A Snapshot of Oakland Corner Stores: Availability of Healthy Foods in Oakland's Low-Income Neighborhoods

Xenia Shih Bion
University of California, Berkeley

ABSTRACT

Objective: Availability of healthy foods is limited in many low-income urban settings. One reason may be the overabundance of corner stores and lack of supermarkets in these areas. The objective of this study was to examine the availability of healthy foods in corner stores located in the low-income neighborhoods of Oakland, CA.

Methods: Staff members and trained community volunteers from an Oakland-based community organization conducted a survey of corner stores located mostly in East and West Oakland. In 2013, data were collected from a convenience sample of 78 corner stores. I calculated descriptive statistics from the survey results and investigated the associations between corner store characteristics and the availability of fresh produce. Among the corner stores that stocked fresh produce, I also investigated the associations between corner store characteristics and the quality of produce sold.

Results: The majority of the corner store employees said there was a community demand for healthy food, but only 42.4% of the stores stocked fresh produce. Among the stores that stocked fresh produce, the quality of the produce sold was high. Corner store employees' perceptions of whether or not their stores stocked healthy food was significantly associated with the availability of fresh produce (p < 0.001).

Conclusions: Efforts to improve the food environment in corner stores located in low-income urban settings should focus more on increasing availability of fresh produce than increasing the quality. When attempting to identify corner stores for a healthy retail intervention, corner store employees' perceptions of whether or not their stores stock healthy food may be a good indicator of readiness for change.

INTRODUCTION

Proximity[a] and access[b] to food retailers that sell unhealthy foods[c] is associated with higher BMI[2-4] and percent body fat[3] in adolescents, and with greater risk for obesity in children[4-6] and adults.[5] In many low-income urban settings, availability[d] of healthy foods like fresh fruits and vegetables is limited.[8, 9] This is largely due to a lack of large supermarkets and farmers markets, combined with an abundance of small markets like corner stores.[6] Some urban corner stores carry fresh produce, but studies that have examined healthy food availability in such stores have either not assessed the quality of produce [9] or found the quality to be variable.[10]

Interventions targeting urban corner stores are an emerging strategy to improve the food environment in low-income urban settings. Corner store interventions in Philadelphia,[11] Baltimore,[12, 13] and Grand Rapids[3] have demonstrated positive outcomes related to the stocking and sales of healthy foods, as well as the purchase and consumption of those foods by customers. For example, in Philadelphia, the Department of Public Health partnered with The Food Trust in 2010 to implement a citywide Healthy Corner Store Initiative. Cavanaugh and colleagues[11] assessed the nutrition environment of 211 corner stores that participated in the initiative. 161 stores received a basic intervention (financial assistance and one-on-one business trainings). The remaining 50 stores, judged by The Food Trust staff as having high potential to

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[a] *Proximity* defined as the location of food retailers within walking distance (approximately ½ mile) of a specific setting.[1]
[b] *Accessibility* defined as "the location of the food supply and ease of getting to that location." [2 (p. 1173)]
[c] *Unhealthy foods* defined as "foods rich in fats, sugars, and salt," which, when consumed regularly, "would make it hard for an individual to meet healthy eating guidelines." [3 (p. 338)]
[d] *Availability* defined as "the adequacy of the supply of healthy food." [7]

progress through the initiative, received a more rigorous intervention (basic intervention components plus mini-grants for shelving and refrigeration, and individualized businesses training). Compared to the stores that received a basic intervention, the stores that received a rigorous intervention improved their stocking of 1% or skim milk, apples, oranges, grapes, and broccoli between intervention implementation and follow-up assessment.

A systematic review of interventions in small food stores by Gittelsohn and colleagues[14] found that seven out of 10 interventions observed increases in consumers' food and health-related knowledge (assessed through pre-post assessments). Nine out of the 10 trials that reported impact on consumer purchasing behaviors observed significantly increased purchasing frequency of at least one promoted food (also assessed through pre-post evaluations). Furthermore, the five out of 16 interventions that collected sales data observed 25-50% increases in stores' produce sales.

