

## Healthy eating gets no boost after corner store interventions, study finds

May 16 2016, by Frank Otto



Credit: Drexel University

A lack of access to healthy food is often blamed for poor eating habits in low-income urban areas, but a recent Drexel University study found that simply adding healthier stock to a local convenience store may not

actually have any effect.

By upgrading local [corner stores](#) in East Los Angeles through adding fresh fruits and vegetables, improved shelving, training and social media marketing, a team of researchers led by Alex Ortega, PhD, professor in Drexel's Dornsife School of Public Health, poured more resources into a healthy eating intervention than are usually available—and very little seemed to change.

"Given the financial and technical support that we were able to provide to stores, it is quite disheartening that we saw no real changes in [food](#) purchasing or diet at the community level," said Ortega, who also serves as the chair of the school's Department of Health Management and Policy. "This does not bode well for interventions that are able to provide fewer resources to stores."

Ortega served as lead author on the study published in the journal *BioMed Central Public Health* under the title, "Substantial Improvements Not Seen in Health Behaviors Following Corner Store Conversions in Two Latino Food Swamps."

### **Providing a Healthy Choice**

Policy-makers and community organizations often use neighborhood corner stores in urban settings to target obesity and other nutrition-related issues. However, evidence pointing toward the effectiveness of the interventions has been mixed, at best. Ortega and his team's study spanned a longer time (two years) and reached a larger study population (at least 1,000 sampled residents) than prior studies and pointed solidly at no significant changes in [healthy eating habits](#).

"This study, in two neighboring Latino food swamps, found that, regardless of intervention status, perceptions of food accessibility and

corner stores improved over time, but effects of patronage, purchasing and consumption of healthy foods were non-significant," the researchers wrote.

East Los Angeles was chosen as the site for the study as it is considered a food swamp—an area where a disproportionate amount of food options are unhealthy.

It also happens to be the area of the United States with the highest Latino population: 97 percent of the local population identifies as Latino. Nationally, the Latino population have particularly high rates of obesity, with 78 percent reported as overweight or obese as compared to 67 percent of non-Latino whites.

With those two factors considered, it was an ideal location for the study.

### **An Intervention Makeover**

Three corner stores were chosen for the intervention and given makeovers that included new refrigeration cases, updated store interiors and exteriors, modified floor plans and increased access to fresh fruits and vegetables.

Additionally, the stores' owners were given training for handling the new produce and negotiating with wholesalers. A social marketing campaign complemented store renovations. These steps are often not available in other interventions.

Five other stores were selected as part of a control group that received no changes in order to serve as a comparison.

At the start of the intervention, 1,035 residents living near the stores in the study (both the ones in the intervention and the ones in the control

group) took surveys that focused on five different outcomes: Perceived accessibility of healthy food, perception of corner stores, patronage of those stores, food purchasing and eating behaviors.

Between one and two years after the interventions began, 1,052 residents in the same area—63 percent of whom had taken the initial survey—were once again surveyed.

What the surveys revealed was that the interventions resulted in no significant changes in healthy eating behaviors.

### **Making The Same Choices**

The percentage of people who felt they had a convenient place to buy healthy food in the intervention areas increased from 83.4 percent to 88.2, but that was actually statistically insignificant. In fact, people surveyed in the control areas—areas that didn't get the healthy makeover—actually had a statistically significant increase in perception of healthy food availability, going from 77.8 percent to 88.2. It was theorized that this odd finding might have been due to unrelated [healthy eating](#) initiatives in the area at the time.

There was almost no change in whether residents in either area viewed healthy food as too expensive (1.2 percentage point increase in intervention areas; 2.2 percentage point decrease in control areas).

The amount people spent on fruits and vegetables did not change significantly over the intervention period (\$46.2 to \$49.8 in intervention areas; \$44.6 to \$47.2 in control areas). Fruit and vegetable consumption also remained pretty much the same as at the start of the study (4.4 servings per day at the start of the study to 4.2 in intervention areas; 4.5 to 4.8 servings in control areas).

Ortega and his team concluded that food interventions to combat issues such as obesity need to be more comprehensive than simply changing the look and stock of a local store.

"There have been really big changes over the last couple of decades in how we think about food behaviors. There have also been changes in the factors that predict what and how we eat, including access to [healthy food](#) venues, food prices, portion sizes, calorie density and social norms related to eating," Ortega said. "If the obesity epidemic was caused by really big changes in production, marketing and selling of unhealthy foods that took place over a long period of time, it probably is not realistic to expect a quick fix."

### **A Better Path to Healthy Eating?**

Ortega said food interventions like the ones at the corners stores are "one component" to combating community-level obesity.

"Interventions need to confront challenging issues such as poverty, education, marketing and policy," Ortega explained.

Although no one really knows what the "right" intervention looks like, Ortega believes there is a need to reach all levels, including individual, interpersonal, community, organizational and policy phases.

As such, a corner store intervention could play a more effective role only if it's teamed with a much larger, multi-pronged effort.

"It is always disappointing when an [intervention](#) that makes intuitive sense does not have the desired effects," Ortega said. "But the evaluation results are useful for policy and program planning because we want to be able to allocate [public health](#) dollars as effectively and efficiently as possible."

**More information:** Alexander N. Ortega et al, Substantial improvements not seen in health behaviors following corner store conversions in two Latino food swamps, *BMC Public Health* (2016). DOI: [10.1186/s12889-016-3074-1](https://doi.org/10.1186/s12889-016-3074-1)

Provided by Drexel University

Citation: Healthy eating gets no boost after corner store interventions, study finds (2016, May 16) retrieved 30 March 2023 from <https://medicalxpress.com/news/2016-05-healthy-boost-corner-interventions.html>

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