A Qualitative Study of the Experience of Residing in a Healthy Food Priority Area

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Abstract

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Background: The 2019 Seattle Healthy Food Availability and Food Bank Network Report identified several areas in Seattle, Washington, including the High Point community, as healthy food priority areas, or places to prioritize for increasing access to healthy food.

Objective: To understand the lived experience of food access for High Point residents and if their perceptions of the food environment match quantitative accounts of the food environment.

Methods: We interviewed 15 individuals who self-identified as living or working in High Point. Questions focused on five domains of food access: availability, accessibility/convenience, affordability, acceptability, and accommodation. We analyzed data using a directed content analysis approach.

Results: Perceptions of the food environment largely matched quantitative accounts. Proximity to stores, transportation mode, and cost all shaped decisions about where to shop for food. The

local food bank played an important role in making food access easier over time. Participants had varied suggestions for ways to improve the neighborhood, both related and unrelated to the food environment. Participants did not discuss topics within the domains of acceptability, accommodation, and availability to the same extent as topics within the domains of accessibility/convenience and affordability.

Conclusions: Healthy food priority areas might have other pressing needs beyond food access, making partnering with community members an important step in understanding community needs. The domains of accessibility and affordability may play the greatest role in influencing food access and food-related decision-making, and within the domain of accommodation, the desire for culturally appropriate foods may be more pressing than wanting or needing adjusted store hours or acceptance of different types of payment.

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INTRODUCTION

There are numerous benefits of a healthy diet rich in fruits and vegetables, including lower risk for cardiovascular disease and obesity,[1,2] type-2 diabetes,[3] and all-cause mortality.[2] Despite these known benefits, most U.S. adults do not eat the recommended daily amount of fruits and vegetables,[4] and neighborhood disparities in healthy food access may exacerbate this problem. Research indicates residential property values are positively associated with diet quality,[5] and that neighborhood socio-economic status is positively associated with fruit and vegetable consumption.[6,7] While research suggests an association between better access to large chain grocery stores and healthier diets,[8] low-income neighborhoods often have fewer chain supermarkets in comparison to middle-income neighborhoods, as do neighborhoods with higher proportions of African American residents in comparison to neighborhoods with higher proportions of White residents.[9]

Much of the research on disparities related to neighborhood food environments has focused on food deserts and physical distance to grocery stores,[10] despite new evidence indicating food swamps (areas in which unhealthy food retailers outnumber healthy food retailers) may better predict obesity rates,[11] and that a relationship potentially exists between fast food restaurant accessibility and prevalence of obesity, with people with obesity more likely to reside in communities with medium or high accessibility of fast food.[12]

Recently, a more expansive definition of the food environment includes five dimensions of access in total: availability, accessibility/convenience, affordability, acceptability, and accommodation.[10,13] Availability encompasses the sufficiency of the healthy food supply; accessibility encompasses proximity of and ease of traveling to food stores, with geographic

distance and travel time as important measures; affordability encompasses price; acceptability encompasses attitudes about the food environment, including if food meets personal requirements; and finally, accommodation encompasses individuals' requirements for food and food stores, such as store hours.[13]

Building on the expanded definition of the food environment, the 2019 Seattle Healthy Food Availability and Food Bank Network Report created a new metric using three factors—income, multi-mode travel times to healthy food retailers, and presence of less healthy food retailers (e.g., fast food)—to identify healthy food priority areas, or areas to prioritize for increasing access to healthy, affordable food.[10] Healthy food priority areas are low-income areas with a large amount of unhealthy food options and long travel times to retailers providing healthy options. The report identified several healthy food priority areas in Seattle, Washington, including the High Point neighborhood.

While the 2019 report quantitatively documented dimensions of the food environment in healthy food priority areas, we know little about the lived experience of people in healthy food priority areas, and if their perceptions of healthy food availability match quantitative accounts of healthy food availability. While Ko et al. (2018) found perceptions of food availability and access might be different than some quantitative assessments of the food environment, the study setting was rural, agricultural, and predominately Hispanic communities.[14] Further research is still needed on whether perceptions differ in urban communities as well.

