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Prevalence of Meeting 24-Hour Movement Guidelines Among Older Adults

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Abstract

Sleep, sedentary behavior, and physical activity shape daily routines and have significant health implications. This study assessed the prevalence of adherence to the 24-hour movement guidelines among 258 community-dwelling older adults in Taiwan. Each participant wore a triaxial accelerometer (ActiGraph GT3X+) for seven consecutive days to measure time spent in physical activity, sedentary behavior, and sleep. The prevalence of meeting the 24-hour movement guidelines was calculated based on criteria of ≥ 150 min/week (21.4 minutes/day) of moderate-to-vigorous physical activity (MVPA), < 8 hours/day of sedentary time, and 7-8 hours/day of sleep. Differences by sex were analyzed using t-tests and χ^2 tests. On average, participants ($n=258$; mean age=74.36 years) had 7.19 hours of sleep, 9.31 hours of sedentary time, 4.0 hours of light physical activity, and 0.21 hours (12.6 minutes) of MVPA daily. Prevalence rates for meeting individual guidelines were 29.1% for sleep, 34.5% for sedentary behavior, and 21.3% for MVPA, while only 1.9% met all three guidelines. Females had lower MVPA adherence than males (16.8% vs. 29.7%), but no significant sex differences were found in other guidelines. The findings highlight low compliance with the 24-hour movement guidelines, particularly for MVPA. The results indicate a need to improve adherence to the guidelines, with a particular focus on increasing MVPA among older adult females.

Keywords: aging population; physical activity; sedentary behavior; sleep