MSU faculty members receive grant to study digital health games

EAST LANSING, Mich. — Three Michigan State University faculty members received a $284,000 grant from the Robert Wood Johnson Foundation to explore how digitally delivered games such as Wii Fit and Dance Dance Revolution can improve health.

Wei Peng and Brian Winn from the Department of Telecommunication, Information Studies and Media, and Karin Pfeiffer from the Department of Kinesiology, will use the grant to see whether these so-called "exergames" deliver on their promises to improve health, and if there are ways the games can be improved.

"One of the purposes of our project is to measure the actual energy expenditure created by these games," Peng said. "We want to see if playing the games can actually help you burn calories and help overweight and inactive people to lose weight.

"We're also trying to identify features of the game that really motivate people, especially those who do not like physical activity," she said. "With that in mind, we are designing a brand new game based on the Wii remotes and other 'active' input devices."

That game is called Mount Olympus, which will be a 3D fantasy role-playing game that requires players to move their upper and lower body in order to control their character's movements throughout the fictional world of the game.

"The game is set in ancient Greek society," Peng said, "and there are a lot of action, competition and sports activities involved."

Participating in the study will be overweight and inactive college students. They will be assigned to play Mount Olympus or to use a motivational Web site designed to promote and support physical activity.

The study will examine the extent to which each media activity meets individuals' needs for competence, autonomy and social relatedness, and how meeting these needs may motivate engagement in the activity. More engagement is expected to lead to more physical activity in daily life and therefore to more weight loss and better health outcomes.

"Our Mount Olympus game will be designed with strong theoretical foundation and play testing," Peng said. "We expect that the game can engage the players in a fun way and the stealth exercise can become part of their routines."

Peng and colleagues are one of two MSU teams of researchers to earn an RWJF grant as part of the Health Games Research program. Karin Pfeiffer from the Department of Kinesiology, will use the grant to see whether these so-called "exergames" deliver on their promises to improve health, and if there are ways the games can be improved.

Another team's research will pair college-age students with a virtual workout partner to study the impact on exercise trends.

Deborah Feltz, chairperson of MSU's Department of Kinesiology, is leading a team that will use the Eye Toy camera and PlayStation 2 to measure what characteristics in a virtual partner motivate people to exercise harder, longer or more frequently. For more information about this project go here. For information on this project, go here.

Health Games Research is a national program, which conducts, supports, and disseminates research to improve the quality and impact of health games. Supported by an $8.25 million grant from RWJF's Pioneer Portfolio, it is located at the University of California, Santa Barbara.
Michigan State University has been advancing knowledge and transforming lives through innovative teaching, research and outreach for more than 150 years. MSU is known internationally as a major public university with global reach and extraordinary impact. Its 17 degree-granting colleges attract scholars worldwide who are interested in combining education with practical problem solving.

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