

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

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## Introduction

- 75-95% of older adults do not meet the recommended physical activity guidelines.
- COVID-19 has added additional barriers to physical activity participation.
- The recent increased use of virtual exercise programming may allow isolated older adults a way to improve their health and fitness.

## Purpose

To assess the impact that the Community Adult Fitness Program has on health-related fitness level, physical activity and sedentary behavior levels, and mental health.

Table 1. Average Body Composition Measurements and Demographics

Measurements	Baseline Test		Post Test	
	Intervention group	Control group	Intervention group	Control group
Age (yrs)	58.2 +/- 13.1	53.3 +/- 10.9	58.2 +/- 13.1	53.3 +/- 10.9
Height (in)	64.0 +/- 3.2	66.4 +/- 3.0	64.0 +/- 3.2	66.4 +/- 3.0
Weight (lbs)	223.8 +/- 65.6	183.6 +/- 36.6	220.9 +/- 67.2	183.8 +/- 37.8
BMI (kg/m <sup>2</sup> )	37.9 +/- 8.6	29.2 +/- 5.3	37.4 +/- 9.0	29.3 +/- 5.5
Waist/abdomen circumference (in)	45.2 +/- 8.2	39.4 +/- 4.6	43.0 +/- 7.5	38.3 +/- 4.8
Hip Circumference (in)	49.4 +/- 9.7	43.9 +/- 4.5	48.8 +/- 10.0	43.5 +/- 5.0
Neck Circumference (in)	15.2 +/- 2.0	13.9 +/- 2.2	14.7 +/- 2.1	13.8 +/- 2.3
% fat from girths	49.3 +/- 14.9	42.1 +/- 11.2	47.5 +/- 13.3	40.5 +/- 12.0

## Methods

### Equipment:

- Yoga mat, dumbbells, resistance bands, fitness tracker

### Participants:

- 18 participants – Table 1
  - 16 females, 2 males
- 2 groups (intervention and control group)
- Recruited from Gratiot County.

### Fitness Measurements:

- Baseline and Post-Senior Fitness Test (virtually)
- Mental Health Questionnaire
- Fitness Tracker
  - Worn during week 1 and week 10
  - 10-week program

### Intervention Group:

- 1-hour of exercise class twice a week, virtually.
- Based on needs and fitness goals of each individual.
- Exercise class was led by trained students in the Community Adult Fitness Program.

### Control Group:

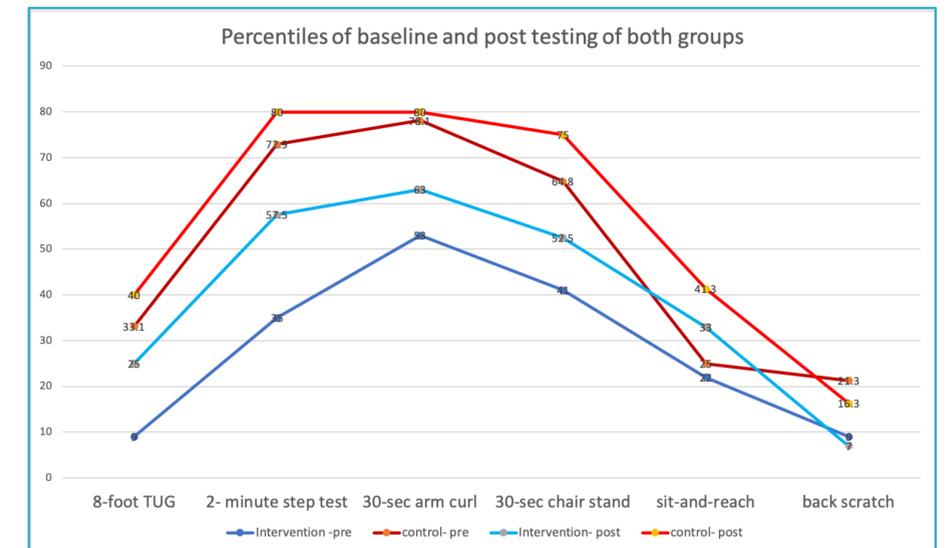
- No change in workout plan.

### Data Analysis:

- Compare changes in fitness, activity, and mental health variables from baseline to post testing of the two groups.



Figure 1. Baseline and Post-test Percentiles of Control and Intervention Group



## Results/ Conclusions

### Outcome?

- Virtual training has had a significant impact on participant health and fitness.
- Average of 2.9 lbs. lost in intervention group.
- Decreased fat % by 2.2% in intervention group.
- Intervention group improved percentile in every test, except back scratch test.
- Increased Confidence & Comfortability with everyday tasks.
- Control group showed slight progress, likely due to seasonal change.
- Intervention group showed overall greater improvement.

### Virtual training programs could be future direction for:

- Accessing a larger range of participants (better health worldwide).
- New job opportunities for up-and-coming students.