



Published in final edited form as:

J Hunger Environ Nutr. 2017 ; 12(3): 328–341. doi:10.1080/19320248.2017.1315328.

Healthy Food Availability Among Food Sources in Rural Maryland Counties

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Abstract

Most studies examining the association of the food environment and health outcomes have focused on urban settings. However, rural adults and children have high rates of obesity, which may be related to their food environments. This study examines the food environment in 7 rural counties in Maryland. A cross-sectional study was conducted at 244 retail food stores from 2012 to 2013. Data on store-level characteristics were collected and a healthy food availability index (HFAI) ranging from 0 to 31 points was calculated for each store. Convenience stores (18.9%) and other nontraditional stores (16.8%) were the most common store types, and box stores were the least (4.9%). Supermarkets had the highest mean HFAI (24.8), whereas gas stations (8.7) had the lowest; convenience stores were also low (11.1). In rural Maryland, the most common food source types have low healthy food availability, and nontraditional food sources are an important part of the food environment.

Keywords

Food environment; obesity; food access; rural health

Introduction

Obesity and related chronic diseases are significant public health challenges in the United States and disproportionately impact rural communities, among other groups (e.g., low-income or racial/ethnic minorities, etc.).^{1,2}

Rural residents throughout the United States have higher rates of overweight, obesity, and chronic disease compared to urban populations.^{3,4} Similarly, 35% of children aged 10–17

living in rural areas are overweight (body mass index ≥ 25 kg/m²) or obese (body mass index ≥ 30 kg/m²), compared to about 31% of children in urban areas.⁵

Prior research, often focused in urban areas,^{6,7} has shown that the food environment may play a role in influencing diet quality and obesity risk.^{8–10} However, the food environment in rural areas may also be a significant barrier to residents achieving a healthy diet¹¹ due to challenges of access, availability, and pricing.¹² Large supermarkets and food retailers (e.g., warehouse clubs and superstores) are less prevalent, and rural residents are more likely to rely on small stores, convenience stores, and gas stations as their primary food sources.¹³ Compared to larger retailers, smaller food stores typically charge higher prices and have fewer healthy choices.¹⁴

More recently, nontraditional food sources, including pharmacies, mass merchandisers (such as Walmart), and dollar stores have gained greater market share in Americans' food dollars¹⁵ and have become an increasingly significant source of food for rural consumers.^{16–18} However, more research is needed on the healthy food availability within these store types and their prevalence relative to traditional food sources.

The food environment is potentially an important focus area for public health interventions seeking to improve dietary choices and decrease the prevalence of overweight, obesity, and chronic diseases in rural areas. However, much of the past research on the food environment has focused on the urban food environment, which may not offer effective solutions for rural communities.^{19,20} Research on the distribution and prevalence of store types and overall healthy food availability in rural areas is vital to informing nutrition-related interventions and policies, particularly in the context of developing store-based interventions. Store-based interventions have been shown to increase healthy food access and purchasing patterns²¹ and improve nutrition-related knowledge and self-efficacy for consumers and storeowners.^{22,23}

This article presents findings from a cross-sectional study in 7 rural Maryland²⁴ counties. This article aims to add to the limited body of literature on the rural food environment by providing an overview on the food sources and healthy food availability in a rural setting. Specifically, this article will address the following questions:

1. What retail food store types are prevalent in rural Maryland counties?
2. What are the characteristics of food store types in rural Maryland?
3. How does healthy food availability vary between store types?

Methods

Setting

Maryland Healthy Stores–2 (MHS-2) was a cross-sectional study of food sources in rural Maryland. Because this study was a baseline assessment and independent of an intervention, the cross-sectional design was utilized. This allowed us to create a detailed assessment of the rural food environment at a point in time to fill the gap in research on rural food access and inform future interventions. The study was conducted in all Centers for Disease Control and

Prevention–designated rural counties in Maryland. In total, 7 rural counties were included in the study: Caroline, Dorchester, Garrett, Kent, St. Mary’s, Talbot, and Worcester.