Setting: City of Oakland

The City of Oakland is located in Alameda County, CA. It is home to over 410,000 residents, 21% of whom live below the poverty line.[15] The demographic breakdown of the major races in Oakland is 28.0% Black, 25.9% White, 25.4% Latino, and 16.8% Asian. [16]

Compared to the rest of Alameda County, the low-income areas of East and West Oakland suffer from disproportionately high rates of overweight, obesity, and diet-related chronic diseases.[17] These are the same areas that have historically had far better access to alcohol and unhealthy foods than fresh produce.[17] Due to the cumulative effect of poorer access to resources like healthy foods, safe places to play,

and quality education, an African American child born in West Oakland "will be 5 times more likely to be hospitalized for diabetes, 2 times as likely to be hospitalized for and to die of heart disease, 3 times more likely to die of stroke, and twice as likely to die of cancer" as a Caucasian child born in the wealthier Oakland Hills.[18]

And yet, to date, few studies have assessed the availability of healthy foods in Oakland corner stores. A food system meta-analysis[19] prepared by Public Health Law & Policy in collaboration with Food First identified a need for more research focused on East Oakland neighborhoods. The report recommended "more attention to the issues and needs of East Oakland residents when undertaking future studies of food system sectors, including food security and access."

Laska and colleagues[9] compared healthy food availability in urban stores located near low-SES schools in a convenience sample of four US cities, including Oakland. The cities were selected because of their involvement in funded and/or ongoing research studies. The researchers found that their sample of Oakland stores carried fewer healthy snacks than Minneapolis/St. Paul and Philadelphia stores, but more than Baltimore stores. When constraining the sample size to small stores, defined as food stores with two to five aisles, their sample of Oakland stores had the lowest availability of healthy staple foods (e.g., high-fiber bread, brown rice, and beans) compared to Baltimore, Minneapolis/St. Paul, and Philadelphia small stores.

There were several limitations to their research. In Oakland, Laska and colleagues limited their samples to food stores within a quarter of a mile of 13 low-income elementary schools, leaving them with only 28 food stores to assess. Additionally, because they were focused on estimating the presence of healthy items in

urban food stores, they only assessed stores for the presence of healthy food and beverage items. They did not assess the presence of alcohol or tobacco products, nor did they assess stores' appearance (e.g., presence of advertisements, damage to store's exterior).

Tester and colleagues [20] examined the availability of healthy foods in food outlets located within a quarter-mile walk from 30 public elementary schools in Oakland. 45 food stores representing corner stores, convenience stores, liquor stores, supermarkets, gas stations, and drug stores were included in the study. The researchers assessed healthy food availability by means of a checklist that included nutritious food items and beverages in five categories: fresh fruits and vegetables, processed fruits and vegetables, healthy beverages and low-fat dairy, healthy snacks, and other healthy staple foods. The researchers found that lower-income schools were surrounded by twice as many single-aisle or small (2-5 aisles) stores than higher-income schools. Additionally, they found a disparity in access to nutritious food options based on food stores' locations: stores located near higher-income schools scored significantly higher in the healthy beverages and low-fat dairy category and the healthy snacks category than food retailers located near lower-income schools.

Research Questions

This study aims to address the gap in the literature on Oakland's food environment. The Oakland-based community organization Health for Oakland's People and Environment (HOPE) Collaborative conducted formative research in 2013-2014 to understand the food environment in and neighborhood environment surrounding 78

Oakland corner stores, with an emphasis on those located in East and West Oakland. HOPE Collaborative's research addressed the following questions:

1. What types of institutions and buildings are located near corner stores?

2. Is there visible damage to the exteriors of corner stores?

3. Is there visible damage to the interiors of corner stores?

4. What proportion of corner stores sells fresh produce?

5. Among corner stores that sell fresh produce, what is the quality of the produce sold?

6. Do corner store owners perceive that the community demands healthy foods?

7. Do corner store owners perceive business competition from the stores located nearby?

My research goes one step further to investigate possible relationships between store- and neighborhood-level characteristics and the availability and quality of fresh produce in corner stores. Specifically, I addressed the following questions:

1. To what extent is the availability of fresh produce associated with the following indicators?

   a. Corner store owner's perception of whether the community demands healthy foods

   b. Corner store's physical appearance

   c. Neighborhood in which the corner store is located

   d. Corner store owner's perception of business competition in the surrounding area

2. Among the corner stores that sell fresh produce, to what extent is the quality of the produce associated with the following indicators?

   a. Corner store owner's perception of whether the community demands healthy foods

   b. Corner store's physical appearance

   c. Neighborhood in which the corner store is located

   d. Corner store owner's perception of business competition in the surrounding area

METHODS

Corner store survey methods

HOPE Collaborative is a community organization that works to improve the health and wellness of Oakland's residents, especially those most impacted by social inequities.[21] In 2013, it used a community-based participatory research (CBPR) approach to conduct a survey of corner stores located mostly in East and West Oakland. The survey tool (Appendix A) was developed by HOPE Collaborative staff based on existing surveys tools used by other healthy retail programs. The survey was piloted among a small sample of corner stores and revised to ease implementation, clarify ambiguous questions, and lessen participant burden.

