P69: Comparing the effects of two balance intervention programs on the center of pressure oscillation of elderly individuals

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Introduction: With the ageing process, changes occur that compromise mobility and balance. These changes increase the risk of falls in the elderly. Thus, it is necessary to create and implement therapeutic intervention programs to prevent falls and their adverse outcomes.

Objectives: This study aims to compare the effects of an Occupational Therapy (OT) balance intervention program and of a balance training program using the Biodex Balance System (BBS), on the oscillation of the center of pressure (CP) in the standing position in elderly individuals.

Materials and Methods: A randomized comparative trial was performed using a probabilistic sample of 22 community-dwelling individuals, aged 60 years or older. The participants were divided into two groups: Group 1 – intervention with the BBS (6 sessions); Group 2 - intervention through OT sessions (6 sessions). The groups were assessed pre and post intervention. The oscillation of the CP in the standing position was assessed with BBS assessment protocols. The results were statistically analyzed using a two factors repeated measures ANOVA.

Results and Discussion: The sample consisted of 22 individuals with a mean ± SD age of 75.27 ± 6.60; 59.1% were female and only one used a walking aid. Statistical analysis revealed that there were no statistically significant effects ($p<0.05$) of the intervention programs, regardless of the type of intervention that was used. Considering that previous studies have found that similar interventions had a positive effect on the oscillation of CP and balance, the results of the present study are possibly justified by the reduced number of intervention sessions.

Conclusion: The effects of the different intervention programs were not evident. Future studies should assess the effects of longer intervention programs and in larger samples. This is important for the development of interventions that effectively improve balance and reduce the risk of falling in elderly individuals.

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