Despite being one of the nation’s wealthiest states,²⁵ numerous rural communities throughout Maryland lack access to supermarkets.²⁶ Furthermore, the prevalence of obesity among adults in Maryland grew from 15% to 27% between 1995 and 2010, and the state now spends an estimated \$1.5 billion annually treating obesity-related conditions.²⁷ The lack of traditional food sources, disparities in food access, and rising obesity rates make rural Maryland an important focus area for a comprehensive assessment of the rural food environment. Furthermore, rural food access disparities^{28,29} and the growing public health impact of obesity in Maryland reflect nationwide trends and speak to the study’s generalization potential.^{30,31}

Data collection

The 244 stores in our sample were drawn from lists of licensed retail food outlets provided by the county health departments from each of the seven included counties. Trained data collectors conducted environmental assessments at 248 retail food stores from the provided lists between fall 2012 and fall 2013. Four stores closed during the study and were dropped from the analysis.

The food source checklist used in this study was a modified version of the Nutrition Environment Measures Survey in Stores (NEMS-S), a tool that assesses the availability of select key healthy foods compared to their less healthy alternatives.³² Items on the checklist included healthy meal items such as fresh fish and whole wheat bread, healthful snacks, condiments, beverages, breakfast foods, and infant foods. The checklist also included questions on store environmental characteristics, such as alcohol sales and the acceptance of the US Department of Agriculture food assistance programs Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). Following data collection, acceptance of SNAP was cross-referenced for each store using a list of Maryland stores that accepted SNAP in 2013. Acceptance of WIC was cross-referenced for each store using a list of Maryland stores that accepted WIC in 2012. These lists were also used to reconcile any missing data on SNAP and WIC acceptance. Missing data on alcohol sales was supplemented by searching for the establishment in the State of Maryland’s Alcoholic Beverages Statewide Licenses Database.³³

For this analysis, store type definitions were created based on the North American Industry Classification System (NAICS) code system. The NAICS categorizes businesses based on the activities they are primarily engaged in and the merchandise they specialize in (e.g., fruit and vegetable markets, health care stores, hardware stores, etc.).³⁴ The NAICS codes and sales volume information were obtained from ReferenceUSA; where data were not available, other Internet databases were used.^{35–37} Stores were classified by their primary NAICS code or the code most closely related to food retail that was best suited for this analysis. The store type categories are groceries, supermarkets, box stores, convenience stores, gas stations, pharmacies, prepared food outlets, and other nontraditional food sources. Definitions for each store type are found in Table 1. For this study, groceries,

supermarkets, and prepared food outlets are considered “traditional food sources,” whereas box stores, convenience stores, gas stations, pharmacies, and other stores are considered “nontraditional food sources” in the food environment.

A healthy food availability index (HFAI) was calculated for each store based on the availability of selected healthy foods, including beverages, cooking fats and condiments, dairy, fresh proteins, fruits, prepared food, snacks, vegetables, and whole grains. A scoring system was used where healthy food items sold at the store were given points (Table 2) and the sum of those points was computed to give the resulting HFAI score. Each food item or group was worth one point or half a point (Table 2), with the exception of the fruits and vegetables. Stores were given between 0 and 5 points for the number of varieties of both fruits and vegetables sold. Using this system, stores could receive between 0 and 10 points for fruits and vegetables toward their overall HFAI (Table 2). The HFAI for each store was scored on a scale of 0–31 points, with a higher score indicating greater healthy food availability. If data on the presence of a food item in a store were missing, it was assumed to not be sold at the store and was not counted in the calculation of the establishment’s HFAI. If fruits and vegetables were marked as being sold but the number of varieties was missing, the median fruit and vegetable varieties for establishments selling fruits and vegetables were respectively imputed and incorporated into a store’s HFAI.

The HFAI for this article was adapted from the HFAI scoring system developed by the Johns Hopkins Center for a Livable Future and Baltimore City Health Department, which has previously been adapted to study healthy food availability at the store level in Baltimore City.⁴⁰

Data analysis

After calculating a mean HFAI for each establishment, the HFAI scores were grouped by tertile to create healthy food availability categories. The tertiles were rated 1 = *low healthy food* availability, 2 = *medium healthy food availability*, and 3 = *high healthy food availability* (defined as being in the lowest, middle, and highest tertile of healthy food availability scores, respectively).

In addition to calculating a general HFAI for all stores, we calculated subscores indicating the availability of healthy beverages and infant foods. For these subscores, each item was worth one point. A healthy beverage score on a scale of 0–4 points was assigned to stores based on the availability of diet soda, bottled water, diet iced tea, and low-sugar flavored water. An infant food availability score on a scale of 0–4 points was calculated for each store based on the availability of infant formula, infant meat, infant cereal, and infant vegetables/fruit (Table 3).

