Grand Movement: Influence of Fitness Sessions on Static and Dynamic Balance in Older Adults

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ABSTRACT

It is recommended that adults 65 years and older engage in activities to improve balance such as standing on one foot at least 3 days a week (CDC, 2022). Flexibility and balance are vital components of fitness for older adults in order to perform activities of daily living (ADLs) and aid in reducing risk of falling which is prevalent in senior living facilities. Fear of falling is a belief that an individual cannot prevent themselves from falling or that they have a nagging worry that they will fall (Varshneya & Sonawane, 2020). **PURPOSE:** To evaluate static and dynamic balance, static flexibility and reaction time in two older adult populations (fitness session group vs non-fitness session group). **METHODS:** Participants (n=31) were recruited within a senior living facility and completed a physical activity (PA) questionnaire to be placed into appropriate groups. Fitness session group participants were encouraged to maintain activity levels as identified by the PA questionnaire. Pre and post measurements were assessed 6-8 weeks apart. Assessments included Back Saver Sit and Reach (R/L), Standard Romberg (eyes open and closed), Standing Functional Reach, 5 Time Sit to Stand, and Timed Up and Go. **RESULTS:** In the Standing Functional Reach significant differences were found in the Session x Group Interaction ($F(1,28)$=4.455, p=0.044) (n_p^2=0.137), as well as the pre to post assessment comparisons ($F(1,28)$=6.760, p=0.015) (n_p^2=0.194). Significant results were also found on the 5 Time Sit to Stand in the pre to posttest analysis ($F(1,23)$=7.813, p=0.010)(n_p^2=0.254), as well as the between groups analysis ($F(1,3)$=8.906, p=0.007)(n_p^2=0.279). Significant differences were also found in the Group x Session interaction for the Timed Up and Go ($F(1,26)$=6.905, p=0.014)(n_p^2=0.210). **CONCLUSION:** The Fitness Session Group improved measurements on all 7 assessments (except Romberg with eyes open), and exhibited higher averages than the Non-Fitness Session Group. There is evident benefit to assisted and independent living facilities providing fitness programming and encouraging physical activity within the older adult population. These resources help reduce the risk of injury and enhance quality of life.