Occupational epidemiology in unorganised sectors: agriculture, construction, service sectors

O-206 DETERMINANTS OF E-WASTE WORKERS’ INTENTION TO WEAR RESPIRATORY PROTECTIVE EQUIPMENT AT WORK IN HONG KONG

Gengfei Liao, Feng Wang, Shaoyou Lu, Yanny Hoe Kuen Yu, Victoria H Arrandale, Alan Chan Hoi-shou, Lap Ah Tse. IC School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong SAR, China; 2School of Public Health, Sun Yat-sen University, Guangzhou, China; 3Occupational Safety and Health Council, Hong Kong SAR, China; 4Dalai Lama School of Public Health, University of Toronto, Canada; 5College of Engineering, City University of Hong Kong, Hong Kong, SAR, China

Introduction E-waste workers in Hong Kong are exposed to more chemicals because more e-waste needs to be handled locally. However, studies suggested that many e-waste workers are unwilling to wear respiratory protective equipment (RPE) for different reasons. This study aimed to identify the determinants of e-waste workers’ intention to wear RPE in Hong Kong.

Material and Methods We recruited 109 e-waste workers from June 2021 to September 2022. A workplace RPE intention scale (WRPIEs) was developed based on validated Robertson’s RPE behavior intention model and Hong Kong Occupational Safety Culture Index. The WRPIEs was consolidated by exploratory factor analysis and further enhanced by confirmatory factor analysis. Multivariate linear regression was used to test the association between the identified domain factors and the intention to use RPE at work.

Results Most of the participants were aged over 40 years (76%), had middle school or below educational degrees (83%), wore RPE (94%) at work, and had increased time of wearing RPE after the Covid-19 pandemic (69%). Four domain factors (containing 17 manifest variables) were confirmed, including ‘subjective norms (SN),’ ‘supportive working conditions (SWC),’ ‘autonomy,’ and ‘occupational safety and health.’ The enhanced WRPIEs had good indices in internal consistency reliability (Cronbach’s α ranged: 0.78–0.94), good composite reliability (range: 0.79–0.95), and model fit (SRMR=0.05, RMSEA=0.03, CFI=0.99). Among the identified domain factors, SN (β=0.36) and SWC (β=0.30) significantly increased e-waste workers’ intention to wear RPE at the workplace.

Conclusions This newly validated WRPIEs scale can help capture Chinese e-waste workers’ intention to wear RPE. Results from this study also suggested that various stakeholders could enhance SN and SWC to facilitate workers’ willingness to wear PPE. (Acknowledgements: GRF/RGC-165056653 & VCFDFIII-136366853. Ethics approval: CREC 2020.039; *shelley@cuhk.edu.hk)