Title of Intervention: Exercise and health programs to improve cardiovascular health in schoolchildren

Intervention Strategies: Group Education

Purpose of the Intervention: To reduce cardiovascular disease risk factors in elementary school children

Population: Third and fourth grade students

Setting: Eighteen urban and rural elementary schools throughout North Carolina; school-based

Partners: None mentioned

Intervention Description:

- Group Education: All students at the classroom-based intervention schools received classroom lessons on heart healthy foods, dangers of smoking and regular physical activity two times a week for eight weeks. They received physical education classes three times a week. At the risk-based intervention schools, students identified as being at risk for different risk factors were provided with physical activity classes, “don’t start smoking” classes and/or nutrition classes.

Theory: Bruhn and Parcel Development of Positive Health Behavior Model

Resources Required:

- Staff/Volunteers: Training leader, registered nurses, teachers, physical education teachers
- Training: Day-long training session for third and fourth grade teachers at each intervention school
- Technology: Not mentioned
- Space: Classroom, gym or other play space
- Budget: Not mentioned
- Intervention: Informed consent forms, American Heart Association Lower and Upper Elementary School Site Program Kits, twenty-four physical education lesson plans, physical activity equipment (jump ropes, parachute), music, incentives
- Evaluation: Sphygmomanometer, blood pressure cuffs, cholesterol testing supplies, ergometer, Heart rate monitors, skinfold calipers, beam scale, stadiometer, questionnaire

Evaluation:

- Design: Randomized, controlled field trial
- Methods and Measures:
    - Healthy Heart Knowledge Test
    - Know Your Body Health Habits Survey
    - Eating Habits Survey
    - Biological measures including blood pressure, cholesterol, skin thickness, balance, heart rate

Outcomes:

- Short Term Impact: Both intervention groups showed improvements in cholesterol levels and skinfolds. The classroom-based group showed improvements in systolic blood pressure, athletic endurance and physical activity behaviors. Both intervention groups had significantly higher scores on the overall knowledge and nutrition knowledge test than the control group. The classroom-based group had significantly higher scores on the exercise knowledge test than the risk-based and control group.
- Long Term Impact: Not mentioned

Maintenance: Not mentioned

Lessons Learned: A classroom-based approach targeting all students would yield a greater benefit in the health of the population than an intervention targeting only those at high risk.

Citation(s):

Harrell, J. S., R. G. McMurray, et al. (1996). "Effects of a school-based intervention to reduce cardiovascular disease risk factors in elementary-school children: the Cardiovascular Health in Children (CHIC) study." J Pediatr 128(6): 797-805.

Harrell, J. S., R. G. McMurray, et al. (1999). "A public health vs a risk-based intervention to improve cardiovascular health in elementary school children: the Cardiovascular Health in Children Study." Am J Public Health 89(10): 1529-35.

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