Balance in the elderly: use of virtual technologies in the physiotherapeutic approach

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Balance is a function to be performed in the integrity of the visual, somatosensory and auditory systems. The injury in one of these systems causes a decrease in balance and the probable appearance of falls, especially the elderly. Diseases of the locomotor system, such as gonoarthrosis, may be sufficient to promote the appearance of falls due to pain and muscle weakness in the elderly. This study aimed to assess the dynamic balance of the elderly after a virtual reality protocol, using the Tinetti scale. An interventional study was carried out at the Intensive Phisio Care Clinic, in the elderly aged 60 years or older, who presented with gonoarthrosis in the period from July to December 2019. Severe hypertensive elderly people with pain and the presence of a recent lower limb fracture were excluded from the study. The elderly did 10 sessions of virtual exercises lasting 40 min, preceded by stretching the lower limbs twice a week. Before and after the intervention, they were evaluated using the Tinetti scale. The sample consisted of 100% elderly women, with a mean age of $\pm$ 65.57 years. The Tinetti scale at the pre-intervention moment showed an average of scores $\pm$ 22.14 indicating a moderate propensity for falls. After the intervention, the scale presented a mean score of $\pm$ 24.28, identifying that, according to the scale's classification, elderly women started to be classified as low risk of falls. The study showed that the elderly benefit from physical activity promoting an increase in muscle strength and a decrease in the risk of falls.

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