There is a particular need for qualitative research; while there are numerous systematic reviews of quantitative literature regarding the food environment, to my knowledge, there is only one systematic review of qualitative literature, a 2017 review of 38 papers examining how the local food environment affects behavior.[15] Moreover, while research has heavily examined the

dimensions of affordability, availability, and accessibility, far fewer studies have focused on the domains of acceptability and accommodation,[13] and research is also need to inform whether the five dimensions of food access actually resonate with people in healthy food priority areas as the most relevant dimensions.

The purpose of this exploratory study was to understand the lived experience of food access for High Point residents and employees, and to understand if their perceptions of the food environment match quantitative accounts of High Point's food environment. Additionally, this study sought to understand if members of the community are concerned with increasing healthy food availability and access. Study findings can inform interventions and local policies aimed at fostering healthy food environments in healthy food priority areas.

Context: The High Point Neighborhood

The High Point neighborhood is located in West Seattle and is part of the corridor around the Duwamish waterway. Situated between the neighborhoods of West Seattle, Fauntleroy, and Delridge, High Point was originally established for defense workers, but beginning in 2000, it was redeveloped into a mixed-income neighborhood with the creation of new housing designed to be affordable for varied income levels.[16] High Point encompasses 34 city blocks, and is home to Seattle Housing Authority's "largest family community."[16] Greater than 25% of people in High Point live below 200% of the federal poverty level.[10]

METHODS

The University of Washington IRB determined the present study to be exempt research.

Interview Guide Development

We created a draft interview guide by designing interview questions and probes to elicit responses within the five domains of food access: availability, accessibility, affordability,

accommodation, and acceptability.[13] For example, we asked "Are there any foods you want to get or purchase, but can't?" to elicit responses in the domain of either affordability or accommodation, and "From your perspective, how does how close you are to food stores impact the food you eat?" to elicit responses within the domain of accessibility [see Table 1 for examples of questions mapped to each domain].

We solicited feedback about the interview guide from community partners at High Point's local food bank. Discussions ensued between the researchers and staff, and based on feedback, we added a question focused on changes to the neighborhood food environment over time. Midway through data collection, we determined the study guide was not sufficiently gathering information on individuals' lived experiences in their neighborhood, both related and unrelated to the food environment. For this reason, for the last five interviews, we added two questions ("How long have you lived in this neighborhood?" and "What has your experience in this neighborhood been like so far?").

Sample

We recruited a convenience sample with the help of contacts at two community organizations: the neighborhood food bank and a local organization focused on health, education, and family services. Through conversations with key stakeholders, we identified these organizations as having contact with many neighborhood residents. We also reached out to other community organizations (e.g., a community housing organization) and posted flyers at the local public library branch, but ultimately did not recruit participants from these locations.

Eligibility criteria included self-identification as living in High Point or self-identification as an employee in High Point, and being over 18 years of age. At the food bank, we were unable

to employ translators, so eligibility criteria additionally included speaking English. At the other community organization, we paid a staff member to provide translation for Somali speakers.

Recruitment and Data Collection

At the health, education, and family services organization, staff directly recruited participants by asking people engaged in activities on the days of interviews if they wanted to participate, and by calling key community members in advance and asking them if they would like to participate. Interviews took place on-site in an available room. At the food bank and with the permission of food bank staff, we approached clients in the food bank's waiting area and determined eligibility and interest. Food bank staff also recruited clients and volunteers by word of mouth. Interviews took place on-site in spare offices.

We conducted semi-structured interviews in January 2020 and received verbal consent to conduct and record interviews. Each participant received an ID number to maintain anonymity. An on-site staff member at the community organization provided translation for three interviews with Somali-speaking participants. Interviews lasted 20 minutes on average, and each participant received either a $20 gift card or $20 cash.

Demographic Survey

Participants completed a nine-question paper demographic survey following their interviews. While the majority independently completed the survey, three participants had the on-site staff member translate questions and record their answers, and one participant requested her helper complete the survey on her behalf. The interviewer also helped participants with limited English literacy as necessary.

