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Lifestyle Changes and Sleep Disturbances in Middle-Aged and Older Adults: A Prospective Cohort Study

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Abstract

This prospective cohort study examined whether changes in risky lifestyle behaviours predict sleep disturbances among middle-aged and older adults in Taiwan. Data were drawn from the MJ Health cohort (1998–2014), including 14,847 participants aged 40 and above (mean age = 50.3, SD = 8.8; 61% men) who completed at least three health screenings over an average follow-up of 7.4 years. Risky behaviours assessed included smoking, alcohol intake, poor diet quality, and physical inactivity. Changes in these behaviours were used to create a lifestyle risk index categorized into reduction, maintenance, or increase, based on participants' first two assessments. Sleep disturbances were self-reported at the most recent screening. Cox proportional hazard models, adjusted for baseline lifestyle risk, age, gender, education, marital status, BMI, occupation, and comorbidities, were used to estimate associations. Compared to those who reduced risky behaviours, individuals who maintained (HR = 1.29, 95% CI: 1.19–1.41) or increased them (HR = 1.13, 95% CI: 1.10–1.17) had significantly higher risks of sleep disturbances. Stratified analyses revealed stronger associations in women. These findings suggest that continuing or increasing risky lifestyle behaviours is associated with elevated sleep problems in mid-to-late adulthood. Promoting healthy lifestyle changes during this life stage may help prevent sleep disturbances and related health risks.

Keywords: insomnia; drinking; exercise; smoking; diet