

Title of Intervention: Exercise training for stroke survivors

Intervention Strategies: Group Education, Supportive Relationships

Purpose of the Intervention: To improve outcomes for individuals with stroke through exercise training

Population: African-American stroke survivors

Setting: Chicago area; community-based

Partners: None mentioned

Intervention Description: The program operated 3 days a week for 12 weeks and consisted of 3 components: fitness instruction and exercise, nutrition education and health behavior changes.

- **Group Education:** Exercise classes consisted of warm-up, aerobic activity, strength activity and cool down. The type and duration of exercise varied from 45 to 70 minutes depending on how the subject felt on any given day. Aerobic equipment included stationary bikes, recumbent steppers, treadmills and cross-trainers. During the first 2 weeks of the study, participants went through an educational program that included instruction in measuring their own rating of perceived exertion, using the equipment safely and understanding the warning signs for when to stop exercise. One-hour nutrition classes included "hands-on" cooking instruction that focused on low-fat, low-cholesterol food items. Participants were taught how to cook healthy meals during the first two classes of the week and then cooked their own during the third class. Health behavior classes met for 60-90 minutes on 2-3 days a week. Each participant developed one to two goals. The curriculum included presentations on stress, coping styles and strategies, family and role change, communication, exercise and healthy cooking and eating habits. Presentations were followed by group discussions that offered the participants an opportunity to relate their own experiences to the specific topic.
- **Supportive Relationships:** Support from co-leaders and group members were provided and incorporated.

Theory: Stages of Change Model

Resources Required:

- **Staff/Volunteers:** Exercise physiologist, registered dietitian, psychologist, social worker, post-doctoral research associate, undergraduate interns and volunteers
- **Training:** Not mentioned
- **Technology:** Computers and printer
- **Space:** Fitness center, facility with cooking stoves, classroom space
- **Budget:** Not mentioned
- **Intervention:** Exercise machines, ingredients for healthy meals, recipes, educational materials, teaching aids, transportation
- **Evaluation:** Materials for taking blood measures, equipment for testing heart rate and oxygen volume, bench press and leg press machine, equipment to do sit and reach test, survey materials

Evaluation:

- **Design:** Cohort
- **Methods and Measures:**
 - Attendance was taken at sessions
 - Blood measures were taken (total cholesterol, HDL, LDL, and triglycerides)
 - A symptom limited graded exercise test was used to measure peak oxygen volume and heart rates
 - Strength was assessed on the bench press and leg press machines
 - Hamstring and low-back flexibility was assessed with a modified sit and reach test
 - Height, weight and skin-fold measures were recorded
 - The Physical Activity and Disability Survey
 - An adapted version of the Rate Your Plate Eating Pattern Assessment assessed fat intake

- Health behavior questionnaire
- The Life Satisfaction Questionnaire and the Symptom Check List-90 Revised

Outcomes:

- Short Term Impact: The intervention group reduced total cholesterol, social isolation and weight and increased cardiovascular fitness, strength, flexibility, life satisfaction and the ability to manage self-care needs.
- Long Term Impact: Not measured

Maintenance: Not mentioned

Lessons Learned: A short-term health promotion intervention for predominantly African-American stroke survivors was effective in improving several physiological and psychological health outcomes. Findings demonstrated that the stroke participants were able to maintain excellent program compliance. Attendance rate was high and all participants completed the program.

Citation(s):

Rimmer, J. H., B. Riley, et al. (2000). "Exercise training in a predominantly African-American group of stroke survivors." *Med Sci Sports Exerc* 32(12): 1990-6.

Rimmer, J. H., C. Braunschweig, et al. (2000). "Effects of a short-term health promotion intervention for a predominantly African-American group of stroke survivors." *Am J Prev Med* 18(4): 332-8.