We calculated mean HFAI scores by store characteristics, including acceptance of SNAP benefits, acceptance of WIC benefits, and alcohol sales. Stata 13⁴¹ was used to calculate the HFAI and subscores and conduct the descriptive analysis. The Kruskal-Wallis test was used to compare healthy food availability by store type category and store characteristics at the $p < 0.05$ level, and Dunn’s test was used for pairwise multiple comparisons at the $p < 0.05$ level following the Kruskal-Wallis test.

Results

Food source type prevalence

Convenience stores were the most prevalent food source type among the 7 rural counties sampled, accounting for 18.9% of all stores sampled (Table 4). Other stores (such as dollar stores) were the next most common food source (16.8%), followed by supermarkets (16.0%) and gas stations (13.5%). Box stores were the least prevalent food source (4.9%; Table 4).

Healthy food availability

Supermarkets had the highest mean HFAI by store type (24.8), whereas gas stations had the lowest (8.7). Convenience stores had a mean HFAI of 11.1, which was below the average for all stores (13.6). Among nontraditional food sources, both pharmacies and other nontraditional food stores had a mean HFAI of 10.0 (Table 5). There was no statistically significant difference in mean HFAI scores between supermarkets and box stores ($p = 0.31$), but there was a statistically significant difference in mean HFAI scores when groceries were compared to supermarkets ($p < 0.01$) and box stores ($p = 0.02$). There was not a statistically significant difference in mean HFAIs between groceries and convenience stores ($p = 0.20$), and there were no statistically significant differences in mean HFAI at the $p < 0.05$ level between gas stations, pharmacies, and other nontraditional food sources.

With the exception of prepared food outlets, all store types had a mean healthy beverage availability of a 3 or higher out of a possible 4 points (Table 3). Supermarkets (3.7), convenience stores (3.7), and gas stations (3.8) had the highest average healthy beverage availability, whereas prepared food outlets had the lowest mean score (2.9). Prepared food outlets had significantly lower healthy beverage availability compared to supermarkets ($p < 0.01$), box stores ($p = 0.01$), convenience stores ($p < 0.01$), and gas stations ($p < 0.01$; Table 5). Box stores, supermarkets, and pharmacies had relatively high infant food availability scores compared to convenience stores, gas stations, and other stores. Box stores had the highest mean infant food availability score (3.3), whereas convenience stores (0.1) and gas stations (0.1) had the lowest mean scores (Table 5). Box stores did not have a significantly different infant food availability compared to supermarkets ($p = 0.37$) or pharmacies ($p = 0.08$) but had significantly higher infant food availability when compared to all other store types at the $p < 0.05$ level. The difference in infant food availability between convenience stores and gas stations was not significant ($p = 0.43$).

Table 6 shows the distribution of establishments by healthy food availability class by store type. Nearly 80% of supermarkets and 75% of box stores were in the high healthy food availability class (defined as being in the highest tertile of HFAI scores), whereas only 26.1% of convenience stores (the most common food source type) had high healthy food availability. Prepared food outlets (66.7%), gas stations (63.6%), and other nontraditional food sources (51.2%) had the highest percentage of establishments in the low healthy food availability class (defined as being in the lowest tertile of HFAI scores; Table 5).

Nutrition benefit acceptance and alcohol sales

Among all food source types surveyed, 12.7% accepted WIC benefits, 57.0% accepted SNAP benefits, and 39.8% sold alcohol. Stores that accepted WIC benefits had a significantly higher mean HFAI (27.1) than stores that did not (11.6; $p < 0.01$). Among stores that accepted SNAP benefits, the mean HFAI score was 16.2 and the mean HFAI score for stores that did not was 10.0. This difference was statistically significant ($p < 0.01$). Finally, stores that did not sell alcohol (14.9) had a significantly higher HFAI than stores that do sell alcohol (11.5; $p < 0.01$; Table 7).

Discussion

This is the first article to assess the food environment by store type and healthy food availability in rural Maryland and makes a valuable contribution to the limited body of research on rural food environments in the United States. Supermarkets and box stores had the highest mean HFAI scores, although box stores were the least common food source. Convenience stores were the most common food source type, but their mean HFAI was below the mean HFAI for all stores in the study.

Our results also show the importance of nontraditional food sources (pharmacies, dollar stores, etc.) in the rural food environment, which constituted a majority of stores in our sample. Unfortunately, we also found that these types of stores sell very little in the way of healthy foods. Therefore, nontraditional food sources must be recognized as a vital source of food for residents and a critical focus area for future policies and nutrition interventions. Additionally, groceries had lower healthful food availability than supermarkets and had healthy food availability comparable to that of nontraditional food sources, which indicates that there are disparities in healthy food availability among traditional food store types.

