

2015

Balance training application of a systematic framework for clinical decision making in therapeutic gaming for older adults

Brian Bocchieri
Cleveland State University

Follow this and additional works at: https://engagedscholarship.csuohio.edu/u_poster_2015

How does access to this work benefit you? Let us know!

Recommended Citation

Bocchieri, Brian, "Balance training application of a systematic framework for clinical decision making in therapeutic gaming for older adults" (2015). *Undergraduate Research Posters 2015*. 25.
https://engagedscholarship.csuohio.edu/u_poster_2015/25

This Book is brought to you for free and open access by the Undergraduate Research Posters at EngagedScholarship@CSU. It has been accepted for inclusion in Undergraduate Research Posters 2015 by an authorized administrator of EngagedScholarship@CSU. For more information, please contact library.es@csuohio.edu.



This digital edition was prepared by MSL Academic Endeavors, the imprint of the Michael Schwartz Library at Cleveland State University.

Balance training application of a systematic framework for clinical decision making in therapeutic gaming for older adults

College of Sciences and Health Professions

Student Researcher: Brian Boccieri

Faculty Advisor: Ann Reinthal

Abstract

Falling is a major health concern for older adults. Balance is crucial in order to prevent falls. For balance to be functional an individual must be able to maintain balance while focusing on other tasks. For example, an individual must focus on more than just staying upright during walking while drinking a mug of coffee, or during standing while washing dishes. There are a countless number of daily activities that challenge balance. One of the problems with current clinical balance rehabilitation is that the training is often completed using isolated exercises that do not include the various other cognitive and perceptual components that occur concurrently in real life activities. Training balance using video games addresses this problem because it is more similar to real world activities that require balance. Gaming's virtual reality nature means that there are multiple varied but simultaneous personal, task, environmental elements.

As with any exercise prescription, to realize maximum therapeutic benefit, the training must match the individual's needs and goals. However, people's balance skills vary based on the activities in which they participate. For example, an older adult who participates in gardening will have an easier time moving between standing and kneeling than someone who rarely gets on the floor in daily life activities. The framework provides the detailed analysis necessary in order to tailor video gaming to adequately challenge each individual's specific balance exercise prescription requirements.

**Supported by the McNair Scholars Program*