Data Analysis

We transcribed all interviews and used qualitative analysis software (Dedoose V. 8.3.17) for coding and analysis. We analyzed data using a directed content analysis approach.[17] This approach involves developing initial codes based on prior research and theory, and then creating new codes to capture emergent themes that do not fit with the original coding scheme.[17] We created an initial coding structure by developing codes within each of the five domains of food access,[13] and later added two additional domains ("Neighborhood level: areas for improvement and changes over time" and "Other") to capture emergent themes unrelated to the five domains of food access.

After the initial codebook development, the primary coder and secondary coder independently coded one transcript, reconciled differences, and updated the codebook based on discussion. The coders repeated this process with five transcripts, at which point they achieved an inter-rater reliability greater than 80%. Using the finalized codebook, the primary coder single coded remaining interviews and re-coded interviews that were double-coded before codebook finalization.

In May 2020, we presented overarching themes to four community stakeholders to corroborate findings.

Table 1. ***Domain Mapping of a Sample of Interview Questions and Probes***

Domain	**Questions or Probe**
Introductory Questions	Can you tell me about your favorite foods to eat?
	What has your experience in this neighborhood been like?
Availability: sufficiency of the healthy food supply	Can you walk me through a typical day of getting food in your household?
	Do you feel healthy food access is a concern of your community?

Accessibility/Convenience: proximity of and ease of traveling to food stores, with geographic distance and travel time as important measures	From your perspective, how does how close you are to food stores impact the food you eat?
Affordability: price	Can you tell me about any food assistance programs you use?
	Are there any foods you want to get or purchase, but can't?
Accommodation: individuals' requirements for food and food stores, such as store hours or culturally relevant food	What makes it hard to get food in your neighborhood?
	Are there any foods you want to get or purchase, but can't?
Acceptability: attitudes about the food environment, including if food meets personal requirements	City council members are talking about how to improve access to food in your neighborhood. What are some things you would like to see changed?

RESULTS

Fifteen people participated in the study. On average, participants had lived in the High Point neighborhood for 9.1 years. While participants ranged in age, education level, family size, and marital and employment status, the majority were female (n=13) and reported a household income less than $20,001 (n=12). See Table 2 for complete participant demographics.

While we designed interview questions and probes to elicit responses within all five domains of food access,[13] participants did not discuss topics within the domains of acceptability (attitudes about the food environment, including if food meets personal requirements), accommodation (individuals' requirements for food and food stores, such as store hours of operation or having culturally relevant food), and availability (sufficiency of healthy food supply) to the same extent as topics within the domains of accessibility (proximity/ease of traveling to food stores) and affordability (price of food). Within the domain of acceptability,

participants occasionally referenced variable food quality and quantity at the local food bank as not meeting personal standards, and a few brought up wanting to shop at a membership-only retail warehouse because of the option to buy in bulk, but otherwise, participants did not discuss acceptability. Similarly, within the domain of accommodation, only two people discussed a desired change in store hours, although various participants discussed wanting food stores to accommodate healthy diets and culturally appropriate food. For the domain of availability, participants discussed availability of healthy food when prompted, but few continuously or organically brought up topics related to the supply of healthy food.

Four primary themes emerged from analysis: (1) proximity and transportation mode shaped most food-related decisions; (2) participants perceived healthy food as available but expensive; (3) the neighborhood food bank played a central role in changing neighborhood food access over time; and (4) participants' suggestions for ways to improve the neighborhood both included and spanned beyond the food environment.

Theme 1: Proximity and transportation mode shaped most food-related decisions

For the majority of participants, proximity and transportation mode were the dominant factors influencing where, when, and how frequently to shop for food. While proximity itself was important, it mattered most in relation to participants' transportation mode: "[…] if you got a car, you know, you got major stores around in your proximity. […] Somebody with a vehicle, it's not as challenging versus somebody who has to depend on like, access to transportation. […]." Consistent with the importance of proximity and transportation mode, participants referenced these factors in response to questions about what makes it hard to get food in the neighborhood and how access has changed over time:

> "Well, being an elderly, you know, it depends on if you have transportation or if you have an aid or if you have a bus pass or, you know, every, it varies on everybody's situation. So, you know, me, I have [a helper]."

