

Study promotes physical activity in preschoolers

By Megan Sexton, msexton@mailbox.sc.edu, 803-777-1421

February 2016

Training teachers to provide preschool children with more ways and opportunities to be active throughout the school day increases the children's activity level, according to research led by University of South Carolina exercise science Professor Russell Pate.

The results, published in the [American Journal of Preventive Medicine](#), showed that preschool students who were encouraged by teachers to be more active engaged in significantly more moderate- to vigorous-intensity physical activity than other preschoolers.

Preschool teachers were encouraged to lead 4-year-olds in physical activity opportunities in the classroom, promote structured and unstructured activity at recess and integrate physical activity into their pre-academic lessons. The study looked at physical activity levels of nearly 380 children at 16 public and private preschools over a two-year period.

The team of researchers, including six from the University of South Carolina, is studying ways physical activity can be increased among preschool-aged children. Previous studies have shown many young children participate in less physical activity than experts recommend.

"Because millions of children spend much of their day in preschool, that setting is a critical one in which to promote physical activity," says lead author [Russell Pate](#), director of the [Children's Physical Activity Research Group](#) at UofSC's Arnold School of Public Health.

"The take-away message from this study is that preschool teachers can, in fact, modify their instructional practices in ways that increase physical activity across the school day," says Pate.

The study, which was funded by the [National Institute of Child Health and Human Development](#), tested an intervention designed to increase children's physical activity in a preschool setting.

"We need research that will enhance our ability to fully implement school-based interventions to increase children's physical activity. Interventions that are implemented with great fidelity will produce substantial increases in physical activity and will contribute importantly to preventing childhood obesity."

The researchers trained preschool teachers to engage children in physical activity during structured, teacher-led physical activity opportunities in the classroom and at

recess. The teachers also learned how to integrate physical activity into pre-academic lessons and were encouraged to adapt the intervention techniques to their classrooms.

After analyzing the physical activity levels of nearly 380 children at 16 public and private preschools over a two-year period, the researchers found that the intervention was effective at increasing children's physical activity in a preschool setting. Children who participated in the intervention engaged in significantly more moderate- to vigorous-intensity physical activity (7.4 minutes/hour) than those in the control schools (6.6 minutes/hour). Even after adjusting for parent education and the length of the school day (i.e., half versus full day), the difference remained significant.

Co-authors include: William H. Brown (University of South Carolina Department of Educational Studies), Karin A. Pfeiffer (Michigan State University), Erin K. Howie (UofSC Arnold School's Department of Exercise Science), Ruth P. Saunders (UofSC Arnold School's Department of Health Promotion, Education, and Behavior), Cheryl Addy (UofSC Department of Epidemiology and Biostatistics), and Marsha Dowda (UofSC Department of Exercise Science).