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## The effects of Nintendo® Wii bowling game on balance in aging adults

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**Background:** Balance training alone or in combination with other exercise interventions, such as strengthening, have been shown to improve gait and balance in the elderly reducing the risk of falls. The therapeutic aspects of Nintendo Wii® are a viable alternative to traditional interventions. The Nintendo Wii® uses a simulated environment in which to deliver fun yet effective and balance training.

**Purpose:** The purpose of this study was to investigate the effects of playing the Wii Bowling game on balance in older adults.

**Methods:** The study consisted of 14 subjects all of which were over the age of 65. There were 8 females and 6 males at the end of the study enrolled, 6 dropped out. The subjects were placed in either the control group or the experimental group based on convenience. The experimental group participated in Nintendo Wii® bowling for 30 minutes twice a week for 8 weeks in sitting, while the control group did not participate in Nintendo Wii® bowling. Pre and post outcome measures included the Berg Balance Test and the Timed Up and Go (TUG) Test.

**Research Design:** The research design used was a pretest-posttest control group design using a sample of volunteers from an adult home that were instructed on playing the Nintendo Wii® for a period of time. The independent variable was the Nintendo Wii® bowling game as the intervention; and the dependent variable was balance. An independent t-test was used to show that there were no differences between the groups at the onset. Dependent t-test: To compare the difference within subjects on the Nintendo Wii® Bowling program.

**Results:** Significant difference of 0.006 was found in the Berg Balance Test scores of the experimental group pre and post intervention. No significant differences were found in the pre and post TUG scores of the experimental group, nor in the pre and post Berg and TUG scores of the control group.

**Conclusion:** Participating in Nintendo Wii® bowling twice a week for 30 minutes for 8 weeks in sitting may be seen as an option to improve balance in older individuals; however further studies need to be performed given the small sample size and sample of convenience.

### Biography

Teresa Ingenito is currently working as Associate Professor at New York Institute of Technology, USA.

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