HOPE Collaborative staff and trained community volunteers jointly conducted the surveys in a convenience sample of 78 corner stores. Stores were selected based on staff and community volunteers' knowledge of small stores located in neighborhoods

with historically low access to healthy foods. Community volunteers included youth and adults who were residents of Oakland and active members of HOPE Collaborative.

Each survey included an observation of institutions and other stores located nearby; an assessment of damage to the store's exterior wall; and an assessment of damage to the store's interior, including its walls, floor, and ceiling. Inside the store, surveyors assessed the presence or absence of produce and deli section. Surveyors also approached the owner of each store and interviewed him/her to understand the history of the store and its business model, as well as the owner's perceptions of the neighborhood and customers' demands. When the owner was not present, surveyors interviewed an employee, family member of the owner, or friend of the owner. When no store employee was available for an interview, surveyors skipped this portion.

Statistical analyses

Due to incomplete survey data, 19 corner stores were excluded from the data analysis. Descriptive statistics were calculated for the remaining 59 stores.

Pearson's chi-square test or Fisher's exact test was used to investigate the association between availability of fresh produce and 30 store-level and neighborhood-level characteristics, including: (1) corner store owner's perception of whether the community demands healthy foods, (2) characteristics of each corner store's physical appearance, (3) characteristics of the neighborhood in which the corner store is located, and (4) corner store owner's perception of business competition in the surrounding area. Due to the multiple hypothesis testing conducted, a Bonferroni correction was applied and a *p*-value of < .002 was used as the level of significance for all analyses.

Among the corner stores that sold fresh produce, Pearson's chi-square test or Fisher's exact test was used to investigate the association between the quality of produce and 30 store-level and neighborhood-level characteristics, including: (1) corner store owner's perception of whether the community demands healthy foods, (2) characteristics of each corner store's physical appearance, (3) characteristics of the neighborhood in which the corner store is located, and (4) corner store owner's perception of business competition in the surrounding area, was investigated. A p-value of < .002 was used as the level of significance for all analyses.

RESULTS

Characteristics of stores – individual level

Table 1 summarizes the characteristics of the 59 Oakland corner stores included in this analysis. The majority of corner stores were family businesses (86.0%, n = 37), and nearly half had been owned by the current owner for 10 or more years (45.7%, n = 16). The majority of stores accepted CalFresh/EBT (90.0%, n = 43), but only 13.3% (n = 6) were WIC retailers.

Over three-quarters of the corner stores had ads for alcohol or tobacco on their windows (78.6%, n = 44), and nearly half had ads for sugar-sweetened beverages on their windows (46.4%, n = 26). Additionally, 42.1% (n = 24) of the stores had ads covering half or more of their windows.

Among the corner stores included in this analysis, surveyors were able to interview 47 corner store employees, including 18 corner store owners, 25 staff members, three family members of the owners, and one friend of the owner. Over one-

third (36.4%, n = 12) of interviewees cited alcohol and tobacco products as their greatest source of revenue, and another 15.2% (n = 5) cited multiple sources, including alcohol and tobacco products. In comparison, only 18.2% (n = 6) of interviewees cited food as their corner store's greatest source of revenue. Two other categories, non-alcoholic beverages and multiple sources, excluding alcohol and tobacco products, represented the greatest sources of revenue for 15.2% (n = 5) of the corner stores each.

Most of the interviewees said they believed there was a community demand for healthy food (89.7%, n = 35). For example, multiple employees said their customers asked them to stock healthy food options. Specific foods that customers asked for included fruit, vegetables, meats, and pre-made salads and sandwiches.

However, when asked whether or not their stores stocked healthy food, only 54.2% (n=32) of the store employees said yes. Independently, HOPE Collaborative surveyors affirmed that 42.4% (n = 25) of the corner stores sold fresh produce. Among those stores, surveyors judged the quality of the produce to be good or excellent in 78.3% (n = 18) of the stores and poor or fair in 21.7% (n = 5).

