

Health researchers explore how to take interactive video games to the next level

May 30 2008

The University of North Carolina at Chapel Hill School of Public Health has received a grant from the Robert Wood Johnson Foundation (RWJF) to explore how interactive digital games could be better designed to improve players' health.

UNC joins 11 other research teams supported in this first round of funding from Health Games Research, an RWJF national program established to strengthen the evidence base related to the development and use of games to achieve desirable health outcomes.

"Research shows that young adults play video games as much as – or in some cases more than – children do," said Deborah Tate, Ph.D., assistant professor in the School's departments of health behavior and health education and nutrition. "Since young adulthood is a time of decreasing physical activity and rapid weight gain, video games may provide a more active form of leisure than traditional TV for this age group."

Tate and doctoral student Elizabeth Lyons, an avid gamer, will investigate people's motivations to expend energy while playing video games. They will compare traditional video games played on home consoles (such as Playstation 3 or Wii, which use a hand-held or motion-sensing controller) with more active games requiring physical movement beyond pushing buttons or flicking the wrist. These active games require players to use a controller such as a dance pad, balance board or even a guitar.

"The research focuses on presence and intrinsic motivation," Lyons said. "Presence is the perception of actually being in the game environment. Intrinsic motivation is the desire to do something for its own sake and not for a reward. Both presence and intrinsic motivation seem to increase the amount of time players spend with games. But these two factors have never been measured or studied to assess their impact on the amount of energy people will expend when playing an active game or when playing a traditional game."

The researchers will look at effects of the types of controllers that players use, the influence of players' perspective in the game and their feelings of presence and intrinsic motivation. Fifty men and 50 women, all aged 18 to 35, will participate in the study, which will examine 10 games.

"The findings may help us understand how to make traditional games more active, and active games more compelling," Lyons said.

Health Games Research is headquartered at the University of California, Santa Barbara. The program is directed by Debra Lieberman, Ph.D., communication researcher in the university's Institute for Social, Behavioral and Economic Research. Lieberman is also a lecturer in the department of communication and a leading expert in the research and design of interactive media for learning and health behavior change. Health Games Research is funded by an \$8.25 million grant from RWJF's Pioneer Portfolio, which supports innovative projects that may lead to breakthrough improvements in the future of health and health care.

"This groundbreaking study led by the University of North Carolina at Chapel Hill School of Public Health will identify new interactive behavioral health strategies to use in the design of future health games and technologies," Lieberman said. "Together, the 12 studies funded in

this round will help us better understand how people respond to various types of health games, and this will potentially lead to new game-based applications that can more effectively engage and motivate players to improve their health."

The 12 grantees were selected from 112 research organizations that applied for Health Games Research funding during the first funding call, which focused on games that engage players in physical activity and/or games that promote and improve players' self-care. In January 2009, Health Games Research will issue its next call for proposals, awarding up to an additional \$2 million in grants.

As UNC and the other 11 grantees conduct their studies, Health Games Research will provide them with ongoing assistance and research resources.

Source: University of North Carolina at Chapel Hill

Citation: Health researchers explore how to take interactive video games to the next level (2008, May 30) retrieved 27 April 2024 from <https://medicalxpress.com/news/2008-05-health-explore-interactive-video-games.html>

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