Our study shows that rural residents have greater access to stores with low healthy food availability. Similarly, other studies have demonstrated that convenience stores outnumber stores with more healthful foods in a rural area⁴² and that supermarkets underserve rural communities.⁴³ In a nonurban area, 10 miles is considered an acceptable distance to travel to a supermarket or grocery store, and past research has shown that rural residents must travel longer distances to reach establishments with healthier items.⁴⁴ Inadequate access to larger food stores causes rural residents to travel further to shop at supermarkets or purchase more food items from small stores.⁴⁵ Our study demonstrates that convenience stores and other nontraditional food sources such as dollar stores outnumber supermarkets and groceries in rural Maryland. Therefore, it is likely that residents lacking reliable transportation would be more easily able to access food outlets with fewer healthy options.

The analysis in this study can be used to inform further research and the development of store-based nutrition interventions in rural Maryland and other rural areas throughout the nation. Its results provide a comprehensive description of the food store types and healthy food availability in Maryland's rural food environment. The low healthy food availability at stores throughout rural Maryland illustrates the importance of current Maryland initiatives to expand healthy food access such as Maryland's Fresh Food Financing Initiative and Maryland Market Money. Since 2015, Maryland's Fresh Food Financing Initiative has

provided government financial support to establishing or expanding businesses that will offer healthy options in underserved communities,⁴⁶ and since 2014 the Maryland Market Money program has expanded the acceptance of US Department of Agriculture SNAP and WIC benefits at farmers' markets throughout the state.⁴⁷ Additionally, our study area was not limited to food deserts and demonstrated that healthy food access is an issue throughout rural Maryland. Therefore, policies and programs aiming to improve the food environment should also include communities that do not fit the traditional definition of food desert.

The study's key strength was the large number of stores that were sampled, as well as the number of food and beverage items and store-level characteristics surveyed to calculate the HFAI and other subscores. The survey contains more items than the NEMS-S checklist, which is one of the most widely used instruments in assessments of the food environment.⁴⁸ Furthermore, the survey instrument used in this study can be used in multiple store settings. Unlike NEMS-S or the Nutrition Environment Survey for Corner Stores (NEMS-CS), our checklist can be used in a range of stores including convenience stores, supermarkets, gas stations, and nontraditional food sources such as pharmacies. Finally, the survey used in this study was specifically designed for use in a rural setting. As the rural food environment, particularly the rural small food store, gains more attention and future nutrition interventions are introduced, more flexible tools will be needed to assess healthy food availability and chart changes in food access over time.

Going forward, the HFAI's scoring system could incorporate pricing and quality to give a more detailed assessment of healthy food accessibility in rural Maryland. The study did not collect information on seasonal local producers including farms and farmers' markets that can act as sources of food for rural residents. It is important to note that food systems are incredibly complex, and numerous factors impact dietary outcomes at the individual level. A single HFAI or environmental assessment cannot account for all of these factors. The scoring system could be expanded in the future to consider other components of the food system and individual factors. Further research is also needed to better understand storeowner capacity to stock healthy food and consumer eating habits and food efficacy to gauge the feasibility of a store-based intervention to improve healthy food availability in rural Maryland counties.

The preceding study presented an in-depth analysis of the distribution of food source types and healthy food availability in a rural area. The food environment is a barrier to obtaining a healthful diet for residents in rural Maryland and thus is an important focus area for public health interventions that promote nutrition, decrease obesity, and prevent chronic disease. Such interventions should work to increase stocking of fresh foods in store types with low healthy food availability (such as convenience stores and gas stations) and incorporate nontraditional food sources into new and existing programs. Successful food environment interventions will require the collaboration of public health researchers, lawmakers, and the community. Our study quantifies healthy food availability at the store level and illuminates priority areas for store types in the food environment to guide nutrition interventions and inform policy makers.

Acknowledgments

Funding

Funding for this project was provided by a Community Transformation Grant from the Centers for Disease Control. This work was supported, in part, by a Kruse Family Publications Award. Additional thanks are given to data collectors Nadine Budd, Jessica Rhodes, and Angela Trude.