Characteristics of stores – neighborhood level

Most of the corner stores had schools (59.3%, n = 35) or easy access to public transportation (69.5%, n = 41) located nearby. 23.7% (n=14) of stores had a housing project located nearby. Nearly three-quarters of the stores (74.6%, n = 44) were located within a one-block radius of another corner store, and 30.5% (n=18) had a fast food restaurant located nearby. In contrast, only 10.2% (n = 6) had a supermarket located nearby.

Corner store interviewees cited discount grocery stores and other small, local stores like corner stores as the other retail places in which their customers shopped most (both 35.3%, n = 12). 20.6% (n = 7) of interviewees said their customers also shopped at supermarket chains, and 8.8% (n = 3) said their customers shopped at dollar stores. 40.6% (n = 13) of interviewees considered these other retail places competition.

When asked how they perceived the neighborhood in which their stores were located, 61.0% (n = 25) of interviewees said they had a positive view. One store owner said, "Everyone is connected despite different languages spoken. It's a nice community." Another said that the neighborhood was full of "lots of talent, love and support but…[we need] more jobs." 14.6% (n = 6) of employees said they had a negative view of the neighborhood. One store owner commented that s/he was "afraid of the neighborhood 'bad boys,'" while another said, "It's bad- there's killing and no police patrolling the neighborhood." 24.4% (n = 10) of employees had mixed thoughts about the neighborhood. One store owner remarked that the neighborhood was "Okay, not good and not bad." Another said, "[the neighborhood] is getting cleaned up little by little."

Associations between corner store characteristics and availability of fresh produce

Table 2 summarizes the associations between various individual- and neighborhood-level characteristics of corner stores and availability of fresh produce. Among the 59 Oakland corner stores included in this analysis, there was one significant association at the .002 threshold for statistical significance: whether or not the corner

store owner/employee who was surveyed perceived that the store stocked healthy food was associated with the availability of fresh produce at the store (p < 0.001).

Associations between corner store characteristics and quality of fresh produce sold

Table 2 also summarizes the associations between various individual- and neighborhood-level characteristics of corner stores and quality of fresh produce sold. Among the 23 Oakland corner stores included in this analysis, there were no significant associations at the .002 threshold for statistical significance.

Logistic regression

A corner store employee's perception of whether or not his/her store stocked healthy food ("healthy food perception") was the only variable that was significant in the analysis of corner store characteristics and availability of fresh produce. Because of this, a post-hoc logistic regression (results not shown) was conducted to assess the significance of "healthy food perception" after controlling for three index variables. Variables were grouped in indexes to capture the degree to which a corner store (1) responded to healthy food incentives, (2) displayed unhealthy food advertisements, and (3) exhibited a neglected appearance. Even after controlling for these index variables, the relationship between "healthy food perception" and the availability of fresh produce remained statistically significant (p < 0.001, β = 4.66).

DISCUSSION

Overview of study results

This study reports on one of the first assessments of the food environment in and neighborhood environment surrounding corner stores located in Oakland, CA. The descriptive findings of this study indicate that many of the corner stores are small, family-owned businesses that have served their communities for a decade or more. Though most of the corner store employees acknowledged in interviews that there is a community demand for healthy food, this study shows that many stores still rely on alcohol and tobacco sales for a significant portion of their revenue. This reliance is reflected in the widespread presence of alcohol and tobacco advertisements displayed on corner store windows.

42.1% of the stores in this sample had ads covering half or more of their windows, violating California's Lee Law (California Business and Professions Code § 25612.5), which states that "no more than 33 percent of the square footage of the windows and clear doors of an off-sale premises shall bear advertising or signs of any sort." [22] In fact, the proportion of stores that violate the Lee Law is likely to be underestimated in this study because surveyors categorized window coverage by quartiles, so some of the stores that had 25-50% of their windows covered may have exceeded the 33% limit.

This finding yields important insights for public policy regarding window advertising in retail establishments. A key goal of the Lee Law is to address youth exposure to advertising because it "increases the risk of youth alcohol and tobacco

consumption and problems associated with those risks." [23] However, this study reveals that many corner stores in Oakland are violating the law, and without any clear repercussions. Future research could shed light on the proportion of systematically-selected corner stores in Oakland, as well as in other California cities, that violate the law. More research is also needed to investigate the enforcement – or lack thereof – of the Lee Law, and the reasons for this (in)action.

