

Science

Research has indicated a link between physical activity and children's cognitive performance, as well as social-emotional skills such as self-regulation. In addition, lack of physical activity for young children is a concern due to high rates of childhood obesity.

Thanks to participating families and children, we are using activity monitors to explore how preschool children's activity is linked with their health and development. Here, Dr. Milagros Nores answers questions about this aspect of our research.

Q. What kind of activity monitor is NIEER using?

We are using the Garmin Vivofit 3 because it is comfortable, durable—even waterproof!-- and has a long battery life.

Q. What does the device track?

The Vivofit tracks both the number and intensity of steps taken throughout the day and total hours and quality – deep, light or active -- of sleep. We have taken careful steps to protect the privacy and safety of all participating children: no personal information is recorded and there is no location tracking on activity monitors.

Q. Why is NIEER tracking child activity?

We are studying how aspects of quality preschool programs—such as curriculum and time allotted for gross motor activity – are associated with child well-being, including their sleep patterns, physical activity, and stress reactivity (see last month's story on Cortisol sampling).

Q. How do researchers obtain activity information?

Data will be transmitted wirelessly through hubs that will be set up at schools over the next few weeks. Each child is assigned a unique identification number linked to his/her tracker so no personal information is transmitted or shared.

Q. How will the findings be used?

We believe this study—the first using activity trackers to gauge how preschool programs affect children's well-being and development—will provide new insights about how preschool policy and practice affect children's physical activity, and how the level of activity influences physical, social, emotional, and cognitive development. NIEER will share findings with our school partners to identify and implement best practices.

Research has highlighted the key role classroom experience--specifically interactions with teachers--plays and what program and classroom characteristics are needed to provide children with the high-quality early learning opportunities shown to make a positive difference in their lives. Here, Dr. Jessica Francis answers questions about NIEER's classroom observation research.

Q. Why are you conducting classroom observations?

Our study is focused on children, so we need to study what is happening inside classrooms. Classroom observations are the best way for us to understand children's daily preschool experiences.

Q. How will classroom activities be affected by observations?

Observations will not interrupt your classroom activities. Trained, neutral observers will use a quiet and unobtrusive procedure, simply observing on the outskirts of each classroom for three hours in the morning.

Q. What is measured by classroom observations?

Three research-based measures will be used in each classroom, each examining something different. The [CLASS](#) focuses on the emotional and instructional interactions between teachers and children, as well as the efficiency in which the classroom is organized and facilitated.

The [EDUSNAP](#) examines the amount of time that children experience various groupings, content, and teaching and learning approaches.

The [ECERS](#) examines the overall environment and health and sanitation practices, as well as interactions that occur across different activities and content areas.

Q. What will be learned by these observations?

Classroom observations will allow us to learn what types of experiences children have on a daily basis across a variety of constructs, and how those experiences relate to their developmental outcomes.

Q. How will observation findings be used ?

Results from observations will be used to understand how quality is related to various aspects of children's development including cognitive, social and emotional, and health-related outcomes. Individual teachers and classrooms will not be identified but overall results will be used to improve practices across programs and districts.