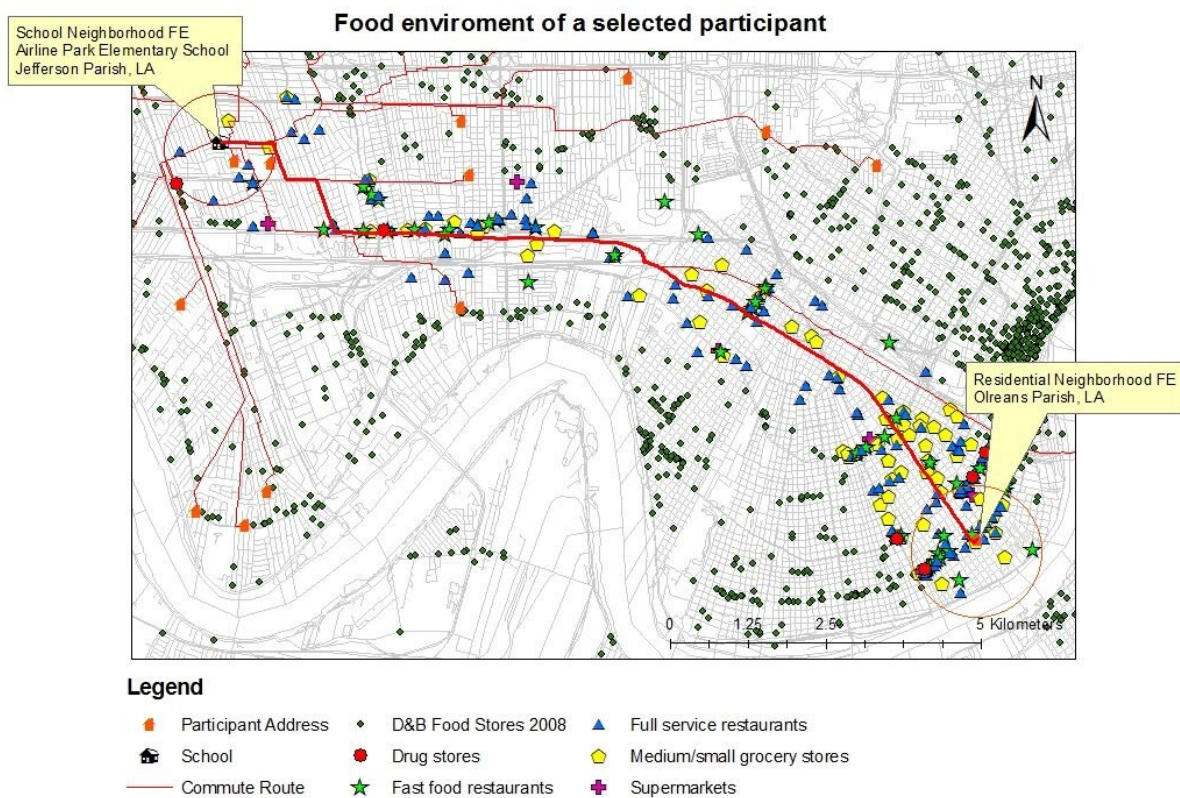


Fast-food availability near commute route linked to BMI

August 7 2019



Commute food environment of a selected participant (FE Jefferson to Orleans)
Credit: A. Dornelles, 2019

In a study of commuting workers, the number of different types of food stores available near residences and commute routes—but not near workplaces—had a significant association with body mass index (BMI). Adriana Dornelles of Arizona State University, U.S. presents these findings in the open access journal *PLOS ONE* on August 7, 2019.

Previous research has revealed links between the [food](#) stores available in residential neighborhoods and residents' [health outcomes](#), including BMI. However, few prior studies have also included food stores near workplaces, and none have examined food options along commute routes. The new study addresses the relationship between these three food environments and BMI.

Dornelles analyzed data from 710 elementary school employees in New Orleans, Louisiana. Drawing on existing databases, she determined the number of supermarkets, grocery stores, full-service restaurants, and fast-food restaurants within 1 kilometer of the employees' residential and workplace addresses. She also determined the number and type of food stores within 1 kilometer of the shortest-distance commute path between each employee's residence and their workplace.

Adjusting for socio-[demographic factors](#), statistical analyses showed that a greater number of fast-food restaurants near the commute route was associated with higher BMI. Higher BMI was also associated with a greater number of supermarkets, [grocery stores](#), and fast-food restaurants near residences, while a greater number of full-service restaurants near residences was linked to lower BMI. The analysis did not find any links between BMI and the food stores available near workplaces.

The author notes that these findings highlight the need to consider multiple [environmental factors](#) when examining contributors to BMI. Future research could explore individuals' exact commute routes and

food-purchasing habits along those routes, as well as looking at health outcomes beyond BMI. A deeper understanding of these factors could help inform interventions to promote better health outcomes.

Dornelles adds: "The most important finding of the study was to establish a significant relationship between BMI and multiple food environments. In our daily lives, we are exposed to several healthy and unhealthy food choices, which has an impact on BMI. The availability and variety of fast-food restaurants along our commute create endless opportunities for a quick, cheap, and unhealthy meal, which results, on average, in higher body mass index."

More information: Dornelles A (2019) Impact of multiple food environments on body mass index. *PLoS ONE* 14(8): e0219365. doi.org/10.1371/journal.pone.0219365

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