

Investigation of the Food Choice, Promoters and Barriers to Food Access Issues, and Food Insecurity Among Low-Income, Free-Living Minnesotan Seniors

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ABSTRACT

Objective: Investigate food choice, food access, and food insecurity among seniors.

Methods: Eight focus groups were conducted in 2 counties with high and low Supplemental Nutrition Assistance Program (SNAP) participation rates. A total of 62 seniors (aged ≥ 60 years) were recruited and each attended 1 focus group at a community center. The sample was 79% female and most were Caucasian (91%), similar to state demographics. The focus group themes of how seniors make food choices and access food, and food insecurity perceptions among this population were identified based on discussion commonalities. For quantitative data, $P < .05$ was significant.

Results: Five themes emerged: (1) former experiences affecting eating behaviors; (2) financial and food security driving use of food assistance programs; (3) food access strategies: restaurants, retail markets, and alternative sources; (4) physical changes associated with aging influencing food access and intake; and (5) social influences that play a role in decision making.

Conclusions and Implications: Both SNAP and congregate dining offer food assistance to seniors, but SNAP use was considered unacceptable by some seniors living in county 1 because of the negative stigma attached to the program or because they lacked program knowledge about income criteria. More effort needs to be made to educate seniors about SNAP. It is important to gain insight into how food insecurity affects their food choices.

Key Words: seniors, food access, food security, food choice, health (*J Nutr Educ Behav.* 2016;48:397-404.)

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INTRODUCTION

The current cohort of older adults continues to grow as the baby boom generation reaches retirement.¹ In 2000, 16.3% of the US population was aged ≥ 60 years; this number is expected to increase to 22.2% by 2020.² With the increasing prevalence of those aged ≥ 60 , it is imperative to focus on their nutritional needs and how they access food. Adequate nutrition has been shown to improve health and reduce acceleration of the development of chronic diseases³ and could reduce health care costs among elderly people.⁴ Having limited access to food

places seniors at greater risk for poor nutrition.⁵ In 2013, nearly 9% of food-insecure households were occupied by seniors.⁶ Research has addressed issues related to the food insecurity problem in this population; however, these studies lack qualitative⁷⁻¹⁰ and recent data.⁸⁻¹⁰

Researchers have suggested plausible barriers, including a lack of social support, limited neighborhood walkability,⁵ seasonal variation,⁷ and functional impairments.⁹ However, only Lee and Frongillo¹⁰ considered the use of food assistance options in their analyses. Furthermore, Smith and Miller¹¹ noted that reciprocal relationships (in-

dividuals sharing excess food with others) could also be an alternative source of food. These alternative food sources may contribute to a decreased need for the Supplemental Nutrition Assistance Program (SNAP), a program that provides money for low-income Americans to buy food, and could contribute to low SNAP participation in some areas. With only 1 in 3 eligible seniors using SNAP nationwide, decreased use may also be attributed to stigma in using the program.^{10,12} This study investigated food security, food access, and food choice among free-living, lower-income seniors who lived in counties with a high and low SNAP participation rate, using qualitative methodology.

METHODS

Study Population and Design

Counties were selected based on SNAP participation rates (1 with high rates and 1 with low ones), using the 2013 Rural-Urban Continuum Codes (RUCC). Counties had an RUCC of

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1, signifying that both counties were located in a metro area with 1 million or more people.¹³ As of 2012, participation rates in county 1 were lower than in county 2, with 59% and 72% of eligible seniors using SNAP, respectively. Opinions were gathered to understand why SNAP usage rates differed between the 2 urban counties with the same RUCC.

Seniors aged ≥ 60 years, who had the ability to shop, were recruited through flyers and sign-up sheets at senior congregate meal sites, senior apartment homes, and community centers. In 2014, 2 researchers conducted 8 focus groups with 4 groups in each of the 2 counties. Discussions lasted about 90 minutes. One researcher facilitated the discussion while the other took notes and taped them with audio recorders.

A list of open-ended questions used during each focus group was developed by the researchers and approved by a review committee. Questions were developed to obtain information on food choices, shopping strategies, food access points, and food security issues using personal, behavioral, and environmental constructs of Bandura's¹⁴ Social Cognitive Theory (for examples of questions, see Table 1).

Seniors provided information about age, income, education, food security status, and use of food assistance programs. Following standard procedures, each participant was weighed and measured for stature (with outer clothing and shoes removed¹⁵) to calculate body mass index (BMI) as weight divided by height squared (kg/m^2). The University of Minnesota's Institutional Review Board approved the study, informed consent was obtained, and seniors were given a small cash incentive.

