

# Using Virtual Exercise Training to Improve Health and Fitness: The Community Adult Fitness Program

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## Introduction:

Physical inactivity is an issue especially in older and low-income populations. An estimated 75-95% of older adults do not meet the recommended daily activity guidelines and, as a result, are at increased risk of developing or managing chronic disease. COVID-19 has added additional barriers to activity by restricting use of fitness facilities and other indoor recreation options. Novel strategies to motivate such populations to be active may help to improve both their physical and mental health.

## Purpose:

The purpose of this study is to assess the impact that the Alma College Community Adult Fitness Program (a virtual, home-based, student-delivered exercise intervention) has on health-related fitness level, physical activity and sedentary behavior levels, and mental health.

## Methods:

Eighteen participants were recruited for this study. All participants will complete the Senior Fitness Test, a mental health questionnaire, and wear a fitness tracker for a total of two weeks at the beginning and end of the 11-week program. The Senior Fitness Test consists of eight activities including body composition, agility, cardiorespiratory endurance, muscle endurance, and flexibility measurements. Intervention participants (eight females and one male, mean age  $58.2 \pm 13.1$  years, mean body mass index  $37.9 \pm 7.4$  kg/m<sup>2</sup>) will then complete a one-hour exercise class twice a week for 11 weeks, designed based on their needs and fitness goals, in a program called the Community Adult Fitness Program. A control group (eight males and one female, mean age  $53.3 \pm 10.9$  years, mean body mass index  $30.8 \pm 6.3$  kg/m<sup>2</sup>) will also complete the fitness testing but not complete any formal exercise training for the 11 weeks. The data analysis will include comparing the change in fitness, activity, and mental health variables from baseline to post-testing between intervention and control groups.

## Discussion:

This study will allow us to gauge changes in fitness and health attributable to the Community Adult Fitness Program. Our hope is that this virtual program can positively impact participants by increasing their exercise levels and allowing them to be stronger, more confident, and comfortable with everyday tasks. If our results do demonstrate positive health effects, such virtual programs may be useful for targeting groups without access to traditional exercise options.