Though fresh fruits and vegetables were available in only 42.4% of stores in this sample, the quality of fresh produce was high overall – surveyors judged the quality to be good or excellent in 78.3% of the stores that carried fresh produce. These findings suggest that efforts to improve the food environment in corner stores should focus more on increasing availability of fresh fruits and vegetables than increasing the quality. It is possible that the barriers to carrying any fresh fruits or vegetables at all are higher than the barriers to carrying high-quality fresh produce. This would be consistent with Jetter and Cassady's[24] findings that common barriers to stocking fresh produce in convenience stores include high start-up costs (time and money) and lack of owner motivation to keep produce sections stocked. Future research could investigate time management and produce procurement practices among corner stores to identify differences between those that successfully stock fresh produce for the long-term, and those that do not.

The lack of statistically significant associations between corner store characteristics and the availability of fresh produce in this study may have been due to limitations in the data (see Limitations section), which resulted in an underpowered study. Regardless, the results suggest that a corner store owner's perception of his/her

store's contribution of healthy foods to the community may be a better indicator of readiness for a healthy retail intervention than his/her perception of whether or not the community demands healthy foods. In this sample of corner stores located in Oakland, the only store-level characteristic that was significantly associated with the availability of fresh produce was the corner store employee's perception of whether or not the store stocked healthy foods. This association remained significant after controlling for the degree to which a corner store responded to healthy food incentives, displayed unhealthy food advertisements, and exhibited a neglected appearance. Future research is needed to confirm or deny this finding.

At the neighborhood level, no characteristics (e.g., types of institutions and businesses located nearby, owner/employee's perception of the neighborhood) were significantly associated with availability of fresh produce at the corner stores in this sample. Nor were any neighborhood-level characteristics significantly associated with the quality of produce available at stores that carried fresh fruits and vegetables.

For researchers seeking to implement interventions to improve the food environment in urban corner stores, the results of this study point to the need for comprehensive needs assessments to identify stores in need of the intervention. In the context of urban areas similar to Oakland, it is unlikely that researchers will be able to determine which corner stores qualify for or are in need of an intervention based solely on characteristics like neighborhood location, status as a WIC or CalFresh retailer, or greatest source(s) of revenue.

Additionally, the findings of this study indicate that a one-size-fits-all intervention is not likely to work for corner stores located in the same city. Interventions should be

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tailored to the unique needs of each corner store. Some stores may show readiness for change in the form of prepared food counters that sell relatively healthy cold or hot foods; these stores may need help financing and procuring additional healthy options. Other stores that violate the Lee Law or that rely on alcohol and tobacco sales for profit may first need assistance cleaning up their windows or moving away from dependence on alcohol and tobacco sales before healthy foods can even be introduced.

Limitations

Due to the CBPR approach that HOPE Collaborative used to conduct the corner store surveys, the selection of corner stores was not at random, and therefore not representative. HOPE Collaborative did not establish a definition for corner stores before conducting the surveys, so surveyors may have included or excluded small retailers that would, for example, be categorized as corner stores by The Food Trust (i.e., stores that are smaller than 2,000 square feet, have no more than four aisles, and have only one cash register [25]).

Furthermore, the convenience sampling used may have introduced selection bias to this study. Corner stores were selected based on staff and community volunteers' knowledge of small stores located in neighborhoods with historically low access to healthy foods. This may have resulted in overrepresentation of Oakland neighborhoods that surveyors were familiar with, or of neighborhoods with longer histories of lacking access to healthy foods. The findings of this research cannot be generalized to all corner stores in Oakland.

Another limitation is that although the HOPE Collaborative staff and community volunteers who conducted the surveys were trained, data collection was not systematic.

The survey data included many missing fields, which indicated that the surveyor skipped the question for unspecified reasons or did not know how to answer the question. In the corner store owner interview portion, missing data indicated that the surveyor was not able to locate the owner or alternate employee to interview on his/her visit. Surveyors were encouraged, but not required, to return to the store for a second attempt to interview the owner or alternate employee. When they did conduct a second attempt, sometimes the owner or alternate employee was still not present for an interview. The missing data in this study limited the sample size, which was relatively small to begin with. It also limited any conclusions that can be drawn from the analyses.