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Table 1

Store type definitions.^a

Groceries	Establishments primarily engaged in retailing a general line of food, including canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry
Supermarkets	The same NAICS-coded establishments used for groceries. Supermarkets were categorized separately from other grocery stores using the Food Marketing Institute definition of a supermarket, which classifies supermarkets as businesses that earn annual revenues of \$2 million or more each year ³⁸
Box stores	Establishments that retail a wide assortment of groceries and products such as clothing, appliances, furniture, etc. Examples include Target, Walmart, etc.
Convenience stores	Establishments primarily engaged in retailing a limited line of goods that generally includes milk, bread, soda, and snacks ³⁹
Gas stations	Establishments engaged in the distribution of petroleum and petroleum products that may or may not have an attached store or convenience area
Pharmacies	Establishments that retail prescriptions or nonprescription drugs and medicines and may sell other personal or medical care items. Examples include CVS, Rite Aid, etc.
Prepared food outlets	Establishments (mostly delis or carryouts) whose primary purpose is to provide food to patrons who order or select such items. Patrons may or may not consume their food on premise. The store also sold prepackaged and processed retail food items in addition to prepared foods
Other	Other nontraditional food sources that did not fit into one of the above categories. The majority of stores in this class were stores such as Dollar General, Family Dollar, and Dollar Tree. Beer, wine, and liquor stores were also in this category

^aNAICS indicates North American Industry Classification System.

Table 2

Calculation scheme for Maryland Healthy Stores 2 Healthy Food Availability Index, adapted from the Nutrition Environment Measures Survey in Stores.

Food item	Value (points)
Dairy	
Milk (whole, 2%, 1%, skim)	1
Low-fat milk availability (1% and skim)	1
Low-fat/skim cheese availability	1
Beverages	
100% Fruit juices	1
Bottled water	0.5
Non-sugar-sweetened beverages (diet soda or diet iced tea)	1
Fresh proteins	
Lean ground beef	1
Lean chicken	1
Fresh seafood	1
Eggs	1
Fruit	
Fresh fruit availability	
0 types	0
1–2 types	1
3–5 types	2
6–10 types	3
11–20 types	4
20+ types	5
Vegetables	
Fresh vegetable availability	
0 types	0
1–2 types	1
3–5 types	2
6–10 types	3
11–20 types	4
20+ types	5
Frozen vegetables	1
Whole grains	
Low-sugar cereals	1
Whole wheat bread	1
Corn tortilla	1
Other whole grains (whole wheat pasta, brown rice, and oatmeal)	0.5 Points for each present (up to 1.5 available points)
Healthy snacks	
Baked chips	0.5
Low-sodium pretzels	0.5

Food item	Value (points)
Reduced fat popcorn	0.5
Other prepackaged foods	
Canned fruit	0.5
Canned vegetables	0.5
Beans	0.5
Canned fish	0.5
Snacks < 150 kcal per package (low-sugar pudding, low-sugar and low-fat granola, and applesauce)	0.5 (If one or more was available)
Other snacks (low-sodium crackers, trail mix, nuts, graham crackers)	0.5 (If 1–3 types were available) 1 (If 4 types were available)
Healthy cooking	
Salt substitute and cooking spray	0.5 (If one or more was available)
Light dressing	0.5
Total available points	31

Table 3

Calculation scheme for Maryland Healthy Stores 2 Healthy Food Availability subscores.

Food item	Value (points)
Healthy beverage availability subscore	
100% Fruit juices	1
Bottled water	1
Non-sugar-sweetened beverages	1
Low-sugar flavored water	1
Total available points	4
Infant Food Availability subscore	
Infant formula	1
Infant meat	1
Infant cereal	1
Infant fruits/vegetables	1
Total available points	4