Focus Group Analysis

All discussions were transcribed verbatim and both researchers independently analyzed them using an open coding method.¹⁶ Transcripts were first read to gain an overall understanding of the focus group, and then each line was coded for concepts and ideas generated from the discussion. After independent analysis, researchers compared codes and reconciled minor discrepancies. Themes were then identified from the most prevalent codes found among the 8 transcriptions.

Table 1. List of Focus Group Questions by Topic for Senior Focus Groups

Icebreaker

What is your favorite food and why?

Food choices

What are mealtimes like in your household?

Tell us about who you live with.

Who prepares meals and snacks?

How do you decide what to eat? How does health influence your eating behavior?

Please describe what your typical meals look like (breakfast, lunch, dinner).

Where do you eat most of your meals?

How has your cooking changed as you have aged? Describe any changes in your food preferences.

Shopping strategies

Tell us about shopping. How do you decide what to buy?

What factors affect your food purchases? How often do you shop?

What stores do you usually grocery shop at? How is the overall selection?

Are the stores easily accessible? How do you usually get to the store (car, bus, taxi, etc)?

How affordable is the selection? What strategies do you use to save money?

On what foods do you spend the most money? What are priority foods for you?

How would you change stores in your area?

Food security

How do you manage your finances around food?

How do you allocate your money? How much goes toward food?

Do you have enough money for food? If not, where do you get food from?

Do you receive SNAP vouchers? How important are they to you?

What encourages you to use SNAP?

If you do not use the SNAP program, what are the barriers to the program?

How does your diet change throughout the month based on the use of your food budget?

Are you or members of your family ever hungry because food does not last through the month?

Food access points

Describe foods available to you.

What types of food assistance programs do you use? How do you feel when you use them?

Do you eat lunch at the Senior Meal Program? Please tell us about this.

If you have used them, how do you feel about congregate/senior dining sites?

Do you receive food from sources other than the store? Which sources?

Have you participated in reciprocal relationships for food (such as trading foods)? Tell us about this.

Does anyone in the household hunt or fish?

Do you have a garden? What do you grow? How important is gardening as a food source?

SNAP indicates Supplemental Nutrition Assistance Program.

Relevant quotations highlight the significance of each theme (Table 2).

Quantitative data were analyzed using the Statistical Package for Statistical Sciences for Windows (version 20.0, SPSS, Chicago, IL, 2014). Independent sample *t* tests were used to analyze and determine statistical differences between groups for age, BMI, and food security scores; $P < .05$ determined significance. The researchers calculated food security scores using the US Household Food Security Survey Module: 6-Item

Short Form.¹⁷ Raw scores were calculated and classified according to food security status: 0–1 represented high or marginal food security; 2–4, low food security; and 5–6 very low food security.¹⁷

RESULTS

This study investigated issues of food security, food access, and food choice among free-living Minnesotan seniors who lived in counties with either high

Table 2. Representative Quotations by Theme With Social Cognitive Theory Construct Identified

