Preschool Children’s Physical Activity Levels in Unstructured Versus Structured Play Settings: Preliminary Data from Direct Observation

Jason S. Gough (James C. Hannon)
Department of Exercise and Sport Science, College of Health, University of Utah

Regular physical activity is one of the best ways to maintain good health and a normal body weight. In 2002, the National Center for Health Statistics reported that 16 percent of children are overweight in the United States. A reduced physical activity level is likely contributing to these trends.

Studies have shown that physical activity is associated with a slower change in body fatness in preschool aged children. Some studies conducted with elementary aged children suggest that structured recess or play breaks may increase (delete suggest an association of child and parental weight to physical activity levels, which may ultimately influence body fatness. Unfortunately, the number of studies conducted at the preschool level is limited.

The purpose of this study was to investigate the effects of unstructured versus structured play settings on the activity levels of preschool aged (3-5 yrs) children. Structured play settings were hypothesized to provide increased overall physical activity levels. Children participated in 5-7 days of unstructured outdoor play followed by 5-7 days of structured outdoor play. The structured outdoor play setting consisted of a developmentally appropriate obstacle course and portable equipment play stations. Actigraph GT1M accelerometers were worn by children to monitor ambulatory physical activity levels. The direct observation system OSRAC-P was used to estimate of physical activity level based on a five-point scale, child’s physical location, observed behavior, type of activity performed, presence or absence of interaction with others, and frequency of activity related prompts.

Results from the OSRAC-P suggest that a simple structured intervention of adding a developmentally appropriate obstacle course and playstations to an outdoor play setting may increase children’s engagement in activities that result in greater limb movement and slow/easy ambulation. Teacher prompting may be needed to increase time spent in moderate to fast physical activity.