**Poster Presentations**

**Friday, June 4 (6:30 pm - 8:00 pm)**

**(S15) EFFECTIVENESS OF THE WII ON STANDING BALANCE IN INDIVIDUALS WITH MULTIPLE SCLEROSIS**

L.E. Bromley,1 A. Szczesniak,1 W. Choinski,1 S. Chan,1 K. Attwood,1 S. Bennett1,2

1Rehabilitation Science, University at Buffalo, Buffalo, NY; 2Neurology, Jacobs Neurological Institute, University at Buffalo, Buffalo, NY

**Background:** Multiple sclerosis (MS) often affects ambulation and dynamic standing, which are needed to perform activities of daily living. Common signs and symptoms of MS that affect standing balance include fatigue, weakness, spasticity, and balance. Impairments in balance and equilibrium are especially problematic, as central nervous system degeneration has been shown to have adverse effects on the visual, somatosensory, and vestibular systems. Physical therapy typically focuses on therapeutic exercise and neuromuscular retraining to manage these symptoms. A new adjunctive treatment that has been used in rehabilitation is the Wii Fit, a game played on the Nintendo Wii console. The Wii Fit uses a balance board that provides feedback on weight shifting.

**Objectives:** Examine the effectiveness of the Wii Fit on static and dynamic balance, as measured by the Functional Reach test, Timed Up and Go (TUG), Timed 25-Foot Walk, and Dynamic Gait Index (DGI) for individuals with MS who are ambulatory.

**Methods:** This one-group pretest-posttest design included five people who were identified from our general exercise program as appropriate candidates to participate in the Wii Pilot Study. All group members completed the standardized measures before participating in the Wii exercise program (Functional Reach, TUG, Timed 25-Foot Walk, DGI). Participants performed the following activities on the Wii once per week for 8 weeks: Soccer Heading, Ski Jump, Ski Slalom, Tight Rope Walking, Penguin Slide, Bubble River. After completion of the 8-week program, all participants were retested on all standardized measures.

**Results:** All participants successfully completed the 8-week Wii exercise program and reported an interest in continuing in this type of exercise program. Functional Reach showed a trend toward a positive result, with two of five participants showing improvement. The DGI showed improvement, with four of five participants increasing their scores. **Conclusions:** The Wii gaming system should be considered as an adjunct exercise program for individuals with MS. The variety of activities that can be performed in a physical therapy clinic or in a safe environment at home creates opportunities for weightbearing exercise. Randomized controlled trials are needed to determine effects on specific functional abilities.

**Disclosure:** Nothing to disclose

**Keywords:** rehabilitation strategies and therapy and MS