

and 4) whether there is a remaining association not mediated by these factors.

Methods We used cross-sectional data from the Canadian Longitudinal Study on Aging (N= 17,938), focusing on working, non-retired adults aged 45–64 years. Data were collected via telephone and in-person interview over the 2011–2015 period. Functional, psychosocial, organizational and life-stage factors were measured using existing variables to create composite index scores. Path models examined the relationship between age and retirement expectations, and the proportion of the relationship explained via each factor.

Results Age was associated with functional, psychosocial, organizational and life-stage scores in expected directions. Older age also was associated with earlier retirement expectations. Path models found that 25–30% of the total relationship between older age and retirement expectations was mediated through life-stage and organizational factors.

Conclusion Our study demonstrates the feasibility of measuring functional, psychosocial, organizational and life-stage concepts via existing data to better understand age-related inequalities in retirement expectations. Future research should focus on measuring additional items for psychosocial and organizational factors, followed by validation of the extent to which each item explains age differences in other work outcomes.

0-439 THE COMPLEX ASSOCIATION OF PERCEIVED WORKPLACE SAFETY, WORK ENVIRONMENT, AND NATIONAL FACTORS WITH THE MENTAL HEALTH OF AGING WORKERS IN EUROPE DURING THE COVID-19 PANDEMIC

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Introduction The widespread COVID-19 contagion in workplaces has created a new workplace hazard, albeit investigated mainly among health care workers. Work-environment factors are related to workplace infection risks and individual vulnerability factors, like older age, predispose workers to severe illness. The stress and anxiety associated with the concerns regarding workplace safety and COVID-19 repercussions are jeopardizing aging workers' mental health (MH).

Objectives We aimed at investigating the individual and macro-level factors associated with declines in the MH of aging workers from different industry sectors. We hypothesize that higher perceived workplace safety is crucial in protecting their MH and mediates the work-environment influences.

Methods Using the Health, Ageing and Retirement in Europe (SHARE) data from COVID-19 survey (summer 2020) from 27 countries in Europe and Israel and additional data collected from pre-pandemic waves, we performed multi-level and mediation analyses to characterize work-environment, safety perception, socio-demographic, clinical, and national-level factors associated with MH among workers aged 50–70.

Results Multi-level analyses demonstrated that 24% of the aging workers experience MH declines characterized by East-West geographical European gradient associated with disease burden. The perceived workplace safety, which is low among 10% of the workers, is the strongest predictor- explaining 30% of their MH status and mediates the effects of work-environment aspects, such as workplace contagion risk. Being a woman, having financial difficulties, a higher vulnerability

index (comorbidities and age>60), pre-existing mental morbidity, and the national high burden of COVID-19 are associated with declines in MH, whereas exclusively working on-site is protective.

Conclusion Evaluating workplace conditions and screening vulnerable sub-groups among the aging workers who are more prone to MH declines are imperative. Workplace interventions, integrated with individual targeted approaches to reduce the influence of work-environment factors on infection risks and mental distress, hence elevating workplace safety perception, are recommended.

0-447 ASSOCIATION OF PERCEIVED JOB SECURITY AND CHRONIC HEALTH CONDITIONS WITH RETIREMENT IN OLDER UK AND U.S. WORKERS

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Background The relationship between job insecurity, chronic health conditions (CHCs), and retirement among older workers are likely to differ between countries that have different labor markets and health and social safety nets. To date, there are no epidemiological studies that have prospectively assessed the role of job insecurity in retirement incidence, while accounting for CHCs in two countries with vastly different welfare systems. We investigated the strength of the association baseline job insecurity and retirement incidence over an 11-year period while accounting for CHCs, among workers aged 50 and above in the UK and U.S.

Methods We performed Cox proportional hazards regression analysis, using data from the Health and Retirement Study (HRS [U.S. cohort, n=491]) and English Longitudinal Study on Aging (ELSA [UK cohort n=821]).

Results We found evidence of reduced likelihood of retirement among job insecure adults in both cohorts, and a significant association between CHCs and retirement in the U.S cohort only. In the UK cohort, the association between job insecurity and decreased retirement incidence (HR=0.69, 95% CI =0.50–0.95) was attenuated after adjustment for CHCs and covariates. In the U.S cohort, adjustment for CHCs and other social and health factors significantly decreased this association (HR=0.60, 95%CI = 0.36–0.99), indicating that CHCs, social, and health factors are contributing mechanistic factors underpinning retirement incidence in the U.S.

Conclusions The country level differences we observed may be driven by macro level factors operating latently, which may affect the work environment, health outcomes, and retirement decisions uniquely in different settings.

Biomarkers

0-123 DNA DAMAGE IN LYMPHOCYTES OF FEMALE FARMERS MEASURED USING THE ALKALINE COMET ASSAY.

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