

Salud America!

The Robert Wood Johnson Foundation Research
Network to Prevent Obesity Among Latino Children



RESEARCH REVIEW

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Food Retail and Financing Initiatives to Address Obesity in Latino Communities

Abstract

Many U.S. families do not have access to healthy affordable foods in their neighborhoods. This is especially true in lower-income communities, including Latino communities, where convenience stores and fast-food restaurants are widespread, but supermarkets and farmers' markets, which can offer affordable fresh fruits and vegetables, whole-grain products, low-fat milk, and other healthy options, are scarce. Without access to foods that can help people stay healthy, obesity rates and health care costs could continue to rise.

Healthy food financing initiatives (HFFIs) include tax credits, zoning incentives, financial, legal, or technical assistance, or equipment to encourage supermarkets and farmers' markets to locate in underserved areas. In addition, several government financing initiatives encourage already established corner stores to expand their offerings of healthy foods at affordable prices or enable farmers' markets to accept food subsidies provided to low-income patrons. Many of these strategies have been

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developed and implemented to boost the number of retailers offering healthy and affordable food selections in underserved neighborhoods across the country.

This comprehensive research review examines the evidence on how such initiatives have increased access to affordable healthy foods in underserved communities, and whether they help foster a healthier diet that could help reduce and prevent obesity among Latino children.

Early evidence suggests that retail and financing initiatives that expand healthy food offerings in underserved communities, including Latino communities, can improve access to and increase purchases of affordable healthy foods. Financial subsidies of healthy foods for low-income consumers also stimulate greater purchase of these foods and may help expand the number of retailers located in underserved communities. In addition, expanding farmers' markets' capacity to accept federal food vouchers increases beneficiaries' ability to purchase fresh fruits and vegetables. Given the relatively early nature of these interventions, evidence showing whether greater access to healthy foods in underserved Latino communities reduces obesity and improves health outcomes is not fully developed.

Introduction

Although obesity is a nationwide problem, Latino children are especially at risk for obesity. According to a recent estimate, more than 38 percent of U.S. Latino youths ages 2-19 are overweight and almost 21 percent are obese.¹ Obesity is linked to an increased risk of developing type 2 diabetes, cardiovascular disease, asthma, liver disease, and cancer.² Latinos are one of the fastest-growing U.S. populations so preventing and reducing obesity among Latinos will have an important impact on our nation's health.

Latino children are more likely to be poor, and poverty is related to consumption of unhealthy foods. A lack of local access to affordable healthy foods, such as fresh produce, whole grains, and low-fat dairy products, can impede underserved Latinos from having a healthy diet that might help prevent obesity. Supermarkets usually offer such affordable foods, but they often are scarce in underserved communities, which instead tend to have a greater concentration of convenience or corner stores with limited selections of whole-grain products and low-fat dairy products, higher prices, and produce of poorer quality.³ One study found Latino neighborhoods have one-third as many supermarkets compared with non-Latino neighborhoods.⁷

Predominantly Latino communities typically have Latino grocery stores (also called *bodegas*) in close proximity, and although studies find that these stores often offer a less expensive range of produce than nearby markets, their selection of other healthy foods, such as low-fat dairy products or low-fat meats, tends to be limited or more expensive.^{4,6}

A number of food retail and financing initiatives on the local, state, or national level have recently been developed and implemented in underserved communities, including Latino communities. These initiatives seek to improve the food

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environment by helping to increase offerings of affordable healthy foods by retailers in these neighborhoods.⁸⁻¹⁰ They also help to create jobs, bring in much-needed tax revenue, spur economic activity and establish markets for our nation's farmers.

The national Healthy Food Financing Initiative (HFFI) provides funding and technical support for food retail projects through three agencies—the Treasury Department, Health and Human Services and the U.S. Department of Agriculture. In addition, many Congressional leaders are working to create a national HFFI program as part of the next Farm Bill.

