

Title of Intervention and Website: Minnesota Heart Health Program

<http://clinicaltrials.gov/ct2/show/NCT00005150>

Intervention Strategies: Campaigns & Promotion, Group Education, Provider Education, Individual Education, Environments and Policies

Purpose of the Intervention: To increase physical activity in children and adults through a community-wide promotion and to assess organizational and employee participation during three community-wide worksite exercise competitions in two communities

Population: Community Wide Youth Exercise Promotion: Class of 1989 (children followed from 6th to 10th grade; Community Education for Cardiovascular Disease Prevention: general adult population ages 25-74; Shape Up Challenge: Employees within 119 participating companies in two communities

Setting: North central U.S. (Minnesota); school-based, faith-based, home-based, community-based, worksite-based

Partners: State Universities, National Heart Lung and Blood Institute Nutrition Coding Center; Minnesota Lipid Research Clinics Core Laboratory, community task forces, Local and State Health Departments, local school districts

Intervention Description:

- Community Wide Youth Exercise Promotion:
 - Campaigns and Promotions: The FM-250 was a peer-led four-week community-wide campaign for 8th graders to exercise the equivalent of bicycling 250 miles. Each week, peer leaders set goals for the class to exercise a certain amount (to reach a certain city). If they were successful, they received a postcard from the goal city.
 - Group Education: Children received instruction on monitoring their heart rate, choosing aerobic activity and learning safety procedures. Slice of Life was implemented for 10th grade students and included ten lessons lead by peers, designed to promote healthy eating and regular physical activity.
- Community Education for Cardiovascular Disease Prevention
 - Campaigns and Promotions: Mass media campaigns included a city-wide poster campaign, pamphlets and books.
 - Provider Education: Health care providers and educators attended continuing education classes to enhance adoption of practical and systematic prevention programs, encourage role modeling, and learn concepts and skills to counsel clients for risk factor assessment and reduction.
 - Group Education: Speakers presented information at club or organization meetings. Adult education classes on physical activity, nutrition, and heart health in general were held in the communities.
 - Individual Education: A weight loss correspondence program was provided through monthly newsletters. Risk factor education videos were shown at a Heart Health Center.
 - Environments and Policies: Communities developed and staffed a center for risk factor screening. Bike racks were installed for public transit.
- Shape Up Challenge
 - Campaigns and Promotions: local newspaper ads and articles, radio ads, television ads publicized weekly results for the top five companies; promotional materials, company exercise chart. A month-long competition during which employees recorded minutes spent daily in aerobic activities. Incentives were established to promote intragroup cooperation and intergroup competition. Companies competed for awards that promote intragroup cooperation and intergroup competition based on average minutes of exercise per employee. Campaigns focused on facilitating individual positive behavior changes and were designed to increase levels of community knowledge and awareness.
 - Group Education: exercise education classes and a school-based challenge

Theory: Social Learning Theory

Resources Required:

- Staff/Volunteers: peer leaders, company coordinators, subgroup coordinators
- Training: not mentioned
- Technology: not mentioned
- Space: exercise space
- Budget: Shape Up Challenge total cost was approximately \$5000 plus an estimated 9.4 hours of coordination time per worksite during the month-long competition
- Intervention: class materials, data collection materials (such as employee logs), media materials, promotional materials, company exercise posters, company and individual incentives, local newspaper ads and articles, radio ads, television ads, exercise class instructor, print materials for mass media campaigns (including pamphlets, posters, brochures, books, guides, weight lose newsletter, etc), TV's, VCR, space (including a clinic, places for community groups to meet, places to hold educational sessions), incentives, computers, funds to give to communities to work on ideas developed during initial planning process (for example to make a par course or hold community education classes),
- Evaluation: survey, implementation logs, surveys (pre and post challenge)

Evaluation:

- Design: Quasi-experimental, longitudinal
- Methods and Measures:
 - Community Wide Youth Exercise Promotion: An annual survey was administered during English, health, or social science classes. It included self-reported hours of exercise per week and a physical activity score (frequency and intensity).
 - Community Education for Cardiovascular Disease Prevention: Event attendance logs; self-reported surveys measured exposure to campaign materials; an annual risk factor survey measuring tobacco use, blood pressure, blood pressure control methods, cholesterol, dietary behaviors and physical activity in leisure time; and interactive computer program measuring physical activity were all utilized.
 - Shape Up Challenge:
 - Average exercise hours and minutes per employee and per participant, both overall during the month-long challenge and per week (averaged across 4 weeks) – via self-report
 - Implementation logs to record number of companies recruited and participating, adjunct promotional and exercise campaign activities, and Minnesota Heart Health Program costs
 - Surveys assessing type of business, number and gender of employee, health promotion programs and policies, and perceived benefits in participating were completed by representatives
 - Post-challenge survey to assess the amount of time spent and strategies used within participating companies to organize and promote employee participation

Outcomes:

- Short Term Impact:
 - Shape Up Challenge:
 - Overall employee participation rate of those exposed to the challenge was 29%
 - Participation rates varied by organization size with smaller companies reporting higher participation rates
 - Consistently higher employee participation rates than those found in traditional worksite exercise programs
 - Average weekly exercise frequencies at recommended levels (3 or more hours per week of aerobic activity)
 - Average number of minutes of exercise per week per participant in smaller companies was higher than that in companies with 45 or more employees.
- Long Term Impact:
 - Community Wide Youth Exercise Promotion: Females in the intervention communities showed significantly greater hours of exercise per week at all but the 11th grade level. Males also had

- increased rates of physical activity (significantly different only in some grades). Participants in intervention communities also had greater physical activity scores than control communities.
- Community Education for Cardiovascular Disease Prevention: Physical activity increased throughout the trial, but not significantly.

Maintenance: Not mentioned

Lessons Learned: High school years may be the optimum grades to foster physical activity. School administrators must allow for time during the school day for implementation and evaluation. Through the provider education, physicians became not only advisors but served as leaders on the community advisory board. Most primary care physicians expressed interest in providing effective counseling for patients with elevated risk factors, but felt they lacked the necessary skills, by using continuing medical education to teach physicians about practical intervention strategies for lifestyle changes to reduce the risk of heart disease they were much more comfortable in advising patients. The "Shape Up Business" challenge appeared quite popular, spawning natural competition among local industries. Exercise competitions are feasible to conduct in entire communities and provide an effective incentive for employee exercise. More effective methods of organizational recruitment need to be developed and evaluated to motivate involvement by all types of businesses in communities of varying size.

Citation(s):

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