Representative Quotation	SCT Construct	County	Focus Group
Theme 1: Former experiences affect eating behaviors			
"None of us got out of house without my mother teaching us how to cook, so I've been cooking from a very early age."	Behavior	1	8
"And I can cook from a cookbook, but I prefer just doing something relatively quickly like pork chops and potatoes, fried potatoes and onions. I enjoy that."	Personal	1	1
"Being able to eat fish is nice, and eat some chicken, but the Indian food [focuses] more on legumes and different fantastic ways to cook vegetables and potatoes, and the flavors are just fantastic."	Behavior	2	7
"I like chicken and fish. And during the summer I like fresh vegetables. I have a garden also."	Personal	1	2
Theme 2: Financial and food security drive use of food assistance programs			
They're [SNAP vouchers] very helpful. I get \$15 a month and it is amazing how it'll come in very handy.	Environment	2	3
"If I ordered something and didn't like it, I'd probably eat it anyway just because I wouldn't wanna waste the money."	Personal	2	5
"After they came out with this card we got—ya know, it's not really our fault that we're in the situation we're in, and it isn't charity, and it gave dignity to me, too. It was one of the best things they did."	Environment	1	2
"You have to have done it 2 or 3 times to get into practice as to how to get the things that you need [at the food shelf]. Your first time, you're just kind of overwhelmed because there is a lot of choice and so it's important to know that when you're going in there, that you are going to be shown categories of food."	Personal	2	7
Theme 3: Food access strategies are implemented at restaurants and retail markets, and when using alternative sources			
"[It's] across the alley basically from where I live. I'm so close I can throw a stone to Korte's."	Environment	2	4
"You're at the mercy of the schedules and whether or not they work. I'm in trouble for getting a particular job that I could get tomorrow because I—the bus won't be able to accommodate me on the weekends."	Environment	2	7
"I think it's \$10/delivery unless you have 4 people, is that it? Then it's only \$2.50 for delivery. It's a lot cheaper than even trying to crank up a car."	Environment	1	1
"[I live] downstairs in my apartment by myself, but my daughter lives upstairs. So she helps me out and she takes me to the groceries because I don't drive either."	Environment	2	7
"I walk down to the trout pond behind the courthouse here and catch trout or I go to the local lakes and if I can catch something big enough."	Environment	1	2
"Yes, because a cousin of mine—she has a huge garden. She says you can always come and pick tomatoes."	Environment	1	6
"When my arthritis kicks up a little bit there are days when I can hardly make it through the grocery store, 'cause then I come home and I am really beat, so that kind of affects, you know, how long I shop—go in and get what I need on my list and get out."	Personal	2	3
Theme 4: Physical changes associated with aging influence food access and intake			
That [gastroesophageal reflux disease] had an impact because I—1 meal that was simple to make was spaghetti. Fry up a little hamburger and just throw the spaghetti sauce in it. Get your noodles ready, throw some cheese, ya know, parmesan on it. That was an easy meal, but that took that away from me."	Behavior	2	5
"[I need] something to perk up the taste buds because my taste buds aren't very good anymore. I get the urge to have something, and then after I have it, it didn't taste as good as I thought it was going to taste."	Personal	1	2
"I remember my father and he was in his eighties, I think, and we were out for dinner and he was eating his favorite, which, I don't remember what it was."	Behavior	1	8

(continued)

Table 2. Continued

Representative Quotation	SCT Construct	County	Focus Group
Theme 5: Social influences play a role in decision making			
"I have some friends in this area, so sometimes I'll go out on the weekends and have lunch with friends and otherwise I'll make something very simple."	Environment	2	3
"I have a lot of cereal on days I don't eat in the lunchroom."	Behavior	1	1
"What they're saying is true. I think a lot of people come down to engage in conversation as well as for the meal."	Environment	2	3
"They [senior center] have a lot going on," and if anyone is bored "it's their own fault."	Environment	1	8
"[We want] more opportunities to socialize in different settings."	Personal	2	4

SCT indicates Social Cognitive Theory.

Note: Some quotations listed align with multiple SCT constructs.

or low SNAP participation rates. Of the 64 seniors who signed up, 62 participated. Most participants were female (79%) and 91% were non-Hispanic white individuals. No significant differences were found between counties for age, income, or BMI. Mean BMI was 30.1 ± 6.2 kg/m². About 23% of the sample used food stamps whereas 62% used a congregate meal site. Food security scores were significantly different between counties (county 1 mean: 0.7 ± 1.6 ; county 2 mean: 1.4 ± 2.1 ; $P = .01$); 13.4% of individuals in county 1 had low to very low food security compared with 34.4% of county 2 participants.

Within the context of the Social Cognitive Theory framework, it was evident that the environment and behavior constructs affected seniors' food choice more than did personal factors. Influences from past experiences framed the development of food choice, but food cost and access appeared to affect actual dietary patterns of seniors. The combined effects of limited incomes and rising food cost caused seniors to seek alternate food sources and assistance programs. The primary difference between focus group discussions in the 2 counties was the frequency of food insecurity. County 2 participants talked more about SNAP and other food assistance programs whereas SNAP seemed to have a more negative stigma in county 1; this will be discussed in theme 2. Otherwise, no distinctive differences were noted between the 2 counties, so the researchers grouped qualitative information for themes. Seniors had developed strategies to cope with incomes lowered as a result of retirement and the increasing cost of living. Common themes identified across focus groups included: (1) former experiences affect eating behaviors; (2) financial and food security drive the use of food assistance programs; (3) food access points include restaurants, retail markets, and the alternative food system; (4) physical changes associated with aging influence food access and intake; and (5) social influences play a role in decision making.

Theme 1: Former Experiences Affect Eating Behaviors

Food choice among seniors was strongly influenced by foods consumed

during childhood, family influence, and travel experience. Participants cited dishes they had enjoyed growing up and which they still enjoyed. One individual stated, "Well growing up on the farm, every Sunday we would have chicken, fried chicken. So I still make it." Family influence was another chief contributor to cooking style and ability. Most participants learned how to cook from their mothers as a child; however, a few participants did not cook and relied on their spouse to do so. Participants also discussed how travel shaped their eating, influencing not only food choice but also cooking style. Many seniors found it difficult to uphold traditions when money was a limiting factor.