The HFFI provides tax credits, zoning incentives, financial, legal, or technical assistance, and equipment to encourage supermarkets and farmers' markets to locate in underserved areas. They also encourage already established corner stores to expand their offerings of healthy foods at affordable prices. Other financing initiatives include food subsidies to expand demand and purchasing power for healthy foods by low-income consumers. Food retail and financing initiatives are relatively recent efforts to prevent obesity in Latino and underserved communities. However, given the urgency in halting and reversing the obesity epidemic in these groups, it is important to understand and monitor the relative contributions of these efforts in promoting healthy food access and availability, and in improving body weight outcomes.

Methodology

To gather peer-reviewed, published literature for this comprehensive research review, keyword searches were conducted in PubMed and Google Scholar, using, in various combinations, the search terms “obesity”, “food deserts,” “low-income,” “Latinos,” “Latinos,” “Mexican-Americans,” “minorities,” “farmer's markets,” “food financing initiative,” “grocery stores,” “healthy food,” “tiendas,” “bodegas,” and key food marketing terms. Searches were not limited to acquiring only research conducted on children because much of a child's diet is determined by the food purchases made by his or her adult caregivers.

Additional more targeted searches were done of specific food financing initiatives identified in initial database searches. Referenced policy briefs and reports accessed on the Internet were also used to help find other peer-reviewed articles or reports from reputable government agencies or national organizations, or to provide information otherwise unavailable from these sources. Search limits were confined to the English language. Searches were not restricted by date or study design.

All the information gathered was combined, condensed and used to inform conclusions and policy implications without selectivity based on any assumptions. All findings were reported, including those that were contradictory.

Key Research Results

- Most studies find that a greater local access to supermarkets in underserved populations is linked to a lower prevalence of obesity in adults or children.
- Preliminary findings show incentives offered to participants in the Women, Infants, and Children (WIC) or the Supplemental Nutrition Assistance Program (SNAP) resulted in these participants buying and consuming more fruits and vegetables and low-fat milk, and in local retailers stocking more of these items.
- Preliminary findings show food retail and financing initiatives that introduce supermarkets in underserved communities successfully improve access to healthy foods and increases communities' economic vitality.
- Early evidence indicates that food retail and financing initiatives that seek to expand healthy food offerings of corner stores in underserved communities increase healthy food sales.
- Preliminary findings show food retail and financing initiatives that introduce farmers' markets or subsidize their use by SNAP participants improve accessibility, quality, and sales of fresh produce in underserved communities.

Studies Supporting Key Research Results

Most studies find that a greater local access to supermarkets in underserved populations is linked to a lower prevalence of obesity in adults or children.

A systematic review of 28 studies, 16 of which were conducted in the United States, consistently found that greater accessibility to supermarkets was linked to a lower body mass index (BMI) or prevalence of overweight/obesity.¹¹ Another systematic review of 45 U.S. studies about disadvantaged populations documented that access to supermarkets was one of three neighborhood factors strongly and inversely linked to obesity.¹² In addition, one study observed that as the number of chain supermarkets increased in Latino neighborhoods, body weight outcomes improved among adolescents.²⁸

Most studies that have explored the links between obesity and access to supermarkets are cross-sectional, meaning that they use data only at one point in time. Thus, they cannot show a causal relationship. These studies did not determine whether greater access to supermarkets is also linked to a healthier diet. The evidence from the few longitudinal studies is mixed as to whether obesity in adults or children is tied to lack of local access to supermarkets.²⁹⁻³⁰ Some, but not all studies, have observed that greater access to affordable healthy foods is related to greater consumption of such foods in underserved communities.³ The increased access to affordable healthy foods observed in some of these studies was due to larger shelf space devoted to healthy foods in grocery stores, subsidies on such items, or the introduction of farmers' markets.

