# Video Games that Include Exercise Appear to Reduce Depression in Senior Citizens

**Subjects chose Nintendo Wii Sports games to play on their own – tennis, bowling, baseball, golf or boxing**

Feb. 25, 2010 - New research suggests a novel route to improving the symptoms of subsyndromal depression (SSD) in senior citizens through the regular use of "exergames" – **entertaining video games that combine game play with exercise**.

In a pilot study, the researchers found that use of exergames significantly improved mood and mental health-related quality of life in older adults with SSD. The research report is from the Sam and Rose Stein Institute for Research on Aging at the University of California, San Diego School of Medicine.

SSD is much more common than major depression in seniors, and is associated with substantial suffering, functional disability, and increased use of costly medical services. Physical activity can improve depression; however, fewer than five percent of older adults meet physical activity recommendations.

The study, led by Dilip V. Jeste, MD, Distinguished Professor of psychiatry and neurosciences at UCSD School of Medicine, Estelle and Edgar Levi Chair in Aging, and director of the UC San Diego Sam and Rose Stein Institute for Research on Aging, appears in the March issue of the American Journal of Geriatric Psychiatry.

"Depression predicts nonadherence to physical activity, and that is a key barrier to most exercise programs," Jeste said. "Older adults with depression may be at particular risk for diminished enjoyment of physical activity, and therefore, more likely to stop exercise programs prematurely."


In the study, 19 participants with SSD ranging in age from 63 to 94 played an exergame on the Nintendo Wii video game system during 35-minute sessions, three times a week. After some initial instruction, they chose one of the five Nintendo Wii Sports games to play on their own – tennis, bowling, baseball, golf or boxing.

Using the Wii remote – a wireless device with motion-sensing capabilities – the seniors used their arm and body movements to simulate actions engaged in playing the actual sport, such as swinging the Wii remote like a tennis racket. The

participants reported high satisfaction and rated the exergames on various attributes including enjoyment, mental effort, and physical limitations.

"The study suggests encouraging results from the use of the exergames," Jeste said. "More than one-third of the participants had a 50-percent or greater reduction of depressive symptoms. Many had a significant improvement in their mental health-related quality of life and increased cognitive stimulation."

Jeste said feedback revealed some participants started the study feeling nervous about how they would perform in the exergames and the technical aspects of game play. However, by the end of the study, most participants reported that learning and playing the videogames was satisfying and enjoyable.

"The participants thought the exergames were fun, they felt challenged to do better and saw progress in their game play," Jeste said. "Having a high level of enjoyment and satisfaction, and a choice among activities, exergames may lead to sustained exercise in older adults." He cautioned, however, that the findings were based on a small study, and needed to be replicated in larger samples using control groups. He also stressed that exergames carry potential risks of injury, and should be practiced with appropriate care.

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Additional authors include Dori Rosenberg, Jennifer Reichstadt, Jacqueline Kerr and Greg Norman, UCSD Department of Family and Preventative Medicine; and Colin A. Depp, Ipsit V. Vahia and Barton W. Palmer, UCSD Department of Psychiatry.