Finally, the findings of this study are descriptive and do not paint a comprehensive picture of the food environment in Oakland corner stores. The survey data assessed the availability of fresh produce and quality of the produce sold, but did not examine other important components of healthy food access, including availability of whole grain products or non- or low-fat dairy products. Furthermore, the survey data did not assess the availability of unhealthy foods and beverages like candy or sugar-sweetened beverages.

CONCLUSIONS

Despite the limitations of this study, to my knowledge it is the first to examine individual- and neighborhood-level characteristics of Oakland corner stores. It combines quantitative and qualitative data to provide insight into the food environment in and neighborhood environment surrounding a sample of corner stores located mostly in the

low-income areas of East and West Oakland. This study also sheds light on possible barriers to the stocking of healthy foods in these stores.

The formative research presented here was used to plan a Healthy Corner Store Project in Oakland. A pilot program was implemented in six Oakland corner stores by HOPE Collaborative beginning in 2014. The stores were selected based on the following criteria: owners' interest in participating in a healthy retail intervention; owners' understanding of the social goals of the program or owners' personal vision for his/her store that aligned with the program's goals; and the HOPE Collaborative staff's judgment of the owner's readiness for change.

Rigorous follow-up on the stores in the Healthy Corner Store Project is needed to assess the feasibility, effectiveness, and impact of the intervention. If shown to be successful, HOPE Collaborative's Healthy Corner Store Project will contribute to the research showing that interventions targeting urban corner stores are an increasingly important strategy to improve the food environment in low-income urban settings.

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Table 1 Characteristics of urban corner stores located in Oakland, 2013-14
*Total *n*'s differed due to missing data

Variable	*n**	%
Family business (% yes)	37 (n=43)	86.0%
Current owner has owned store for:		
0-5 years	12 (n=35)	34.3%
5-10 years	7	20.0%
10-20 years	9	25.7%
20+ years	7	20.0%
Store accepts CalFresh/EBT (% yes)	43 (n=48)	90.0%
Store is a WIC retailer (% yes)	6 (n=45)	13.3%
Ads for alcohol or tobacco on windows (% yes)	44 (n=56)	78.6%
Ads for SSBs on windows (% yes)	26 (n=56)	46.4%
% window area covered with ads:		
0-25%	23 (n=57)	40.4%
25-50%	10	17.5%
50-75%	15	26.3%
75-100%	9	15.8%
Exterior wall has 1+ holes, cracks, areas of water damage, dents, or visible leaks (% yes)	15 (n=54)	27.8%
Interior wall has 1+ holes, cracks, areas of water damage, dents, or visible leaks (% yes)	8 (n=50)	16.0%
Floor has 1+ holes, cracks, areas of water damage, dents, or visible leaks (% yes)	16 (n=52)	30.8%
Ceiling has 1+ holes, cracks, areas of water damage, dents, or visible leaks (% yes)	16 (n=52)	30.8%
Windows have 1+ cracks or holes (% yes)	6 (n=54)	11.1%
Windows have 1+ missing window panes (% yes)	1 (n=53)	1.9%
Store's greatest source(s) of revenue:		
Alcohol and tobacco products	12 (n=33)	36.4%
Multiple sources, including alcohol and tobacco products	5	15.2%
Food	6	18.2%
Non-alcoholic beverages	5	15.2%
Multiple sources, excluding alcohol and tobacco products	5	15.2%
Store has a prepared food counter:		
Cold food	16 (n=52)	30.8%
Hot food	1	1.9%
Cold and hot food	9	17.3%
Interviewee is the owner (% yes)	18 (n=54)	33.3%
If not owner, interviewee is:		
Staff member	25 (n=29)	86.2%

Family member	3	10.3%
Friend	1	3.4%
There is community demand for healthy food (interviewee's perception) (% yes)	35 (n=39)	89.7%
Store stocks healthy food (interviewee's perception) (% yes)	32 (n=45)	54.2%
Store sells fresh produce (% yes)	25 (n=59)	42.4%
Quality of the produce for sale:		
Poor or fair	5 (n=23)	21.7%
Good or excellent	18	78.3%
Fast food restaurants located nearby (% yes)	18 (n=59)	30.5%
Supermarkets located nearby (% yes)	6 (n=59)	10.2%
Schools located nearby (% yes)	35 (n=59)	59.3%
Easy access to public transportation nearby (% yes)	41 (n=59)	69.5%
Housing projects located nearby (% yes)	14 (n=59)	23.7%
Other corner stores located within 1 block radius (% yes)	44 (n=59)	74.6%
Interviewee's perception of the neighborhood:		
Positive	25 (n= 41)	61.0%
Negative	6	14.6%
Mixed thoughts	10	24.4%
Other places interviewee's customers shop:		
Supermarket chain	7 (n=34)	20.6%
Discount grocery store	12	35.3%
Dollar store	3	8.8%
Other small/local stores	12	35.3%
Competition with previously mentioned stores (interviewee's perception) (% yes)	13 (n=32)	40.6%