Most of the studies used heterogeneous underserved populations—although a few contained larger samples of Latinos, enabling subanalyses with findings specific to

One study of Latino immigrant women in New York City reported that the presence of a farmers' market within the home neighborhood was linked to greater consumption of fruits and vegetables.

this population—or were limited to studying Latino communities. For example, one study of Latino immigrant women in New York City reported that the presence of a farmers' market within the home neighborhood was linked to greater consumption of fruits and vegetables.³¹ Another study was focused on Hartford, Conn., corner stores, where nearly half of the customers were Latino, and more than half lived in an underserved neighborhood. This study showed that the more variety of fruits or vegetables made available in the store, the more likely customers were to purchase them. In addition, this study found participants of SNAP were nearly two times as likely to purchase fruit as those who didn't receive such food subsidies. Greater availability of reduced-fat milk, however, was not linked to increased customer purchasing.³²

In contrast, one cross-sectional study of 300 participants in Austin and Houston, Texas found that of the presence of grocery stores and supermarkets in neighborhoods was not linked to the intake of fruits and vegetables. Instead, individuals' levels of stress in response to a wide range of variables, such as arguments with coworkers or spouses or confrontations with a boss or the police, were inversely related to fruit and vegetable intake in a population of African American and Latino women.³³ These findings suggest the dietary habits of African American and Latino women may be more significantly influenced by stress levels that affect the willingness of family providers to take the extra time to purchase and prepare fresh fruits and vegetables.

Preliminary findings show incentives offered to participants in the Women, Infants, and Children (WIC) or the Supplemental Nutrition Assistance Program (SNAP) resulted in these participants buying and consuming more fruits and vegetables and low-fat milks, and in local retailers stocking more of these items.

Approximately 15 percent of SNAP participants and 41 percent of WIC participants are Latinos, according to the USDA (<http://1.usa.gov/YHQuyQ>). In 2009, the U.S. government revised WIC food packages to offer healthier foods, such as whole grains, fruits and vegetables, and lower-fat milk. A few studies found that the new WIC food packages significantly improved the availability and variety of healthy foods sold in WIC-authorized and, to a smaller degree, non-WIC convenience and grocery stores.¹³⁻¹⁵

Using pre- and post-revision store inventories to assess how the new WIC food packages affected access to healthy foods in convenience and grocery stores in the state of Connecticut, a study found that the supply of healthy foods increased by 39 percent in lower-income areas. Moreover, improved availability and variety of whole-grain products were responsible for a majority of the increase in the healthy food supply.¹³

Another cross-sectional study of small, WIC-authorized food stores in eight U.S. major cities found that after WIC was revised, store managers reported increases in their sales of new WIC-approved foods, such as whole-grain bread, low-fat milk, white corn and whole-wheat tortillas.¹⁵ Although this study did not see changes in

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sales of processed fruits and vegetables, a pilot program implemented in New York State documented that the vegetable and fruit WIC vouchers were popular among stores that accepted them.¹⁶

The revised WIC food package also appears to be changing what participating children are eating. A cross-sectional study conducted in New York state found that after the WIC revision was implemented, consumption of low-fat or nonfat milk increased by 3 percent among children ages 2-4 and participating children saw steady increases in daily consumption of fruits, vegetables and whole grains. Concurrently, the percent of children aged 1-2 and 2-4 who were obese decreased by 6 and 3 percent, respectively.¹⁷

Although SNAP does not directly target healthier options within the broad categories of their subsidized foods, California has been conducting a “Healthy Purchase” pilot program which enables SNAP recipients to use a portion of their benefits to purchase fresh produce with their Electronic Benefit Transfer (EBT) cards. Similarly, Hampden County, Mass., is conducting healthy incentives pilot projects in which coupons for healthy foods are given to SNAP recipients at point-of-sale outlets to increase their purchase of these foods.²⁵ Although results of these pilot projects have not been reported yet, a study that simulated the effects of reducing the cost of fruits and vegetables by 20 percent found that it is likely to result in a larger decrease in body mass index (BMI) among SNAP participants than non-participants of similar income level.¹⁴ In this study, between 10 and 14 percent of the SNAP participants were Latino.

