Study to examine health benefits of outdoor preschools

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Tiny Trees executive director Kellie Morrill (far left) and a handful of students wait to throw leaf confetti in the air as part of their Summer Solstice Celebration. Credit: Tiny Trees Preschool

As preschoolers across the nation head into classroom buildings for the

start of the school year, more than 300 Seattle area children enrolled in the Tiny Trees Preschool will get to spend their time learning outside—rain or shine. Part of a growing trend toward nature-based early learning, outdoor preschools could very well hold the key to combatting childhood obesity. It's why one Washington State University Health Sciences researcher is partnering with Tiny Trees to study the impact of an outdoor preschool model on children's health outcomes.

"One third of children in the U.S. are overweight or obese," said Amber Fyfe-Johnson, a researcher in the WSU Institute for Research and Education to Advance Community Health and an assistant research professor in the Elson S. Floyd College of Medicine. "And those who become overweight or obese in childhood are very likely to stay on that trajectory through their adult lives, increasing their risk of heart disease—the nation's leading cause of death—and other health issues later in life."

Though genetics and where a child lives play a role, up to 90 percent of childhood obesity can be explained by lifestyle factors such as physical activity, which is what piqued Fyfe-Johnson's interest in outdoor preschools. She noted that previous studies have suggested that kids are twice as physically active outside as they are inside, even when they have open play areas and opportunities for active play while indoors. However, more data are needed to get legislators, educators, and parents on board to change policies about outdoor time in childhood, which she said is critical for childhood health and is disappearing from preschool- and elementary school environments.

Supported by funding from the National Institutes of Health and the George B. Storer Foundation, Fyfe-Johnson is embarking on a five-year project to measure physical activity, body mass index, sleep, and gut microbiome—microorganisms that live in the digestive track—in 200 children. Half of the children will be enrolled at Tiny Trees, while the

other half will be children who are on the school's waitlist and enrolled in a more traditional preschool setting.

The largest outdoor preschool in the country, Tiny Trees runs 12 open-air classrooms located in nine public parks spread out across Seattle's King County, where kids are engaged in a play-based curriculum that has them learning while they explore the natural world around them.

Fyfe-Johnson will follow each child for two years, collecting data at the beginning and end of each academic year. In addition to comparing data across the two groups, she will also conduct cost-benefit and cost effectiveness analyses to help determine the feasibility and sustainability of the outdoor preschool model.

Fyfe-Johnson first developed the desire to address childhood obesity during her prior career as a pediatrician.

Tiny Trees students sit on logs as they are led through their morning greeting time. Credit: Eli Brownell, King County Parks

"I saw kids getting unhealthier, and I didn't feel like I could do anything about it within the structure of a medical system," she said.

Changing kids' lifestyles is difficult and time-consuming, and though Fyfe-Johnson understood the limitations faced by hard-working parents, it still left her feeling frustrated and powerless. It fueled her decision to pursue a career in science so she could contribute to policies that make it easier for kids to lead healthy, active lifestyles.

"We as a society need to collectively shoulder the responsibility of taking care of our kids, figuring out how to make them healthier and

how to prioritize that," Fyfe-Johnson said.

Preschool, she said, is an opportune moment to intervene in children's lifestyles. It's when kids are actively growing and developing, and it's still relatively easy to influence their food intake and physical activity levels. It's also a point in time just before rates of overweight and obesity start to spike up, which starts happening in elementary school.

Fyfe-Johnson's study is likely to draw attention from across the country, as states are seeking data to help them consider whether to allow licensing of outdoor preschools. This fall, Washington State will be the first state in the nation to license a small number of outdoor preschools—including Tiny Trees—that participated in a pilot program ordered by the state legislature in 2017. The pilot helped establish new licensing guidelines for outdoor preschool programs. Prior to this, licensing requirements were geared specifically toward indoor school environments, and outdoor preschools could only operate part-day programs, which are not required to meet licensing standards.

Washington State's move toward licensing outdoor preschools clears the way for full-day programs to be established and gives parents access to state-sponsored childcare subsidies, helping to put outdoor preschools within the reach of more families.

"Having the room to move around, express yourself, and test your balance and the laws of nature is hugely beneficial to young kids," said Kellie Morrill, executive director of Tiny Trees. "It's really important to us to invest in the research to show why we believe outdoor preschools or access to nature is a right that every kid should have, which is why we are excited to be a part of WSU's study."

Provided by Washington State University

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