

Article Critique #2

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The article I have reviewed and critiqued is “Effects of an Interactive Video Game (Nintendo Wii™) on Older Women with Mild Cognitive Impairment,” a study done by Elizabeth Weybright, John Dattilo, Frank R. Rusch, published in the *Therapeutic Recreation Journal*. This article uses video games as a way to analyze if they have a positive effect on patients with a mild cognitive impairment that can potentially lead to a treatment program.

### **Summary**

Weybright, Dattilo, and Rusch (2010) analyzed two residents of an assisted living facility who are both diagnosed with a mild cognitive impairment, or MCI. Both residents were female, ages 86 and 93 years old. To begin the study, the participants took the Mini-Mental State Examination to assess their mental state and both scored within the MCI range. The researchers used a baseline and intervention program to gather information on how video games affects the participants. During the baseline phase, participants would watch a video of a Professional Bowlers Association competition four times a week. The next phase was having the participants play the bowling game on the Wii. The first criteria was observing whether participants maintained eye contact with the game and actively participated in it. The second criteria was determining positive affect by measuring facial response in the form of smiling. The researchers concluded from the data gathered that playing Wii bowling demonstrated an increase in attention and also positive affect compared to just watching television.

### **Strengths**

This study approached the situation with a way to compare the results of the video game with something that residents of an assisted living facility commonly do which is watch television. It was beneficial to compare the two activities to accurately observe whether the video

games would be beneficial to improving their cognitive abilities. The observations were made by using a camera so that the participant wasn't necessarily feeling watched directly from the front by an observer, which led to more authentic results (Weybright, et al., 2010).

The nurses who care for the participants reported that participants had longer attention spans on other activities that they participated in after the study was done. This follow up strengthened the study as it showed how the activity continued to affect MCI patients and their level of attention. Another factor that supported the study was that on the Mini-Mental State Examination the participants took prior to beginning the study, the two participants scored on opposite ends of the MCI range. One participant had a low MCI score, while the other had a high one that bordered dementia (Weybright, et al., 2010). This factor gave the study a broader range it could affect as both participants showed increase positive affect and attention to task.

### **Weaknesses**

The biggest weakness of this study is that there were only two participants, from the same living community, that were observed. The problem with only having two participants is that the study needs to be replicated several times in order for this specific activity to be applied with confidence in an actual treatment program. Both participants were also female and so there is no evidence that this activity could show positive effects with male participants.

Another weakness with the study is that during the baseline observations, participants were watching professional bowlers, not necessarily something that they would traditionally watch. Also, the effects of the program were only assessed for three weeks after the observations were complete so the long term effects are unknown.

### **How This Can Be Applied**

As a recreational therapist, this activity can be effective in helping clients who have a MCI in order to improve their quality of life. By helping clients increase their attention to task they would be able to participate in more activities that can contribute to better physical fitness and also general well-being. This activity promoted physical fitness to residents who usually stayed in bed or in their room watching television or other minimal activities. They were able to get up and move around while at the same time improve their cognitive abilities. This can also be helpful in preventing a degradation of their mental health by keeping their minds active. Other Wii sports can also be applied to add variety to a client's tasks and keep them entertained and excited for a greater long term effect.

### **Personal Reaction**

I really found this article interesting because I had picked it to critique a few days before I volunteered at the Orem Rehab where I participated in an activity where the residents played the Wii. The residents I was working with had different disabilities but it was interesting to see their involvement with the game. At first I wasn't sure if it actually benefited them in some way other than a form of entertainment, but as I studied this article I saw how this can affect the attention to task for a person who has a cognitive disability. I would be interested in researching more about this to see if more studies have been done with bigger and more diverse populations and see if there is a long term effect to a person's cognitive abilities. It's a very practical game and easy to use, but still develops simple skills that patients with cognitive disabilities can regain. It is hard to test this activity with only this study because of the small population sample and so there is little confidence on the validity and success of this program.

### References

Weybright, E. H., C.T.R.S., Dattilo, J., and Rusch, F. R. (2010). Effects of an interactive video game (nintendo wii(TM)) on older women with mild cognitive impairment. *Therapeutic Recreation Journal*, 44(4), 271-287. Retrieved from <http://search.proquest.com/docview/921547910?accountid=4488>