



of the American Alliance for Health, Physical Education, Recreation and Dance

## **AAHPERD RESEARCH GRANT PROGRAM AWARD 2003**

### **Sex-Specific Activity Patterns of the Segmented School Day**

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#### **ABSTRACT**

School-based physical activity interventions require information about a child's typical physical activity patterns throughout the school day. The purpose of this study was to describe the sex-specific patterns of school children's daily physical activity during activities engaged in before school, during physical education, recess, lunchtime, and after-school, as determined using a pedometer.

A cross-sectional design was used to study pedometer-determined physical activity during the segmented school day. Eighty-one sixth grade students (28 boys and 53 girls) wore pedometers (Walk4Life LS2500, Plainfield, IL ) at their waist during waking hours for four school days following a brief familiarization period. Research staff was present throughout monitoring days to remind children to record the number of steps accumulated at distinct time points during the day (e.g., arrival and departure from school, pre- and post-recess, lunchtime, and physical education class). At night, children wrote their day-end pedometer values in provided records.

Independent t-tests were used to examine sex-specific steps taken during specified segments of the day. The proportions of boys meeting 15,000 steps/day and girls meeting 12,000 steps/day were evaluated as indicative of meeting proposed physical activity guidelines. The boys took significantly more total steps/day than girls, and more steps during unstructured time (e.g., before school, recess, lunchtime, and after-school), but the same number of steps during structured physical education classes. Although there was no significant difference in the number of steps taken during recess or physical education for boys, girls took 400 fewer steps at recess compared to physical education. Similar proportions of boys and girls met sex-specific physical activity guidelines. In conclusion, these data provide a greater understanding of sex-specific activity patterns and the relative contribution of distinct segments of the school day to a school child's total physical activity.