

Intervention program increases exercise and health outcomes in older adults

January 26 2023, by Tim Schnettler



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As we age, strength training and aerobic exercise become increasingly important. Studies have shown strength training may enhance quality of life and improve our ability to do everyday activities, while physical

inactivity—also known as sedentary behavior—can lead to numerous adverse health conditions and outcomes, including premature death.

Aging rural women are at particular risk for [physical inactivity](#) due in part to environmental, sociocultural and psychosocial factors. One way to counter this is through [intervention programs](#) that encourage and make it easy for people to be physically active.

Findings recently published in the *International Journal of Behavioral Nutrition and Physical Activity* by researchers with the Texas A&M University School of Public Health, the Texas A&M AgriLife Institute for Advancing Health Through Agriculture, IHA, and other colleagues looked at changes in physical activity and associated factors from a multicomponent community-engaged intervention trial and found that participants in the intervention group reported more physical activity than those in the control group.

Jay Maddock, Ph.D. Fellow of American Academy of Health Behavior and professor in the Department of Environmental and Occupational Health at the School of Public Health and director of the Center for Health and Nature served as first author on the study. Rebecca Seguin-Fowler, Ph.D., registered dietitian and associate director for Healthy Living at the IHA, was the principal investigator and corresponding author.

The intervention program, named Strong Hearts, Healthy Communities 2.0, SHHC-2.0, was built on the results of a previous study, SHHC-1.0, conducted by the researchers.

"In the first trial, we observed significant improvements in outcomes and behaviors, but through process evaluation we knew adaptations to the program were needed to maximize effectiveness and feasibility," Seguin-Fowler said. "This resulted in the SHHC-2.0 trial to rigorously evaluate

the impact of those adaptations."

SHHC-2.0 was a 24-week program that consisted of twice-per-week, 60-minute experiential group physical activity and nutrition education classes with sessions on social and environmental change.

Classes led by health educators were held at various community locations such as libraries, town halls and churches. Participants were provided with [exercise equipment](#), [aerobic exercise](#) videos, participant guides and health journals.

The classes included progressive [strength training](#) and aerobic exercise, which included walking and aerobic dance and progressed from low intensity to moderate intensity. Participants were also encouraged to engage in physical activity outside of the classes, and they were provided with strategies and recommendations for exercising in bad weather.

Participants were asked to wear an accelerometer and complete an [online survey](#) that included questions related to sociodemographic factors, physical activity behaviors, psychosocial measures and other relevant topics. The surveys were completed prior to the start of intervention, midway through or at 12 weeks, and immediately following the conclusion of the 24-week program.

In total, 316 individuals were screened, and 182 women were enrolled in the trial. Of those women, 70 were age 60 or older.

The research team found that the participants in the intervention group had significantly higher levels of objectively measured and self-reported physical activity at 12 weeks and 24 weeks than the control group. Additionally, the findings were consistent among the 70 participants who were age 60 and older.

"Being physically active throughout the lifespan is essential for good health," Maddock said. "These results are promising for the effectiveness of the Strong Hearts, Healthy Communities program to help people get and remain active."

From their findings, the research team concluded that the intervention program successfully increased [physical activity](#) among previously sedentary, at-risk older [rural women](#) at both 12 weeks and 24 weeks.

"Given the positive, significant impacts across numerous clinical outcomes and health behaviors due to the SHHC 2.0 program overall, and in comparison to SHHC 1.0, we are eager to move the program to national dissemination research studies," Seguin-Fowler said.

In the future, the team will focus these efforts on implementation and testing in more diverse populations across the U.S.

More information: Jay E. Maddock et al, Changes in physical activity outcomes in the Strong Hearts, Healthy Communities (SHHC-2.0) community-based randomized trial, *International Journal of Behavioral Nutrition and Physical Activity* (2022). [DOI: 10.1186/s12966-022-01401-1](#)

Provided by Texas A&M University

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