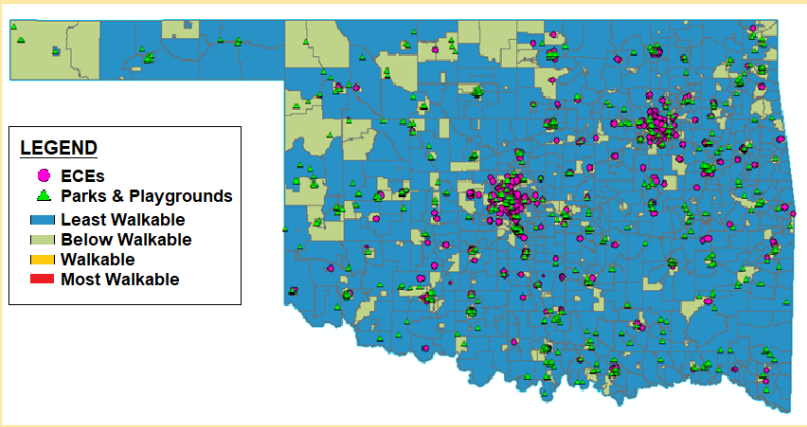
BEHAVIORAL NUTRITION AND PHYSICAL ACTIVITY LABORATORY
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER

NEIGHBORHOOD PARKS, WALKABILITY, & ECE CLASSROOM HEALTH PRACTICES.

Healthful physical activity (PA) in childhood supports development of fine motor skills, cognitive function, and long-term health habits.(1,2) Children's health behavior are primarily dependent on their surrounding environments and role models.(3) For these reasons, **settings for early childhood education (ECEs) are ideal for promoting PA behaviors that predict lifelong health of those children served.**

For children and adolescents, presence of community parks and ideal walkability surrounding schools and homes predict higher levels of PA.(4) **However, little is known about the impact of the community environment on ECE policies or practices as identified by their staff.**

Map of Oklahoma parks, ECEs and walkability index.



THE GOAL OF THIS PROJECT WAS TO...

Determine whether ECE classroom PA practices and barriers are different based on healthfulness of neighborhood PA environments (i.e. access to parks and walkability).

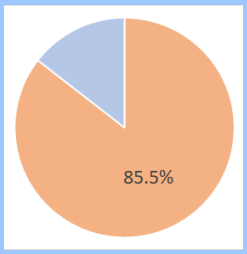
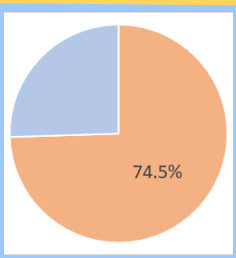
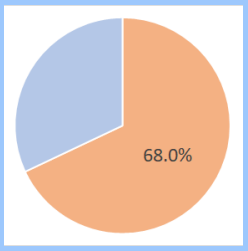
STUDY METHODS INCLUDED...

"Communities and Classroom Health Survey": survey distributed to directors of licensed Oklahoma ECEs serving 3-to-5-year old children, including Head Starts, center-based childcare (CBCs) and family child care homes (FCCHs).

ECE Classroom PA Practices & Barriers: The Nutrition and Physical Activity Self-Assessment for Child Care (NAPSACC) (5) was completed. Each question's response was scored from 1 to 4 indicating healthfulness of classroom PA practices, including Active Play & Inactive Time, Play Environment, Supporting PA, Education, and Policy. Presence of barriers to implementing PA practices were also reported.

Neighborhood PA Environments: Locations of ECEs, National Walkability Index, and locations of parks and playgrounds (exported from Google Earth) were mapped in ArcMAP 10.6. An ECE was located within an "Activity Desert" if its neighborhood had "poor" Walkability (<10.5), or had no parks in a 1-mile radius. (6)

RESULTS

Head Starts (*n*=51)	CBCs (*n*=155)	FCCHs (*n*=159)
PA Classroom Practice Scores (Percent out of Max. Points)		
		
51% reported limited room for indoor play time.	41% reported limited space for storing indoor play equipment.	43% reported lack of resources for purchasing play equipment.
60.8% had no parks within 1 mile 76.4% had poor walkability 80.3% Were located in an "Activity Desert"	68.4% had no parks within 1 mile 77.4% had poor walkability 87.0% Were located in an "Activity Desert"	82.4% had no parks within 1 mile 91.1% had poor walkability 96.5% Were located in an "Activity Desert"

For Head Starts & CBCs:
Neighborhood parks and Walkability Index were **not** related to classroom PA practices or barriers.

For ALL ECEs (Head Starts, CBCs, FCCHs):
Classroom PA practices did **not** differ based on PA Desert Status.

For FCCHs **only**:
Higher number of parks within 10 miles was related to **healthier** PA practice scores.

IN SUMMARY...

- Head Start centers reported the healthiest classroom practices, while FCCH providers reported the least healthful and higher prevalence of barriers.
- Head Starts and CBCs may provide a healthful micro-environment for children lacking access to health resources in their residential neighborhoods.
- FCCHs may be more vulnerable to their surrounding communities, due to an overall lack of resources and location within less healthful residential areas.

REFERENCES: **1.** Khan NA, Hillman CH. The relation of childhood physical activity and aerobic fitness to brain function and cognition: a review. Pediatric exercise science. 2014 May 1;26(2):138-46. **2.** Telama R. Tracking of physical activity from childhood to adulthood: a review. Obesity facts. 2009;2(3):187-95. **3.** Natale RA, Messiah SE, Asfour L, Uhlhorn SB, Delamater A, Arheart KL. Role modeling as an early childhood obesity prevention strategy: effect of parents and teachers on preschool children's healthy lifestyle habits. Journal of Developmental & Behavioral Pediatrics. 2014 Jul 1;35(6):378-87. **4.** Sallis, J.F., Owen, N., & Fisher, E.B. (2008). Ecological Models of Health Behavior. Health Behavior and Health Education: Theory, Research, and Practice(4), 465-486. **5.** Benjamin SE, Neelon, B, Ball, SC, Bangdiwala, SI, Ammerman, AS, Ward, DS. (2007). Reliability and validity of a nutrition and physical activity environmental self-assessment for child care. The international journal of behavioral nutrition and physical activity, 4(29). **6.** Frank LD, Saelens BE, Chapman J, Sallis JF, Kerr J, Glanz K, Couch SC, Learnihan V, Zhou C, Colburn T, Cain KL. (2012). Objective assessment of obesogenic environments in youth: geographic information system methods and spatial findings from the neighborhood impact on kids study. American journal of preventive medicine, 1;42(5):e47-55.

This report was prepared by Dr. Bethany Williams on behalf of the Behavioral Nutrition and Physical Activity Laboratory directed by Dr. Susan Sisson. If you have questions or comments, please contact us at nutritionandactivitylab@ouhsc.edu or 405.271.8001 ext. 41173