One study of five farmers’ markets in Arizona found that after the markets began accepting SNAP EBT cards, which require an electronic card-reading device, SNAP redemptions increased in 4 of the 5 markets, as did overall sales.³⁴ Similar increases in SNAP redemptions have been reported by other farmers’ markets after they began to accept EBTs.³⁵

Preliminary findings show food retail and financing initiatives that introduce supermarkets in underserved communities successfully improve access to healthy foods and increase communities’ economic vitality.

The Pennsylvania Fresh Food Financing Initiative (PFFFI) created in 2004 is the nation’s first statewide program to foster the development of supermarkets in underserved communities through grants and loans. Between 2006 and 2010, the program approved funding for 88 projects across the state, creating or retaining more than 5,000 jobs and developing 1.67 million square feet of retail space. These projects are estimated to have improved access to healthy foods for a half million Pennsylvania residents.¹⁸⁻¹⁹

Other states and municipalities, including New York City, New Orleans, New York State, Illinois, Louisiana and California have instituted HFFIs similar to the program in Pennsylvania. Most of these initiatives are still in the planning or implementation stages, thus their impacts are not yet available in the peer-reviewed literature.⁹

Nonetheless, it is anticipated that such programs will improve access to healthy affordable foods. For example, New York City's FRESH Program provides zoning and financial incentives to property owners, developers and grocery store operators in areas of the city currently underserved by grocery stores and populated with Latino and other ethnic communities. FRESH is expected to help create an estimated 15 new grocery stores and upgrade 10 existing stores, creating 1,100 new jobs and retaining 400 others.³⁶

Additionally, the federal government has been allocating funding for HFFIs nationwide. As of 2012, \$77 million has been awarded to support a diversity of food access projects in underserved communities, according to the Healthy Food Access Portal (<http://bit.ly/YIXgcR>).

Early evidence indicates that HFFIs that seek to expand healthy food offerings of corner stores in underserved communities increase healthy food sales.

New York City's Healthy Bodega Initiative recruited *bodegas* to increase their offerings of low-fat milk and fruits and vegetables. The city also provided promotional and educational materials to entice consumers to purchase the new offerings and encourage *bodegas* to participate. About 1,000 *bodegas* were recruited for the low-fat milk campaign, and 450 *bodegas* were recruited for the fruit and vegetable campaign. Forty-five percent of participating *bodegas* experienced increases in sales of low-fat milk, and 32 percent and 26 percent of stores reported experiencing increases in sales of fruits and vegetables respectively.¹⁶

Another study of 55 participating *bodegas* in this initiative found the percentage of customers surveyed who purchased healthier promoted options increased from 5 percent to 16 percent. Owners also reported increased sales of healthier items, but noted that lack of space and refrigeration remained a significant barrier to implementation.²¹ One study in an underserved community in Baltimore found that when seven corner stores and two supermarket owners were given financial subsidies for the healthy foods they offered, and consumers were given coupons for such healthy products, the availability and sales of those healthy items increased significantly in participating stores compared with those that did not receive subsidies or coupons.²³

Some food financing initiatives have fostered collaborations of corner stores that pick up their supplies from the same wholesaler. This improves their purchasing power, which means stores end up paying less and receive fresher produce. GrowNYC, for example, has successfully connected 13 corner stores in Brooklyn, N.Y., with local produce. Similarly, the Lane Coalition for Healthy Active Youth in Eugene, Ore., has a Healthy Corner Stores program that targets underserved areas with a lack of access to grocery stores. This program, which partners with farmers to provide fresh organic produce to corner stores on a weekly basis, was linked to a significant increase in fresh produce sales.³⁷

