

P70: Comparing the effects of two different intervention programs on mobility, balance and risk of falls in elderly individuals

Ricardo Azevedo, Bibiana Oliveira, Ana Sofia Silva, Paula Matos, Tiago Coelho, Ângela Fernandes, Daniela Lopes, Paula Portugal, Rubim Santos

School of Allied Health Technologies, Polytechnic Institute of Porto, Portugal

Presenting author: tfc@eu.ipp.pt

Introduction: Mobility and balance impairments are frequent in old age. Consequently, elderly individuals may present a higher risk of falling, which in turn can have dire consequences. Therefore, it is imperative to implement effective therapeutic interventions in order to improve mobility and balance related skills of older individuals and prevent falls.

Objectives: This study aims to compare an Occupational Therapy (OT) balance intervention program and an intervention program exclusively consisting of balance training with the Biodex Balance System (BBS), regarding their effect on the mobility, balance and risk of falling.

Materials and Methods: A randomized comparative trial was performed using a probabilistic sample of 22 community-dwelling individuals attending the Cruz Vermelha Portuguesa – Vila Nova de Gaia, aged 60 years or older and mean age was 75 years. The participants were divided into two groups: Group 1 - balance training using the BBS (6 sessions); Group 2 - Balance training through OT sessions (6 sessions). The groups were assessed in two moments: pre and post intervention. Falls Efficacy Scale (FES), Activities-specific balance confidence scale (ABC), Timed Up and Go Test (TUG) and TUG cognitive were used as measures. Statistical analysis consisted of a two factors repeated measures ANOVA.

Results and Discussion: The sample consisted of 22 individuals with a mean \pm SD age of 75.27 ± 6.60 . 59.1% of participants were female and only one person used a walking aid. The ABC score significantly ($p < 0.05$) improved after the interventions, and this change was similar for both groups. This means that both interventions had a similar positive effect on the participants' confidence in their balance during the performance of daily activities. These results may be positive considering that fear of falling is usually the most important predictor of falls in elderly individuals. However, it is important that confidence in performance is accompanied by effective change in performance ability, and this was not observed in this study, as the effect of the intervention on the remaining variables was not significant.

Conclusion: Both interventions had a positive effect on the participants' confidence in their balance during the performance of daily activities. The effect was similar for both interventions. Future studies should assess the effects of longer intervention programs and in larger samples.

References

1. Dutschke, G., Gomes, J.C., Comadão, J. & Jacobsohn, L. (2015). Developing a scale measuring Organizational Happiness: content analysis and exploratory factorial analysis. In the proceedings of the 1st International Conference Positive Organizational Communication: Empresa, liderazgo y comunicación interna. Universidad Loyola. Sevilla.
2. Fisher, C. (2010). Happiness at Work. *International Journal of Management Reviews*, 12, 384-412
3. Ryff, C., & Keyes, C. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719-727