A chain drug store played a unique role in the food environment due to its proximity within the neighborhood and accessibility for people without cars. While some neighborhood residents could walk to a local supermarket, a trip there necessitated going down and up a large hill, making the drug store an easier and faster option accessible regardless of transportation mode. Yet, although some participants walked to the drug store to shop for quickly-needed items, many expressed disappointment that the store in closest walking distance sold predominately unhealthy options. Two participants felt disappointed the drug store had stopped providing fresh produce, with one participant expressing that the drug store discontinued a fresh foods program because they "didn't sell enough" of the fresh items.

Finally, and as expected, proximity and transportation mode influenced travel times to food stores. Participants who utilized public transportation emphasized the variability of travel times: "It depends on which direction you're going but the average... you're talking about, you talk about wait time and actually getting there—could be like roughly anywhere from 20 minutes to an hour"; "Sometimes one way you can walk, it takes 40 minutes to get to store. And then when you come back, a lot of groceries, so cannot walk back. So I had to catch a bus so it takes two hours, couple of hours […]." Participants also expressed the need to have a cart or bags to help transport groceries, and some discussed needing to plan food shopping around work schedules and other activities.

When participants shopped at stores that were not in close proximity or shopped at multiple stores, they typically did so to save money or to seek out cultural food (e.g., halal meats). “Our culture store is far away from here. But for Americans food is everywhere.”

Theme 2: Participants perceived healthy food as available but expensive

Along with proximity and transportation mode, food prices influenced shopping decisions. Some participants did not shop at the most proximate and/or within walking distance stores due to price (“we can walk to [a local supermarket] but we cannot afford”), and multiple participants decided where to shop based on sales and traveled farther for better deals. Participants named the ability to buy in bulk or save money via membership as a reason to shop at a membership only retail warehouse. Additionally, while the majority believed food access in the neighborhood had remained the same or gotten easier over time, three of the four participants who believed access had gotten harder cited the fact that food was more expensive now.

Participants wanted to eat healthy foods but reported high costs, with a quarter of participants reflecting that more money would enable them or their families to purchase healthier foods (other participants reflected that more money for food would enable greater variety or the ability to occasionally purchase special treats). With the high cost of healthy food, participants appreciated that the neighborhood food bank supplied fresh fruits and vegetables. However, although participants were satisfied with the food bank, some noted variable fresh food quality and quantity.

One participant also discussed the intersection of cost and quality at local stores:

> “Sometimes it's the quality of the food, especially over in White Center, there isn't great quality. Like, you can tell there's like pesticides, or like wax all over the foods so it isn't like the great, healthier options for healthy foods in itself, or

> they'll be way too expensive at a really great grocery store who have great quality. So, just depending on which."

Theme 3: The neighborhood food bank played a central role in changing neighborhood food access over time

Nearly half of participants discussed the food bank as a primary reason why access to food in High Point has gotten easier over time. These participants ranged in age, education status, and family size. While ten of our fifteen interviews took place at the food bank with food bank volunteers or clients, three of the five participants interviewed at the other local organization also referenced the importance of the food bank, with two participants volunteering and/or utilizing the food bank and one participant identifying the food bank as a reason access to food in the High Point community has changed over time.

Participants felt the food bank served "hundreds and hundreds" in the community. Participants appreciated the food bank's proximity within the neighborhood, as well as its varied services, such as providing meals to homebound community members. One participant even suggested that because the neighborhood has the food bank, the city should focus resources on other areas (e.g., education and activities for children) rather than the food environment.