Table 2 Data for Chi-Square Test of Independence
[+] Used Fisher's exact test due to one or more cells with expected frequency of 5 or less
*Significant at $p < .002$

Variable	Availability of Fresh Produce		Quality of Fresh Produce	
	X^2 value	p-value	X^2 value	p-value
Family business	+	0.39	+	1.00
Number of years current owner has owned store for	+	0.10	+	0.83
Store accepts CalFresh/EBT	+	0.64	+	0.53
Store is a WIC retailer	+	0.20	+	1.00
Ads for alcohol or tobacco on windows	0.38	0.54	+	1.00
Ads for SSBs on windows	0.14	0.71	+	1.00
% window area covered with ads	+	0.09	+	0.64
Exterior wall has 1+ holes, cracks, areas of water damage, dents, or visible leaks	0.00	0.95	+	0.13
Interior wall has 1+ holes, cracks, areas of water damage, dents, or visible leaks	+	1.00	+	0.54
Floor has 1+ holes, cracks, areas of water damage, dents, or visible leaks	1.84	0.18	+	0.60
Ceiling has 1+ holes, cracks, areas of water damage, dents, or visible leaks	0.22	0.64	+	0.61
Windows have 1+ cracks or holes	+	0.07	+	0.28
Windows have 1+ missing window panes	+	0.42	+	1.00
Store's greatest source(s) of revenue	+	0.33	+	0.90
Store has a prepared food counter	+	0.06	+	0.54
Interviewee is the owner	0.64	0.43	+	1.00
If not owner, other subject interviewed	+	0.53	+	0.38
There is community demand for healthy food (interviewee's perception)	+	1.00	+	1.00
Store stocks healthy food (interviewee's perception)	+	0.00*	+	1.00
Store sells fresh produce			+	0.19
Quality of the produce for sale	+	0.19		
Fast food restaurants located nearby	1.84	0.18	+	0.62
Supermarkets located nearby	+	0.39	+	1.00
Schools located nearby	2.30	0.13	+	1.00
Easy access to public transportation nearby	0.13	0.72	+	1.00
Housing projects located nearby	+	0.07	+	1.00
Other corner stores located within 1 block radius	0.99	0.32	+	0.29
Interviewee's perception of the neighborhood	+	0.60	+	1.00

Other places interviewee's customers shop	+	1.00	+	0.51
Competition with previously mentioned stores (interviewee's perception) (% yes)	1.35	0.25	+	0.55

Appendix A: HOPE Collaborative Corner Store Survey

Date: _____

Time: _____

Initials: _____

HOPE Collaborative Corner Store Survey

Store name:

_____

Address:

_____

A. Environmental observation
1. Description of the types of buildings near to the store:
   □ Fast Food Vendors
   □ Supermarkets
   □ Residential
   □ Schools
   □ Public Parks/Playgrounds
   □ Easy Access to Public Transportation (Subway, Bus)
   □ Healthcare Centers
   □ Housing projects

2. Other corner or convenience stores nearby (within a one block radius)?
   □ YES
   □ NO

3. Store Location
   □ Corner Store
   □ Freestanding
   □ Middle Lot

4. Advertising in windows?
   □ Sugar Sweetened Beverages
   □ Tobacco
   □ WIC
   □ Food Stamps/EBT
   □ Lottery
   □ ATM

      □ Bodega Initiatives: _____

      □ Alcohol

      □ Other:_____

5. % of window area covered with advertisements (take picture):
      □ 0-25%
      □ 25-50%
      □ 50-75%
      □ 75-100%