Table 4Prevalence of food source type by county, % (n).^a

	All	Caroline	Dorchester	Garrett	Kent	St. Mary's	Talbot	Worcester
Traditional food sources								
Supermarket	16.0 (39)	15.6 (5)	15.1 (8)	22.6 (7)	24.3 (9)	11.1 (4)	12.0 (3)	10.0 (3)
Grocery	13.1 (32)	18.8 (6)	9.4 (5)	12.9 (4)	13.5 (5)	16.7 (6)	20.0 (5)	3.3 (1)
Prepared food	4.9 (12)	6.3 (2)	1.9 (1)	3.2 (1)	5.4 (2)	8.3 (3)	8.0 (2)	3.3 (1)
Nontraditional food sources								
Box store	4.9 (12)	3.1 (1)	9.4 (5)	3.2 (1)	5.4 (2)	2.8 (1)	0	6.7 (2)
Convenience	18.9 (46)	21.9 (7)	22.6 (12)	22.6 (7)	13.5 (5)	19.4 (7)	12.0 (3)	16.7 (5)
Gas station	13.5 (33)	9.4 (3)	7.6 (4)	16.1 (5)	13.5 (5)	22.2 (8)	8.0 (2)	20.0 (6)
Pharmacies	11.9 (29)	15.6 (5)	18.9 (10)	9.7 (3)	10.8 (4)	5.6 (2)	8.0 (2)	10.0 (3)
Other ^b	16.8 (41)	9.4 (3)	15.1 (8)	9.7 (3)	13.5 (5)	13.9 (5)	32.0 (8)	30.0 (9)

^aThe above table shows the percentage of all establishments the store category comprises at a county level and in the entire sample. *N* represents the number of establishments^b“Other” stores include nontraditional food sources such as dollar stores, liquor stores, etc., that did not fit into another store type category.

Table 5Mean healthy food availability indicators by store type, mean (SD).^a

	Overall HFAI ^b	Healthy beverage availability ^c	Infant food availability ^c
Supermarket	24.8 (8.8)	3.7 (0.7)	3.1 (1.6)
Grocery	13.8 (6.7)	3.1 (1.3)	0.8 (1.5)
Box store	24.2 (10.5)	3.6 (1.2)	3.3 (1.6)
Convenience	11.1 (3.3)	3.7 (0.7)	0.1 (0.5)
Gas station	8.7 (2.3)	3.8 (0.4)	0.1 (0.2)
Pharmacies	10.0 (6.3)	3.6 (1.0)	2.5 (1.8)
Prepared food	9.3 (7.3)	2.9 (1.2)	0.4 (1.2)
Other	10.0 (5.9)	3.3 (1.1)	0.9 (1.4)
All stores	13.6 (8.6)	3.5 (1.0)	1.2 (1.8)

^aHFAI indicates healthy food availability index.^bHFAI is on a scale of 0–31. A higher HFAI indicates greater healthy food availability.^cHealthy beverages and infant food availability are both respectively scored on scales of 0–4 points. Each item included in the scoring is worth one point. The scores presented are the average among all establishments in the study grouped by store type category. A higher score indicates greater availability of selected items.

Table 6Healthy food availability category by store type, % (*n*).^a

	Low	Medium	High
Supermarket	10.3 (4)	10.3 (4)	79.5 (31)
Grocery	28.1 (9)	31.3 (10)	40.6 (13)
Box store	16.7 (2)	8.3 (1)	75.0 (9)
Convenience	21.7 (10)	52.2 (24)	26.1 (12)
Gas station	63.6 (21)	33.3 (11)	3.0 (1)
Pharmacies	31.0 (9)	58.6 (17)	10.3 (3)
Prepared food	66.7 (8)	16.7 (2)	16.7 (2)
Other	51.2 (21)	29.3 (12)	19.5 (8)

^aTertile cutoffs for low, medium, and high healthy food availability were calculated by analyzing all establishments together. The above table shows the percentage of establishments that fell into each tertile category by store type, as well as the number of establishments the percentage represents.

Table 7Healthy food availability^a by store^b characteristics.^c

Characteristic	Value
WIC benefits	
Stores that accept WIC, % (<i>n</i>)	12.7 (31)
HFAI score: stores that accept WIC, mean (SD)	27.1 (7.3)
HFAI score: stores that do not accept WIC, mean (SD)	11.6 (6.8)
SNAP benefits	
Stores that accept SNAP, % (<i>n</i>)	57.0 (139)
HFAI score: stores that accept SNAP, mean (SD)	16.2 (8.9)
HFAI score: stores that do not accept SNAP, mean (SD)	10.0 (6.7)
Alcohol	
Stores that sell alcohol, % (<i>n</i>)	39.8 (97)
HFAI score: stores that sell alcohol, mean (SD)	11.5 (7.2)
HFAI score: stores that do not sell alcohol, mean (SD)	14.9 (9.1)

^aHFAI was on a scale of 0–31, with a higher score indicating greater healthy food availability.^bAll establishments in the study were analyzed together (*n* = 244).^cWIC indicates Special Supplemental Nutrition Program for Women, Infants and Children; HFAI, healthy food availability index; SNAP, Supplemental Nutrition Assistance Program.