The majority of participants referenced satisfaction with the food bank's services, citing availability of dairy free items and halal chicken as well as appreciation of the food bank's grocery store model for "allow[ing] people to go to what's most important to them first" and for "[getting] rid of some of the lack of dignity that sometimes was involved when people had to wait in a line and volunteers were just trying to make them take, make you take things whether you wanted them or not."

Though the food bank serves large numbers of community members, three participants referenced stigma associated with shopping there: "[…] a lot of the community people doesn't want to come [to the food bank]. They feel like, I don't know, some people feel shame, I don't know, coming to food bank."

Theme 4: Participants' suggestions for ways to improve the neighborhood both included and spanned beyond the food environment

Participants reflected on solutions to improve the neighborhood food environment. A majority felt community residents should be part of conversations focused on improving food access and availability for the community. Participants' most common suggestion was increasing the number of stores in High Point or creating an epicenter or superstore with both culturally appropriate foods (e.g., Halal meats) and staple items. Participants also discussed wanting to ensure all community members know about and feel comfortable utilizing the food bank and other community organizations.

Participants had many suggestions spanning beyond the food environment for ways to improve the neighborhood. Common suggestions included increasing social services, programs and activities for youth and children, and improving transportation and safety. However, three participants discussed safety as something they liked about the neighborhood. Only one participant directly suggested the need for structural change:

> "Well, we can have more stores and you know, and family owned stores and support local, like, you know, businesses and you know, all that jazz. But I think what it really, really comes down to is a structural change. Um, like an equitable change where it's like, are we really… are we really like giving enough resources to specific communities to strive, you know […]."

Table 2. *Demographic characteristics of participants (N=15)*	
Variables	**n (%)**
Number of years living in neighborhood	9.1 (6.5)[1, 2]
Food bank patronage	12 (80)
Household size	3.6 (2.1)[1]
Gender	
Female	13 (86.7)
Male	2 (13.3)
Age Range	
18-34	2 (13.3)
35-44	4 (26.7)
45-64	2 (13.3)
55-64	2 (13.3)
65+	5 (33.3)
Annual Household Income[2]	
<$10,000	8 (57.1)
$10,001-$20,000	4 (28.6)
$40,001-$50,000	1 (7.1)
>$60,000	1 (7.1)
Employment[3]	
Employed	8 (53.3)
Out of work and looking for work	2 (13.3)
Student	1 (6.7)
Retired	4 (26.7)
Unable to work	1 (6.7)
Marital Status	
Married/Domestic Partnership	5 (33.3)
Divorced/Separated	5 (33.3)
Single, Never Married	4 (26.7)
Widowed	1 (6.7)
Education[2]	
High school graduate	2 (13.3)
Some college vocational school	5 (33.3)
College degree	2 (13.3)
Advanced degree	2 (13.3)
Other	3 (20)
Race/Ethnicity[3]	
Non-Hispanic White	4 (26.7)
Non-Hispanic Black or African American	8 (53.3)

Non-Hispanic Asian, Native American, American Indian, or Alaska Native[4]	3 (20.0)

[1]*Mean and Standard Deviation.*
[2]*One non-response.*
[3]*Participants could check multiple options.*
[4]*Categories are combined to preserve anonymity due to small sample size in one of the categories.*

DISCUSSION

A majority of participants identified proximity, transportation, and cost as the most influential factors affecting food-related decisions and access to healthy food. For participants relying on public transportation, travel times to food stores were often variable and long. The majority of participants believed food access in High Point has either remained the same or improved over time, in large part due to the presence of the local food bank. Participants' suggestions for ways to improve food access in the neighborhood included increasing the number of stores and ensuring people know about the food bank and its resources. Participants additionally suggested other areas to focus resources on, such as programs for youth.

This study's findings resonated with community stakeholders and are largely consistent with those of other qualitative studies, which have found cost[18,19] and geographic location[19] to be important factors shaping shopping decisions and access to healthy food. Additionally, this study's results largely indicate that subjective perceptions of High Point's food environment largely matched quantitative data from the 2019 Seattle Healthy Food Availability and Food Bank Network report, such as long travel times to healthy food retailers and short travel times to convenience stores providing less healthy options (e.g., the chain drug store).[10] The finding that subjective and objective perceptions largely matched is in contrast to findings of Ko et al.[14] that rural communities' perceptions of the food environment potentially differed from some of the quantitative assessments of the food environment.

