

ASSOCIATION OF QUALITY OF SLEEP AND PHYSICAL FUNCTION IN THE ELDERLY POPULATION: A SYSTEMATIC REVIEW

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ABSTRACT

Decreased quality of sleep (QOS) is a common complaint among the geriatric population and has been associated with decreased physical strength and performance, cognitive impairments, and depression. The present study aims to determine the association between QOS and daily physical functioning in the elderly population. Electronic database searches were completed from October 29, 2018 through November 3, 2018 using PubMed and EMBASE as the primary databases. Inclusion criteria: healthy, elderly individuals, age 60 years or older, measured QOS, and physical function/quality of life. Articles consisting of patients with disease, physical disability, or drug therapy were excluded from the study. Risk of bias was assessed using a National Institute of Health Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies. Thirty-two articles were screened by all authors. Seven studies met the inclusion/exclusion criteria. Six of the seven studies identified an association between QOS and physical function based on selected functional outcome measures and self-reported quality of sleep. We suggest using a longitudinal design in future studies to determine the relationship between poor sleep quality and physical function in the elderly population. Future studies should employ polysomnography (the gold standard) to more objectively measure an individual's QOS. While cause and effect cannot be determined during this review, an association exists between decreased quality of sleep and a decline in physical function. Based on these findings, physical therapist should take an active role in screening for sleep disturbances and providing education on benefits of good sleep habits and tips to facilitate improved sleep.

Keywords: Elderly, physical function, sleep quality

INTRODUCTION

Fifty percent of those 65 years of age and older report sleep disturbances [1]. Those numbers may be higher as almost 90% of sleep disturbance go undiagnosed [9]. Changes in the circadian rhythm and sleep patterns are a normal part of aging but may contribute to decreased quality of sleep (QOS) [8]. Many elderly report increased difficulty falling asleep, awake frequently during the night, and have difficulty falling back asleep. Stage four of the sleep cycle is considered the restorative phase of the sleep cycle. During this time of sleep the body repairs muscles and tissue, has an increase in growth hormone, and facilitates the immune system [8]. The elderly spend less time during this restorative phase of sleep putting them at a risk for health issues [10]. An association between QOS and the following have been established: decreased strength, physical performance, depression, reduced cognition, and mortality [1]. Additional sleep disturbances along with normal changes may lead to a decrease in quality of life in the elderly. According to the American Physical Therapy Association, physical therapists play a major role in prevention and wellness and should screen all patients for sleep quality in order to promote optimal health [1]. Physical therapy can assist in identifying sleep issues by performing sleep quality screens, providing tips for sleep hygiene, and making appropriate referrals as needed to promote sleep health thus improving physical function and quality of life for the elderly population [9,10]. The purpose of this study is to establish the association of QOS and daily physical functioning in the elderly population.