesi, Marcello Campagna. ¹University of Cagliari, Italy

10.1136/OEM-2021-EPI.72

Introduction The Job Demand–Control–Support (JDCS) model suggests that a combination of job demands (JD), job control (JC), and job support (JS) forms eight different job types. In the last three decades, these constellations of job types have been explored by adopting the traditional variable-centered perspective. In this sense, these constellations of job types as postulated in the JDCS model have been rarely confirmed empirically and few studies were able to find all the hypothesized constellations.

Objectives The aim of this study was to expand previous research on the JDCS model by adopting a person-centered approach to identify relevant job type profiles.

Methods We applied latent profile analysis (LPA) to identify profiles in a sample of Italian workers ($n=348$). LPA including one to eight latent profiles were estimated by using MPlus 7 robust maximum likelihood estimator, considering the following goodness-of-fit indices: Bayesian information criterion, Akaike information criterion, Constant AIC; bootstrapped likelihood ratio p-value and the Lo-Mendell Rubin adjusted likelihood ratio.

Results LPA showed a five-latent-profiles solution: isolated high strain (high JD, low JC, low support; $n=36$, 10.35%), cowboy-hero (high JC, low support; $n=16$, 4.60%), moderate-strain (moderate JD, moderate JC, low support; $n=125$, 35.92%), collective-low-strain (low JD, high JC, high support; $n=37$, 10.63%), and supported (high support, $n=134$, 38.51%).

Conclusion Results from our study partially agree with JDCS theorization as it replicated three of the eight-profile solutions identified, finding two new constellations. In fact, we were not able to identify the passive jobs, active jobs, obedient comrade, and participatory leader constellations. This study extends previous research on JDCS, highlighting that future studies should consider empirically identified profiles rather than theoretically defined subgroups. Finally, one of the main theoretical contribution of the present study was the consideration of job support as an important component for job types identification, as postulated in the JDCS model.