

Nintendo Wii as a Modality in TBI Rehabilitation

Presented by:
Nabila Enam, MOTR/L
Doreen Turner, OTR/L

Beechwood Rehabilitation Facility
Occupational Therapy Department
June 22, 2009

The following two game packages will be demonstrated in this presentation

- **Wii fit package includes the following games:**
 - Balance games
 - Yoga
 - Cardiac exercises
 - Strength exercises
- **Wii sports package includes the following games:**
 - Baseball
 - Tennis
 - Bowling
 - Golf
 - Boxing



Benefits of using Wii as a Modality in Therapy

- Sustains clients' attention in an enjoyable activity rather than focusing on the difficulty of a task or pain
- Increases motivation and self esteem
- Makes the individuals feel more comfortable
- Immediate visual feedback on performance
- Interactive nature of the games make it more fun and interesting for the clients
- Some clients enjoy competitive aspects of the game
- Meaningful to the clients; something they can relate to from their past
- A great way to introduce clients to new games and exercises

Risk Factors

- Overuse of Wii can cause aching backs, sore shoulders and elbows
- Can be addictive
- Can cause injury to self if not performed correctly

Video Presentation

- Abby: her goal is to participate in Wii fit balance tasks without loss of balance given minimal assistance.
- Her goal is being addressed via tightrope walking.
- The following performance components are being addressed:
 - motor control
 - weight shift
- Outcome:
 - After six months, Abby is able to participate in Wii fit balance tasks without loss of balance given minimal assistance, 25% of the sessions.



Video Presentation

- Abby: her goal is to improve reaction time by hitting targets 50% of the time during Wii tasks.
- Her goal is being addressed via tennis activity.
- The following performance components are being addressed:
 - balance (red mat)
 - eye-hand coordination
 - proprioceptive input (weight on right hand)
 - lower extremity muscle strength
- Outcome:
 - After six months, Abby has met her goal.



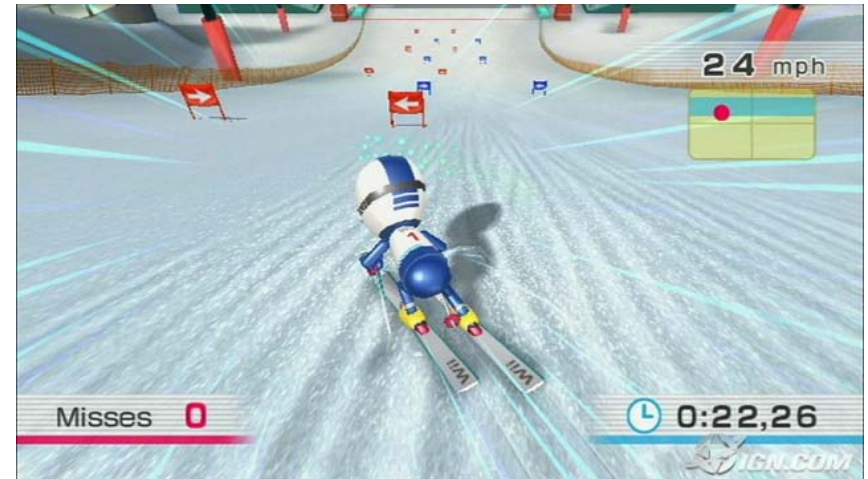
Video Presentation

- Rick is participating in a boxing activity from the Wii sports package.
- The following performance components are being addressed:
 - bilateral hand integration
 - endurance
 - standing balance
 - visual motor integration
- Outcome:
 - Through clinical observation, it was evident that Rick made improvement in the areas of bilateral hand integration, endurance and visual motor integration.



Video Presentation

- Michael: his goal is to maintain dynamic standing balance during functional activities for 10 minutes with close supervision 25% of sessions.
- His goal is being addressed via skiing activity.
- The following performance components are being addressed:
 - postural control
 - motor control
 - visual motor integration
 - increase standing tolerance
 - weight shift
 - balance
- Outcome:
 - After a year, Michael has met his goal.



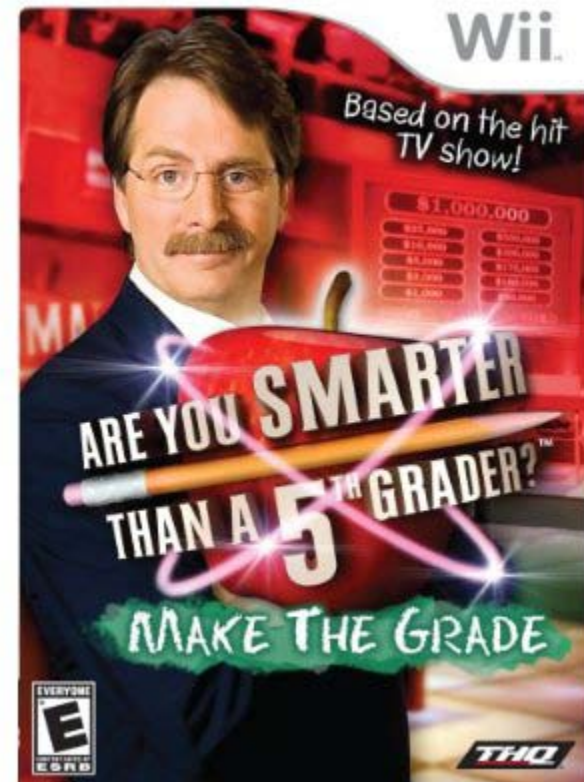
Video Presentation

- Jon: his goal is to maintain standing tolerance for 40 minutes in a standing box while participating in an activity.
- His goal is being addressed via playing a game of “Are You Smarter Than a 5th Grader?”
- The following performance components are being addressed:
 - weight bearing on lower extremities
 - muscle stretch to improve posture
- Outcome:
 - After six months, Jon is able to maintain standing tolerance for 40 minutes in a standing box while participating in an activity, 42% of the sessions.