Theme 2: Financial and Food Security Drive Use of Food Assistance Programs

Food insecurity was a concern among seniors in both counties; in this sample, 24% ($n = 15$) had low or very low food security. When money was constrained, seniors in county 2 used assistance programs (eg, SNAP, food shelves, soup kitchens) to supplement their food resources, whereas seniors in county 1 turned to family and implemented thrifty shopping strategies. However, seniors in both county types used congregate dining because it provided great affordable meals and social events. Congregate dining had no negative stigma attached to its use because most seniors paid something for the meal. Conversely, SNAP use was controversial in 2 focus group discussions in county 1, with some seniors disapproving of its use. Participants chose not to use SNAP because (1) they could obtain food from family and friends, (2) they implemented thrifty shopping strategies, (3) they believed that their income was too high to qualify, and (4) they viewed the program as a welfare program. In contrast, other seniors, especially those in county 2, believed that the program was helpful. One senior explained,

It goes by your income. I make \$830/mo and I maintain a car and my apartment. I pay \$230, I think, for rent and if it wasn't for the food stamps, I wouldn't make it through the month.

While strategies varied in how to obtain food, it was evident from discussions that seniors appeared to need assistance with obtaining food.

Theme 3: Food Access Points Include Restaurants, Retail Markets, and the Alternative Food System

Whereas the safety net portion of the food system (eg, congregate meal programs, SNAP, food shelves) was an important access point for many seniors, they also accessed food from other sources such as restaurants, retail markets, and the alternative food system.

Many seniors, even those who were aged 89 years, said they were still cooking and thus still went shopping. They chose grocery stores based on price and locations near their home. Food price was most important. One man explained his store choice by saying, "Target has quite low prices on their food—[but] not a great selection. And so I find myself shopping there a lot and not going out to eat." Although seniors enjoyed eating out, many opted to eat at home to limit spending. When the retail food system was used, coupons were a vital part of seniors' spending habits. Seniors reported using coupons frequently, but only for things they already planned to purchase. When buy 1, get 1 free offers were used, seniors either kept the free product or gave it to a friend. Keeping a list and buying only needed groceries reduced waste.

Transportation was a common barrier to food access. Although seniors may have wanted to search for stores with lower prices to save money, transportation prevented access to them. Most participants were still able to drive but chose not to because of associated expenses. Most seniors relied on family, friends, or public transportation, which was often limited because of scheduling. Seniors in this study worked around these barriers by calling in a shopping list and have groceries delivered for a small fee.

Participants often spoke of eating out at fast-food and casual dining restaurants. Although most restaurants visited were low or moderately priced, it appeared that seniors with higher incomes chose to eat out more frequently. However, some participants revealed

that they focused on price when out at a restaurant even if they had no financial concerns. One participant said, "... Maybe I should just forget about what it costs and buy what I want ... but it's a habit. Comes from my upbringing—from the hard times." Some chose to eat out because they desired food they would not cook for themselves or to enjoy the convenience of not having to cook that day.

Three components of the alternative food system frequently used by seniors included gardening and fishing, assistance from friends and family, and reciprocity (eg, trading or sharing food). Gardening was often incorporated into seniors' daily routines. It provided them with an inexpensive source of fresh produce and an increased activity level. Several community sites had garden plots specifically designated for seniors. Some mentioned that they still can their produce, thus saving money and providing produce throughout the year.

Friends and family also served as a common source of food assistance for seniors. Participants stated that family members often offered transportation, delivered food such as produce and fish, mailed food to them, and extended invitations to join them for meals at home or outings to restaurants. One woman stated, "I have a grandson that does commercial fishing in Alaska and I get salmon, halibut and moose, and caribou." Whereas some seniors enjoyed fish and other foods that were provided by family members, a few others still did their own fishing. Reciprocity with peers (friends and neighbors) was also common among seniors.

Theme 4: Physical Changes Associated With Aging Influence Food Access and Intake

As seniors aged, physical changes and other health issues developed, such as altered taste and smell, sleep changes, and chronic conditions. Some seniors had physical limitations that affected their cooking ability, although most still cooked. One participant used a walker and stated, "It's hard to stand and cook, but I open my cupboard door and put one foot up." For some, physical limitations caused a decline in cooking and eating balanced meals;

for others, chronic conditions affected their overall dietary intake.

In addition to health issues, sensory perception changed with age and may have affected the variety of food that seniors consumed. Many reported observing a change in taste (especially for meat) with age, but only a few noticed a change in their ability to perceive smells.

