Title of Intervention and Website: Daily Physical Activity in Primary School Students

Intervention Strategies: Group Education

Purpose of the Intervention: To determine the physical and psychological effects of increased endurance fitness and motor skill acquisition

Population: 10 year-old school children

Setting: Adelaide, South Australia; metro primary schools; school-based

Partners: South Australian Education Department

Intervention Description: Children were randomized by class into an endurance fitness program, a skill program or the regular physical education program. The control group maintained the traditional status quo of three half hour periods of physical education per week concentrated on developing student skill and competence levels in minor games. The skill group had identical program content to that of the controls; however, the duration and frequency of exercise was increased to one and a quarter hours daily. The fitness group had the same duration and frequency of the skill group, but particular emphasis was placed on the intensity at which game activities were carried out with the goal being to raise the heart rate.

Theory: Not mentioned

Resources Required:
- Staff/Volunteers: personnel to perform physical measurements
- Training: not mentioned
- Technology: not mentioned
- Space: space for physical education classes
- Budget: not mentioned
- Intervention: teachers to lead physical activity, physical education program content
- Evaluation: scales, measurement tool for height, Harpenden skin caliper, standard mercury column sphygmomanometer, Monark bicycle ergometer, Autoanalyser II

Evaluation:
- Design: randomized controlled trial
- Methods and Measures: height, weight, four skin folds, blood pressure, endurance fitness, plasma and total cholesterol. KAB Child Behaviour Scale (teacher's ratings of classroom behavior), academic tests (ACER arithmetic test and the GAP reading test)

Outcomes:
- Short Term Impact:
    - All groups gained in endurance fitness although the gain was by far the greatest for the Fitness group
    - Fitness group experienced a significant decline in the sum of four skinfolds
    - No significant change in systolic or diastolic blood pressure
    - No significant differences between the groups for lipids
    - No significant differences between the changes in treatment group on either of the academic performance measures
    - Classroom behavior of the Fitness and Skill groups improved to a significantly greater extent than that of Controls
- Long Term Impact: not measured

Maintenance: 60% of the total primary schools in the State of South Australia adopted the program in the two-year period following the first phase. The prospects for maintaining a successful program in the long term within an average school are good – despite the practical difficulties that must be faced in the field.

Lessons Learned: Substantial health benefits to 10-year-old children can result from the daily physical education program described.

Citation(s):
Dwyer, T., W. E. Coonan, et al. (1983). "An investigation of the effects of daily physical activity on the health of primary school students in South Australia." Int J Epidemiol 12(3): 308-13.