Title of Intervention and Website: A university-wide, incentive-based exercise program

Intervention Strategies: Individual Education, Group Education, Supportive Relationships, Campaigns and Promotions

Purpose of the Intervention: To evaluate the effect of behavioral management techniques on exercise adherence linked to improvements in work capacity

Population: University faculty, staff and graduate assistants

Setting: Large Midwestern university campus; worksite-based

Partners: None mentioned

Intervention Description: All exercise was performed by participants on their own or in small groups but not as part of any activities directly supervised by program staff.

- Individual Education: individual counseling, a contract containing specific aerobic exercise programs that they intended to follow for the next 6 months was completed by each participant,
- Group Education: orientation meetings, group meetings - one hour weekly program meetings led by the exercise physiologist at the worksite for the first 8 weeks and bi-weekly for the remainder of the 6 months
- Supportive Relationships: contracts included the names of people who would verify as witnesses each of the exercise bouts reported weekly by the participant, participants were requested to explain the nature of the behavioral changes they were attempting to make and ask for help and support from verifiers
- Campaigns and Promotions: individual and team incentives, charts depicting status of the competition

Theory: Not mentioned

Resources Required:

- Staff/Volunteers: exercise physiologist, graduate students
- Training: not mentioned
- Technology: not mentioned
- Space: not mentioned
- Budget: not mentioned
- Intervention: exercise prescription, calculated target heart rate range, charts depicting status of the competition, behavioral contracts, monetary incentives
- Evaluation: Physical Activity Readiness questionnaire, treadmill, electrocardiograph, meteorological balloons, dry calibrated gas meter, Applied Electrochemistry Oxygen Analyzer, Applied Electrochemistry Carbon dioxide Analyzer, skin calipers

Evaluation:

- Design: experimental and control groups, not randomly assigned
- Methods and Measures:
    - Interview to determine training status/activity level
    - Physical Activity Readiness questionnaire: identifies those with possible contraindication for exercise
    - Graded exercise test: to determine eligible exercise program participants and to determine appropriate exercise prescriptions; also monitored heart rate, blood pressure, perceived exertion at each stage of the test and maximal oxygen consumption
    - Body fat percentage
    - Adherence: strictly defined as verified fulfillment of all four bouts of exercise

Outcomes:

- Short term Impact:
    - Overall adherence rate for the experimental group was 97%, compared to 19.2% in control

    - Significant reduction in resting heart rate
    - Significant decrease in body weight and percent body fat
    - Significantly lower exercise heart rates and recovery heart rates
    - Significantly reduced ratings of perceived exertion
- Long Term Impact: not measured

Maintenance: The true effectiveness of any behavior change program ultimately must be measured in terms of long-term maintenance. Follow-up studies need to be done to determine the success of similar programs over several years.

Lessons Learned: Adherence to a 6-month endurance exercise program can be improved significantly through the use of well conceived behavior management strategies. Increased adherence results in significant improvements in cardiovascular efficiency and work capacity.

Citation(s):
Robison, J. I., M. A. Rogers, et al. (1992). "Effects of a 6-month incentive-based exercise program on adherence and work capacity." Med Sci Sports Exerc 24(1): 85-93.