This study's findings also support the 2019 Seattle Healthy Food Availability and Food Bank Network report's qualitative data from focus groups with food bank participants, namely that clients desire a dignified experience, quality food, and expanded hours of operation and other services to improve community access.[10]

This study also elucidated new findings with important ramifications for local policy. Community residents wanted to be involved in decisions about the food environment, and many had other areas they would rather see the city support, such as family programming. This study's findings suggest that healthy food priority areas might have other pressing needs beyond food access, and that partnering with community members is important for understanding community needs.

Additionally, this study's findings contribute to current literature on the relative importance of the five domains of food access. Since relatively few studies have focused on the domains of accommodation and accessibility,[13] we intentionally asked questions designed to elicit responses within those domains. However, participants did not discuss topics within the domains of acceptability, accommodation, and availability to the same extent as accessibility and affordability. While these findings suggest that the domains of accessibility and affordability play the greatest role in influencing food access and food-related decision-making, another explanation is that these domains are easier to measure, which is consistent with the fact that the majority of research on the food environment has focused on affordability, availability, and accessibility.[13] Moreover, in sampling from the local food bank, we likely heard from community members with limited budgets for food spending, which might lead to a prioritization of affordability. In the broader community, residents might be more concerned with other domains of food access.

Our data also suggest that within the domain of accommodation, desires for culturally appropriate foods and healthy foods are more pressing than wanting or needing stores to adjust their hours of operation or accept different payment types. When participants shopped at multiple stores or distant stores, they often did so to seek out cultural foods. In contrast, no participants discussed payment as an area in which they desired greater accommodation.

Limitations

This study has several limitations. First, while we intentionally asked questions designed to elicit responses about each of the five domains of food access, some domains had more directive questions than others, which could have inflated the relative importance of these domains.

Second, approach bias and social desirability bias might have affected responses, particularly for questions regarding the food bank. Food bank staff were instrumental in recruitment and may have selected participants based on participants' attitudes towards the food bank. Additionally, two-thirds of interviews took place at the food bank, and participants may have overstated the food bank's significance to the community and/or their personal satisfaction with the food bank. However, participants who were not interviewed at the food bank also discussed its important role in the community, indicating findings of the food bank's importance were likely not entirely due to social desirability or approach bias.

Third, because study inclusion criteria consisted of self-identification of living in the High Point neighborhood, some participants might not have lived within city-defined neighborhood boundaries. Rather than checking participants' addresses, we chose self-identification as inclusion criteria to maintain participant privacy and out of recognition that self-

identification with a community is perhaps more important than living within city-defined boundaries.

Fourth, because the study recruited from two sites that provide food and/or resources, this study potentially missed community members who are struggling with food access but are not using community resources. To account for this limitation, we asked participants "What do you think the experience of accessing food is like for other people in the neighborhood? Do you know of people who are struggling?"

Finally, 12 participants (85.7%) reported household incomes below $20,001. While our predominately low-income sample was consistent with the fact that High Point was identified as a healthy food priority area in part due to higher poverty levels, future research should prioritize recruiting an economically diverse sample to investigate whether the relative importance of the five domains of food access changes based on income.

CONCLUSION

Interviews with members of Seattle's High Point community largely revealed that perceptions of the food environment matched quantitative accounts. Interviews reflected the importance of proximity to stores, transportation mode, and cost in shaping decisions about where to shop for food, as well at the importance of the local food bank in making food access easier over time. Participants had varied suggestions for ways to improve the neighborhood, both related and unrelated to the food environment.

Our findings suggest the domains of accessibility and affordability may play the greatest role in influencing food access and food-related decision-making, and within the domain of accommodation, the desire for culturally appropriate foods may be more pressing than wanting or needing adjusted store hours or acceptance of different types of payment.

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