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Abstract

Effect of a physical exercise program on depression in elderlies living in nursing homes

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In recent years, there has been an increase in demographic ageing in Portugal and the prevalence of depression in elderlies living in nursing homes. Frailty and independence loss may contribute to the increase in depression among the elderly. Exercise has been suggested as an effective intervention, with no negative secondary effects, to avoid the increased rate of age-related loss of functionality and independence, possibly associated with depression in older adults. The main goal of the present study was to measure the effect of a physical exercise program on depression, frailty and functional autonomy in elderlies living in nursing homes. Data was

collected from 31 elderlies (71% of women between 65-97 years, 84.42±8.49). Mini Mental State Examination (MMSE) was used to evaluate cognitive capacity and to exclude the subjects with cognitive deficits. Subsequently, a test for handgrip strength (Camry EH101) and frailty test (Short Performance Physical Battery-SPPB) were performed. Finally, questionnaires for functional independence (Barthel Index - BI) and levels of depression (Geriatric Depression Scale-GDS) were applied. The mean age of the sample was 84.4±8.5 years old, without cognitive impairment (MMES 23.4±5.7). Three adverse events occurred during the exercise program implementation, though they did not occur during the exercise sessions. Regarding functional tests, it was observed an average handgrip strength of HGright: 12.7±6.4; HGleft: 11.7±6.5 kg; and SPPB test of 4.9±3.9. In the questionnaires, BI showed a mild functional dependence of the subjects (75.7±25.3), and GDS showed a mild depression (9.5±5.7). There were significant improvements in the SPPB variable (p=0.004), from 4.9±3.9 to 6.4±4.7. There were no significant results in the remaining variables, although there was a reduction in the average levels of depression from 9.5±5.7 to 8.4±6.8. BI showed a slight reduction in functional independence levels from 75.7±25.3 to 72.4±29.3, though they remain in the same category of dependence. The results revealed that implementing a physical exercise program leads to a reduction in depression and frailty in elderlies living in nursing homes. The registration of adverse events, such as falls, contributed to the decreased levels of functional autonomy. Since depression is increasingly present in this population, it becomes important to include these practices in the daily routines of these elderly people, with the aim of reducing depression, retard or reduce frailty, thus improving their quality of life.

Keywords: Depression, frailty, cognitive function, functional independence.