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Associations Between Community Nutrition Environments and Early Care and Education Classroom Nutrition Practices

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Objectives: Poor child diet is influenced by nutrition environments surrounding schools and homes; influence of these environments on Early Care and Education (ECE) settings is not understood. The purpose of this study was to determine associations between community nutrition environments and ECE classroom nutrition practices, by ECE context [Head Starts, community-based childcare (CBCs), and family child care homes (FCCHs)].

Methods: Cross-sectional study including licensed Oklahoma ECEs. Locations of 457 grocery stores were determined in-person. Locations of participating ECEs and grocery stores were geocoded and analyzed in ArcMap 10.6. ECEs were considered located within a "Food Desert" if no grocery stores were available within a 0.25-mile radius for urban ECEs, or 10-mile radius for rural ECEs. ECE directors completed the Nutrition and Physical Activity Self-Assessment tool (i.e., NAP SACC); items were reported on a Likert-type scale and subscores were calculated for nutrition practices. Wilcoxon Rank Sum test was performed to compare practice scores among those located within a Food Desert versus Non-Desert. Benjamini Hochberg calculations for False Discovery Rate were applied ($\alpha < 0.004$).

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Results: 54 Head Starts, 159 CBCs, and 160 FCCHs participated with 24%, 27% and 37%- respectively- being located within a Food Desert. ECE descriptive characteristics including food purchasing and meal planning strategies varied by ECE context. Head Starts demonstrated the highest classroom nutrition scores for mealtime practices, and nutrition education and policy. Food Desert status was not related to classroom nutrition practice scores for any ECE context ($P > 0.004$).

Conclusions: Contrary to studies in residential areas and schools, nutrition environments were not related to nutrition practices in ECEs. This suggests that ECEs may serve as protective microenvironments supporting health for children more vulnerable to the health environments of their nearby residing communities. Supporting health practices for ECEs may be achieved most effectively through within-center intervention and policy.

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