

Coping with COVID-symptoms: A focus on sleep, alcohol-use and mental health problem. A longitudinal study

M.L. Wong¹, A.B. Elliott²

¹City University of Hong Kong, Department of Social and Behavioural Sciences, Hong Kong, Hong Kong, SAR of China, ²University of Exeter, Psychology, Exeter, United Kingdom

Background: While COVID-symptoms and its associated impact on wellbeing are shown to correlate with poor sleep condition and mental health problems, existing studies mostly used cross-sectional data. In this study, we aim to investigate the prospective association among sleep duration and mental health problems, with COVID-symptoms and associated impact on wellbeing. We also included measures of health-related behaviours, e.g. exercise, use of alcohol and positive social interaction as potential mediators.

Methods: We conducted a secondary data analysis using three prospective cohort dataset, the Millennium Cohort Study (MCS), The Next Steps (NS) and the 1970 British Cohort Study (BCS-70), where participants (n=2031, mean age=43.0, female: 63.8%) completed measures of sleep duration and history of mental health problems at Time 1 (2020 May), exercise, use of alcohol, and positive social interaction at Time 2 (2020 October) and COVID-symptoms and associated impact on wellbeing at Time 1, Time 2 as well as Time 3 (2021 March). Structural equation modelling path analyses were used to model the prospective associations with sleep and mental health problems entered as predictors, health-related behaviours at mediators, and COVID-19 symptoms and associated impact on wellbeing as outcome variables.

Results: The model has achieved a good fit index, CFI=.97, RMSEA=.055 (95% CI=.042-.069, $p=.253$), SRMR=.024. Sleep duration has a direct effect on COVID-symptoms, Est= -.03, 95% BCCI:(-.05, -.01), a direct effect, Est=-.11, 95% BCCI:(-.17,-.04), and indirect effect on COVID-associated impact on wellbeing through more frequent use of alcohol, Est= -.01, 95% BCCI:(-.02,-.003). History of mental health problems have a direct effect on COVID-symptom, Est= -.11, 95% BCCI:(-.18,-.04), and wellbeing, Est=-.34, 95% BCCI:(-.64,-.05).

Conclusions: The findings added to existing understanding that sleep duration and mental health problem could contribute to the COVID-symptoms and poor wellbeing associated with COVID. More frequent alcohol use was additionally found to partly mediate the effect of sleep duration on COVID-associated wellbeing. Collectively, health-promoting behaviours, e.g. smart use of alcohol, sufficient sleep duration and better care for individuals with mental health problems, are important elements to offset the impact of COVID on health and wellbeing.