The Food Trust pioneered an innovative network of 40 corner stores in underserved Philadelphia neighborhoods that collaboratively buys fresh fruit and fresh fruit salads from the same local distributor. The fruit salads have been popular with students at nearby schools.²² Some initiatives are bringing fresh produce directly into schools. The New North Florida Cooperative, for example, acts as an intermediary between local farmers and school districts. The cooperative market handles, processes and delivers fresh produce on behalf of participating local farmers at competitive prices. Since its inception in 1995, the cooperative has served fresh fruits and vegetables to more than one million students in 72 school districts.³⁶

Other food financing initiatives, such as the San Francisco Good Neighbor Program, provide technical, financial and marketing assistance to corner stores in exchange for accepting EBT cards and committing to devote at least 10 percent of their inventory to fresh produce and an additional 10 percent to 20 percent to other healthy foods. The San Francisco initiative, which targeted underserved communities, has increased the average sales of produce by 12 percent, while simultaneously boosting overall profits.²²

These preliminary findings on HFFIs that target corner stores are encouraging. But rigorous controlled studies are needed to strengthen the validity and applicability of these early findings concerning the impact of HFFIs on the availability of affordable healthy food across underserved and Latino communities. It is also important to note that increasing fruit and vegetable offerings in stores or via farmers' markets may not prevent/reduce obesity, especially when they have to compete with other energy-dense snack foods, as one study found.⁴²

Preliminary findings show food retail and financing initiatives that introduce farmers' markets or subsidize their use by SNAP participants improve accessibility, quality and sales of fresh produce in underserved communities.

In the past decade, the number of farmers' markets in the United States has more than doubled.³⁸ However, many of these markets had not served underserved and Latino populations. But a number of food financing initiatives have increased the number of farmers' markets operating in underserved communities.²² For example, through the activities of community groups, there are nearly a dozen farmers' markets in underserved neighborhoods in Oakland, Calif. Latinos comprise 25 percent of these communities.³⁹

Similarly, the Y USA's Pioneering Healthier Communities initiative prompted the creation of the Activate West Michigan coalition, which established five farmers' markets in underserved African American and Latino communities in urban Grand Rapids. One inner city farmers' market was held at a public school located in a Latino community. The community became actively involved, adding a celebration component to the market that included traditional music, games and educational activities. Community partners who spoke Spanish provided information on how to identify food services and other resources. The market was so successful, it has

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become an annual community event, and it has expanded into other inner-city communities.⁴⁰

Several studies have found that Latinos, especially Latino women, report wanting more fresh fruits and vegetables in their diet and a willingness to support farmers' markets introduced into their neighborhoods.^{31,41} A few studies suggest that the introduction of farmers' markets have improved the eating habits of underserved Latinos and/or other underserved consumers.^{29,26-27} Most of these surveys provided descriptive information but did not use a comparison group nor detailed how much these initiatives improved food purchasing or eating habits. Nevertheless, one quantitative study using survey data found that two farm stands placed outside two underserved community sites in Texas one day a week for 12 weeks led to a significant increase in participants' consumption of fruits and vegetables.²⁷ Nearly one-third of participants in this study were Latino and about two-thirds had children.

To encourage more lower-income families to patronize farmers' markets, several programs provide subsidies to participants to use at local farmers' markets. These initiatives appear to be effective. After New York City instituted its Health Bucks program, which offers \$2 for each \$5 spent using EBT at a farmers' market, sales at farmers' markets more than doubled in 2007.²⁰ A similar program instituted in downtown Rochester, N.Y., found that EBT sales increased more than tenfold within a year of implementing and promoting the program. EBT and WIC customers using the program reported the quality of the farmers' market produce was better than the quality of produce at their usual store. Moreover, about two-thirds reported that the price of the farmers' market produce was either better or the same as that of produce at their local stores.²⁴

In addition, a program in Massachusetts provided coupons to SNAP recipients that doubled their purchasing power at farmers' markets. This program found that use of the coupons doubled the markets' SNAP sales. This program began in 2008 and has since expanded to more than 160 markets.²⁵

