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ASSOCIATION OF SLEEP DISTURBANCE AND PHYSICAL FUNCTIONING FOLLOWING ACUTE HOSPITALIZATION IN OLDER ADULTS

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Introduction: Three out of 10 older adults are admitted for acute care in U.S. hospitals where they are at risk for a rapid decline in physical function due to deconditioning. Identifying factors, such as sleep quality, that may be related to recovery of physical functioning is a key step in facilitating independence following hospital discharge. Thus, this study aimed to examine the association between sleep quality and functional recovery after an acute hospitalization in community dwelling older adults.

Methods: Participants (n=52; age 71.3 ± 6.8y, 75% female, 94.2% white), were recruited during an acute hospitalization. Participants completed sleep questionnaires including PROMIS Sleep-Related Impairment and Sleep Disturbance, as well as physical function testing and questionnaires, Short Physical Performance Battery (SPPB) and PROMIS Physical Function prior to hospital discharge (baseline) and at 4-weeks post-discharge (follow-up). Separate multivariate regression models were conducted to determine whether baseline sleep predicted physical functioning at follow-up as well as if pre-post hospital changes in sleep predicted pre-post changes in physical functioning.

Results: The PROMIS Sleep-Related Impairment score at baseline was inversely associated with SPPB Gait (0.02±0.009, p=0.04), SPPB Balance (0.02±0.008, p=0.02), SPPB Chair Stand (0.05±0.02, p=0.006) and Total SPPB (0.19±0.04, p<.0001) at follow-up. Similarly, baseline PROMIS Sleep Disturbance score was inversely associated with PROMIS Physical Function at follow-up (0.19±0.07, p=0.008). The change in PROMIS Sleep-Related Impairment was inversely associated with the change in Total SPPB (0.05±0.03, p=0.03), SPPB Balance (0.05±0.02, p=0.01) and PROMIS Physical Function (0.15±0.06, p=0.012) from baseline to follow-up. The change in PROMIS Sleep Disturbance was inversely correlated with the change in PROMIS Physical Function (0.11±0.05, p=0.04) from baseline to follow-up.

Conclusion: Together, these results demonstrated that self-reported sleep disturbance and daytime sleep-related impairments during and following hospitalization predicted physical functioning at 4-weeks post-discharge. Improving sleep during hospitalization may reduce hospital deconditioning and improve functional recovery.

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