

Wii-HAB: Using the Wii Video Game System as an Occupational Therapy Intervention with Patients in the Hospital Setting

The Nintendo Wii video game console has become the most widely used game system in rehabilitation facilities across the US.¹ In the past few years the Wii has been used with diverse populations, including children and adults with cerebral palsy, Parkinson's disease, stroke, and gross and fine motor deficits. Literature has shown the Wii being used in hospital, rehabilitation and school settings, all with the similar goals of improving patients' standing balance, strength, coordination and activity tolerance.^{2,3} The unique features of the Wii allow Occupational (OT) and Physical Therapists (PT) to capitalize on their patient's functional abilities in a fun and novel manner. The Wii is currently being utilized by Occupational, Physical, and Recreational Therapists on the Comprehensive Acute Rehabilitation Unit at Thomas Jefferson University Hospital (TJUH) as well as in the acute care setting. On the Blood and Marrow Transplant Unit (BMTU) at TJUH, OTs are using the Wii to benefit patients physically as well as emotionally. This article highlights how the Wii video game system has been utilized to meet the specialized needs of the patient population on the Blood and Marrow Transplant Unit (BMTU) at Thomas Jefferson University Hospital (TJUH) and the initial observations of its benefits.

The Nintendo Wii gaming system consists of controllers with sensors that track acceleration and movement, allowing users to translate their own motion onto the game's characters. For example, when bowling, a player holds a controller in one hand, then swings his or her arm back and releases the ball at the time and speed they want their character to release the ball. This increases the amount of movement required by video game players and provides a physical challenge. Most recently, OTs on the BMTU have begun using the Nintendo Wii video game system to gather patients together for leisure groups. The goals of the group include: increasing strength, endurance, range of motion, and building social relationships and support networks among members that can last beyond their hospital stay. Patients who meet through the group setting are encouraged to carry on their relationship after group by sharing information such as hospital room number and telephone extension.

Sharing this information allows patients to use each other as a source of support.

The group was based upon the Rehabilitation Model and Ecology of Human Performance Model, and a group protocol was formed by Lindsay Rule, OTR/L, one of the staff Occupational Therapists in Thomas Jefferson University Hospital's Department of Rehabilitation Medicine.⁴ The Rehabilitation Model focuses on a person's ability to return to the fullest physical, mental, social, vocational, and economic functioning. The Ecology of Human Performance Model expresses that the quality of a person's occupational performance is a direct result of the dynamic interaction of the person, environment and task.⁴ Both models encourage therapists to be client-centered and to take into account the client's physical and emotional status as well as the environment and goals in order to make interventions successful. The protocol includes group goals, patient admission criteria, and discharge criteria. As stated above, goals include increasing strength, endurance, range of motion, and building social relationships and support networks among members.

Due to toxic doses of chemotherapy and radiation, long hospital stays, isolation from family and friends, and life-threatening diagnoses, patients on the BMTU are at high risk for becoming depressed and deconditioned. OTs and PTs work with patients throughout their stay to help them maintain their independence and prepare them for discharge from the hospital. In particular, OTs face the challenging task of addressing the patient's psychosocial status and helping them to remain motivated and positive throughout the transplant process.

Since the initial group began in September 2009, 15 to 20 patients have been asked to fill out a five-question survey to assess whether or not they felt they benefitted from the group and if they planned to return the following week. They were also encouraged to share suggestions and ideas for improving the satisfaction of the members. Overall, preliminary findings reveal that the majority of

patients have enjoyed attending the group and feel that it is beneficial to meet and talk with other patients. After group sessions have concluded, many patients expressed the importance of being able to maintain human contact and share "battle stories" with others who are fighting the same issues. Often times, this opportunity to look outside of oneself and to help others adds to motivation and feelings of self-worth.

OTs leading the group often initiate conversations that help patients identify their own valued leisure activities. They also help patients discuss the difficulties they have faced in dealing with their diagnoses and their feelings around loss of certain roles and activities due to cancer-related fatigue. Another benefit of the Wii group is that patients can play sports such as bowling, tennis, golf, baseball and boxing without over-exerting themselves or using a day's worth of energy that they need to save for basic living activities such as bathing, dressing and eating.

In the future, OTs on the BMTU will continue to use the Wii as a method for psychosocial and physical rehabilitation with patients. Data will continue to be collected from the patient's experience and changes will be made based on feedback and new technological advancements. This small group of two to three patients gathering once a week for an emotional and physical workout has the potential to lead to a much larger support group inside and outside of TJUH's walls. Using the Rehabilitation and Ecology of Human Performance Models as guidelines, further research could investigate the relationship between participating in Wii groups in the hospital and returning to occupational roles once patients return home. It is our belief that participating in these groups helps patients physically and emotionally prepare for life outside of the hospital. ■

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