https://doi.org/10.6063/motricidade.31966

Abstract

Effect of exercise on sleep quality in elderlies living in nursing homes

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Conflict of interest: nothing to declare. **Funding:** Funding: This work was supported by SoilRec4+Health - Soil recovery for healthy food and quality of life (NORTE-01-0145-FEDER-000083).

One of the leading age-related changes affecting most older adults is the worsening of sleep quality. The literature suggests that the reduction of daily physical activity and increased frequency of daytime sleep periods in older adults are some of the main events contributing to the reduction in sleep quality, which may also negatively affect cognitive function. Considering this, it is expected that older people submitted to exercise should improve their sleep quality, physical function, reduce daily fatigue, and improve vigilance and cognitive function. The main objective of this study was to assess the effect of physical exercise on sleep quality and its repercussions on cognitive function in elderly residents in nursing homes. The studied sample was composed of 31 elderly people residents in nursing homes. The Mini Mental State Examination (MMSE) was used to assess cognitive function and exclude elderly people with cognitive deficits. Subsequently, the frailty level test (SPPB) and the handgrip strength test (HG) (Camry EH101) were performed. Finally, questionnaires were applied to measure sleep quality levels (MQS) and functional independence (BI). The sample age was 84.4±8.5 years (65-

97 years) and was mainly composed of women (71%). The main results revealed that the exercise program induced an improvement in the physical fitness of the elderly (SPPB: t=-3.105; *p*=0.004; HGright: t=-3.292; *p*=0.003; HGleft: t=-4.792; *p*=0.000;). Sleep quality improved significantly (*p*=0.000), with no significant changes in cognitive function. Our results demonstrate that the implementation of physical exercise programs can be one of the most effective ways to increase sleep quality levels in these elderly people, retarding an age-related decline in cognitive and physical function.

Keywords: Older Adults, Mini Sleep Question, Frailty, MMSE