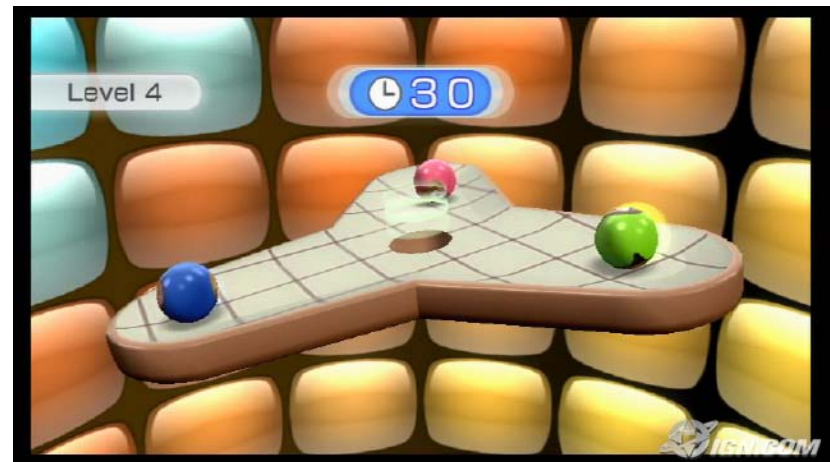
Video Presentation

- Directed Activities Group is participating in the game “Are You Smarter Than A 5th Grader?”
- The following performance components are being addressed:
 - decision making
 - attending to group activities
 - taking turns
 - socialization
- Outcome:
 - Through clinical observation it was evident that clients have made improvements in the areas of decision making, socialization and taking turns.



Video Presentation

- Scott S: his goal is to improve his balance via various Wii fit activities.
- His goal is being addressed via tightrope walking and balancing balls activity.
- The following performance components are being addressed:
 - visual motor integration
 - motor control
 - weight shift
 - coordination
- Outcome:
 - After six months, Scott is making slow gains with his balance. There has been a decline in falls from February to April 2009. His documented falls have been 0-1 per month.



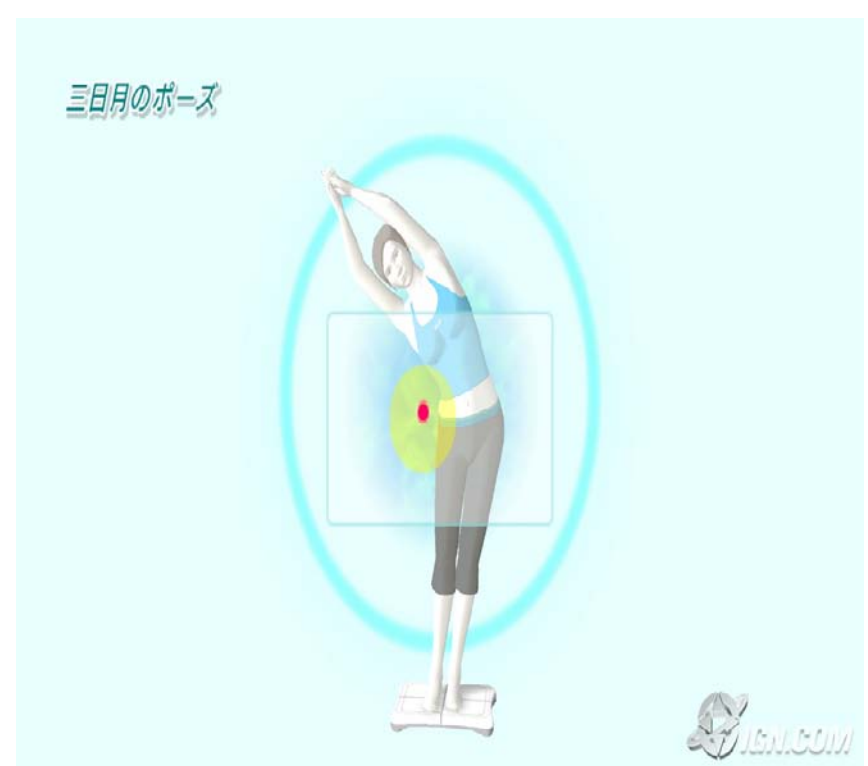
Video Presentation

- Dan is participating in a baseball activity using the Wii sports package.
- The following performance components are being addressed:
 - weight bearing on lower extremities
 - muscle stretch to improve posture
 - eye-hand coordination
 - Increase standing tolerance
- Outcome:
 - After six months, Dan is able to stand for 45-60 minutes in a standing box. Six months prior, he was only able to stand for 30-40 minutes.



Video Presentation

- Scott C: his goal is to participate in a physical fitness activity for 30 minutes with one rest break.
- His goal is being addressed via yoga poses from the Wii fit package.
- The following performance components are being addressed:
 - balance
 - coordination
 - muscle strength
 - relaxation
 - posture
- Outcome:
 - After six months, Scott C is able to participate in a physical fitness activity for 30 minutes with one rest break, 25% of the sessions.



Wii Games

- In therapy sessions we have also tried the following games with our clients:
 - Smarty Pants
 - Beach Sports
 - Cranium Kabookii
 - Deca Sports
 - Carnival Games
 - Super Monkey Ball
 - Banana Blitz