6. Hours of Operation in window?
      □ YES
      □ NO

7. If yes, what are they?

_____

8. Sales of goods outside?
      □ YES
      □ NO

9. If yes, what are they?

_____

B. Store Structure and Finishes
1. Exterior Wall has 1 or more holes, cracks, areas of water damage, dents, or visible leaks:
      □ YES
      □ NO

2. Interior Wall has 1 or more holes, cracks, areas of water damage, dents, or visible leaks:
      □ YES
      □ NO

3. Floor has 1 or more holes, cracks, areas of water damage, dents, or visible leaks:
      □ YES
      □ NO

4. Ceiling has 1 or more holes, cracks, areas of water damage, dents, or visible leaks
      □ YES
      □ NO

5. Windows have 1 or more cracks or holes:
      □ YES
      □ NO

6. Windows have 1 or more missing window panes:

□ YES
□ NO

7. Other, please describe:

_____

C. Produce observation

1. Does the store sell fresh produce?
□ Yes
□ No
□ Yes, but only onions, potatoes, lemons or limes

2. What is the quality of the produce for sale?
□ Excellent – looks like whole foods
□ Good – looks fresh and I would want to buy it
□ Fair – some damage or rot, I buy in a pinch
□ Poor – damaged or rotten, I would not buy produce here

D. Deli observation

1. Is there a prepared food counter?
□ Hot
□ Cold
□ Both
□ Neither **(IF NEITHER, SKIP TO SECTION E)**

2. Deli menu posted?
□ YES
□ NO

3. Roughly how much space in the store does the prepared food counter take up?
□ 0%
□ 10-30%
□ 30-50%
□ Over 50%

4. Is there space for customers to sit and eat their food (ie. counters or tables?)
□ YES
□ NO

INTRODUCE YOURSELF TO THE OWNER OR EMPLOYEE.

Owner/Employee Name: _____

E. Introductory questions
    1. Are you the owner?
        □ YES
        □ NO (IF NO, SKIP TO 7)

    2. How long have you owned this store? _____

    3. How long has this store been here? _____

    4. Have you owned other stores in the past?
        □ YES
        □ NO (IF NO, SKIP TO 6)

    5. IF YES, for how long? _____

    6. How have you changed the store since you bought it?

        □ Physical Renovations – IF YES, CIRCLE ALL THAT APPLY:
            a.   Building
            b.   Lighting
            c.   Refrigeration
            d.   HVAC
            e.   Plumbing
            f.   Flooring
            g.   Deli Systems
            h.   Other mechanical or structural systems – please specify:

                _____

        □ Equipment Renovations
        □ Stock Changes
        □ Customer Service Changes

    7. If not, who are you? (IF OWNER, SKIP TO 8)
        □ Employee
        □ Other:_____

    8. Is this a family business?
        □ YES
        □ NO

    9. Is this one of multiple locations?
        □ YES
        □ NO

10. Does your store accept EBT/CalFresh?
   □ YES
   □ NO

11. Are you part of the WIC program?
   □ YES
   □ NO

12. Do you currently stock healthy food?
   □ YES
   □ NO

13. Why or why not?

_____

14. What would convince you to start or to expand your healthy food options?

_____

15. **(IF HOURS ARE NOT LISTED IN THE WINDOW)** What are your business hours?

_____

16. What are your busiest times/days? _____

17. What are your source(s) of greatest revenue?

_____

18. **IF DELI IS OPERATIONAL:**
   a. What are your best selling items from the deli menu?

   _____

   b. Use stove?
      □ YES
      □ NO

   c. Use grill?
      □ YES
      □ NO

   d. Use grease traps?
      □ YES
      □ NO

F. Community perceptions

    1. What is your perception of the neighborhood?

_____

    2. Where else do your customers shop?

_____

    3. Do you compete with those stores?

_____

    4. Does the community want healthy foods?
        □ YES
        □ NO

    5. Why or why not?

_____

    6. What other retail and services does the neighborhood need?

_____

G. Future Visions

    1. How do you envision your business in 5 years? 10 years? What do you want it to look like?

    2. What do you need in order to get there? (ex – infrastructure, money, new refrigerator, etc.)

_____

    3. Are you willing to spend time and some of your own money to make those changes? If so, how much would you be willing to spend?

_____

    4. Are you willing to take out a loan?

_____

H. Customer observation

1. How many customers were in the store at the same time as you?
   □ Fewer than 5
   □ 5-10
   □ 10-20
   □ Over 20

2. Other observations?

_____