

Employing ‘Virtual Advisors’ to Promote Physical Activity in Underserved Communities: Results from the COMPASS Study

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ABSTRACT

Interactive technologies have been increasingly used to improve health-promoting behaviors associated with chronic disease. Yet little work has specifically targeted socioeconomically disadvantaged ethnic minority older adults, who often lack the English language, literacy, and computer skills to successfully utilize Web-based programs. 40 inactive Latino adults aged 55 years and older were randomized to a 4-month culturally adapted, individually tailored walking intervention delivered via a computer-based bilingual ‘virtual advisor’, or a general health education arm. Both programs were delivered in a neighborhood community center. The overall four-month study retention rate was 97.5 percent, and intervention participants held XX conversations per week with the advisor on average. The primary outcome was walking, assessed via the CHAMPS questionnaire, with verification using Omron pedometry. Four-month increases in minutes of brisk walking per week were significantly greater in the virtual advisor arm (mean increase= 147.0 ± 37.4 min/wk) relative to the health education arm (mean increase= 12.6 ± 7.6 min/wk; $P=.002$). Walking increases reported in the virtual advisor arm were reflected in significant 4-month increases in objectively measured daily steps (slope analysis, $P=.002$; mean increase of 290 ± 75.5 steps/day). The results indicate that a virtual advisor that delivered culturally adapted, individually tailored physical activity advice in a neighborhood setting led to meaningful 4-month increases in brisk walking relative to general health education among Latino older adults. This interactive technology, which requires minimal health and computer literacy, may help to ensure that all segments of the population benefit from health promoting ‘e-Health’ intervention opportunities. Their expanded evaluation across longer time periods is indicated.