Impact of a supermarket on children's diets

February 26 2015

Locating full-service supermarkets within neighborhoods considered to be "food deserts" may not result in healthful dietary habits or reductions in childhood obesity—at least in the short term, according to a new study by NYU Langone Medical Center researchers in the February 26th online edition of the journal *Public Health Nutrition*.

Researcher Brian D. Elbel, PhD, MPH, associate professor of Population Health and colleagues compared two neighborhoods in the Bronx: Morrisania, where a new, government supported, full-service supermarket was placed, and Highbridge, where no new market was built. Caregivers of young children 3 years to 10 years old and living in those neighborhoods were surveyed. Shopping and consumption information was collected from them prior to the opening of the market, five weeks after it opened, and again one year after the store opened.

The researchers analyzed 2,172 street intercept surveys and 363 dietary recalls from a sample of predominantly low-income minorities. They found that while there were small, inconsistent changes in diet over the time periods, there were no appreciable differences in availability of healthful or unhealthful foods at home, or in children's dietary intake as a result of the presence of the supermarket.

Low-income and minority children are disproportionately affected by obesity, and children residing in low-income and minority neighborhoods are less likely to have access to healthful food options than children living in wealthier neighborhoods. Full-service supermarkets, which tend to offer greater varieties of fresh, affordable fruit and vegetables, are less available in low-income communities. However fast food restaurants, small grocers and bodegas that generally sell higher calorie, nutritionally - poor foods and beverages are more prevalent in poorer neighborhoods than in wealthier ones.

Many have hoped that greater access to healthful

food retail outlets could reduce the incidence of childhood obesity. However these efforts have not been evaluated for their impact on household food availability or for changes in dietary patterns amongst children residing in the target communities. This is the first controlled study (including a comparison group) to evaluate the impact of a government-subsidized supermarket on food consumption for children.

According to the research findings, the introduction of a government-subsidized supermarket did not result in significant changes in household food availability or children's dietary intake, at least one year after opening for the neighborhood as a whole.

"Low-income and ethnic minority neighborhoods are underserved by supermarkets relative to their higher-income counterparts, and it would appear to be logical that increasing availability of healthful foods could improve diets," said Dr. Elbel. "However, we do not yet know whether or under what circumstances these stores will improve diet and health. Food choice is complex, and the easy availability of lower-priced processed foods and pervasiveness of junk food marketing have implications for behavior change as well. New supermarkets may play an important role, and further work is needed to determine how these policies might be best structured."

Dr. Elbel points out that further research is needed to determine whether healthy food retail expansion can improve food choices of children and their families, including where best to place these stores, under what circumstances they will be successful, and with what other policies or programs they should be coupled.

Provided by New York University School of Medicine