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Conclusions and Policy Implications

CONCLUSIONS

- Evidence suggests that many U.S. families do not have access to healthy affordable foods in their neighborhoods. This is especially true in lower-income communities, including Latino communities, where convenience stores and fast-food restaurants are widespread, but supermarkets and farmers' markets are scarce.
- There is insufficient evidence to determine the extent to which greater access to healthy foods in underserved communities reduces obesity and improves health outcomes, given the recent implementation of these interventions.
- Early evidence suggests initiatives that introduce supermarkets or farmers' markets in Latino and underserved communities, or foster the expansion of

healthy food offerings in these communities' corner stores, can improve access to and increase purchases of affordable healthy foods.

- Financial subsidies that reduce the costs of healthy foods for underserved consumers stimulate greater purchases of these foods. They also may help expand the number of retailers located in underserved communities.
- Expanding the capability of farmers' markets to accept WIC or SNAP purchases increases the purchases of fresh fruits and vegetables among underserved communities.

POLICY IMPLICATIONS

- Zoning, land-use planning, and community development efforts should synergistically encourage more supermarkets, farmers' markets or other sources of affordable healthy foods to operate in underserved communities.
- Legal, technical and financial support should be given to incentive programs to increase the number of supermarkets or farmers' markets in underserved populations or expand healthy food offerings in corner stores. These incentives can be grants or loans, tax credits, refrigeration for fresh fruits and vegetables, free publicity and marketing advice, or linkages to wholesale distributors.
- The national HFFI should continue to ensure consistent funding streams to the state and local level.
- Financial and logistical support, including reimbursement for wireless or electronic technologies, should be given to vendors at farmers' markets to enable them to accept EBT purchases and increase the share of farmers' markets that serve underserved populations nationwide.
- Financial incentives should be given to WIC or SNAP participants to encourage greater purchases of healthy foods.
- Demonstration projects should incorporate evaluation programs to assess the extent to which and under what circumstances greater access to affordable healthy foods in underserved communities translates into healthier diets for its residents. Such evaluations should collect data on sales, prices, access, purchasing and consumption of healthy foods.

FUTURE RESEARCH NEEDS

This research review indicates that researchers should conduct more and better-designed studies, such as longitudinal or quasi-experimental studies, that can improve causal inferences and the degree to which increased access to local healthy foods impacts dietary habits and obesity in Latino communities.

- Researchers should identify other possible factors that contribute to obesity. Such factors include stressors, lack of time or interest in preparing healthy foods, prices for healthy foods that far exceed those for unhealthy alternatives, and the influence of fast-food options in Latino populations.
- Additional research is needed to document the distinct places where people from underserved communities shop for food. This research should consider whether

grocery shopping is limited to stores within their immediate neighborhood, or whether shopping is done at stores located close to worksites and other areas.

- Research is needed to assess food preferences and food use in homes and the influence of cooking skills and time on the amount of healthy foods incorporated into the diets of underserved families.
- Researchers need to investigate whether food hubs that aggregate locally produced foods from multiple farmers and other producers and distribute them to individuals, schools, hospitals, corner stores, and other institutions can improve access to affordable healthy foods in underserved communities.
- Future studies are needed that examine specific cultural factors in Latino and other underserved communities that might influence the effectiveness of various policies instituted to improve access to affordable healthy foods.

ABOUT THE PROGRAM

Salud America! The RWJF Research Network to Prevent Obesity Among Latino Children is a national program of the Robert Wood Johnson Foundation. The program aims to educate and support researchers, decision-makers, community leaders, and the public in contributing towards healthier Latino communities and seeking environmental and policy solutions to the epidemic of Latino childhood obesity. The network is directed by the Institute for Health Promotion Research at the University of Texas Health Science Center at San Antonio.

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ABOUT THIS RESEARCH REVIEW

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