Sleep is another factor that may be associated with dietary intake. Seniors reported disturbed sleeping patterns because of the need to use the bathroom, not being tired because of low physical activity levels during the day, and being uncomfortable because of physical pain (back aches and muscle pain or cramps). Disturbed sleep appeared to contribute to overall eating patterns because snacking occurred when they got up. One participant discussed her sleeping pattern as "maybe 8 hours or so. I get up a lot during the night to go to the bathroom. Sometimes I eat some cold cereal, thinking I can go to sleep better then." More research is needed to assess to what extent these associations hold true.

Many participants also experienced some memory loss. They had vivid memories of childhood and other experiences, but small details or the clarity of a situation were lost. Taking time to collect coupons but forgetting to take them to the store was a common problem.

Theme 5: Social Influences Play a Role in Decision Making

Social influence appeared to affect the eating behaviors of seniors by getting them to eat balanced meals at the senior center or out with family rather than relying on quick, easy meals of lower nutritional value (cereal, toast, etc) alone in their rooms. If family extended an offer to get together, participants said they would accept the offer regardless of the food or restaurant, which suggests how important social interactions are for seniors. Seniors used congregate dining for meals as well as activities such as games, lectures, parties, and other social gatherings.

DISCUSSION

This study found that seniors' food choice was affected by many factors

and emergent themes included: (1) former experiences affect eating behaviors; (2) financial and food security drive the use of food assistance programs; (3) food access points include restaurants, retail markets, and the alternative food system; (4) physical changes associated with aging influence food access and intake; and (5) social influences play a role in decision making. Although influences from past experiences framed the development of food choice, comments showed that food cost and accessibility appeared to have a more substantial effect on the dietary patterns of seniors, with barriers to food access potentially causing further dietary changes. The combined effects of limited incomes and rising food cost have caused seniors to seek alternate food sources and assistance programs. While these alternate options aided some seniors, others have not used them because of the suggested barriers such as stigma, no monetary need, limited transportation, and lack of program knowledge.

Theme 1: Former Experiences Affect Eating Behaviors

Seniors made important decisions each day, and those choices related to food were strongly influenced by their past experiences with food. The factors that contributed most to food choice were foods consumed during childhood, family influence, and travel experience. Seniors believed that travel experiences changed some of their food preferences, whereas foods consumed during childhood seemed to endure through the years. Research has found that the presence of social interaction with family and friends can influence both food choice and food access.¹⁸

Theme 2: Financial and Food Security Drive Use of Food Assistance Programs

Food insecurity was a concern among seniors in both counties; in this sample, 24% ($n = 15$) had low or very low food security. This rate is almost double that found in the general population (14%).¹⁹ Food-secure and -insecure seniors believed their lack of income was triggered by retirement

and increased food expenses. Other researchers found that seniors believed their income was inadequate once they stopped working and began to rely on Social Security.¹⁹ Wolfe et al²⁰ found that seniors were unable to afford meat and rely increasingly on carbohydrates for calories. This imbalance of nutrients may contribute to the development of chronic conditions, which in turn may lead to an increase in health care expenditures.²¹

Whereas some seniors were well-informed about food assistance programs, especially in county 2, others lacked knowledge about programs available to them. The lack of familiarity and misunderstanding of eligibility criteria (some were surprised to hear that their incomes were low enough to qualify) may be an important barrier to the use of food assistance programs.^{22,23} Similarly, Martin et al²⁴ found that seniors were less likely to use food stamps because they felt uncomfortable using them.

Theme 3: Food Access Points Include Restaurants, Retail Markets, and the Alternative Food System

Seniors reported using 3 components of the alternative food system: (1) gardening and fishing, (2) assistance from friends and family, and (3) reciprocity (eg, trading or sharing food). Smith and Miller¹¹ also reported gardening and fishing helped reduce food insecurity among low-income homes and promoted a sense of community. Reciprocal relationships also provided social interaction for seniors. They cooked large meals and shared with neighbors instead of storing for later use. This idea of reciprocity has been seen in other research, which demonstrates that it is a common strategy for seniors to save money.^{11,22,23} Stoller²³ reported that older adults were more likely to provide help than to receive it, so promoting reciprocity may foster community growth. Participants appreciated when family took them out to eat because of company and cost savings. Friends and family also sent home leftovers, so seniors had additional meals throughout the week. The presence of social interaction with family and friends can influence food choice and food access.^{25,26}

The social aspect of sharing food appears to be important for seniors.

Theme 4: Physical Changes Associated With Aging Influence Food Access and Intake

As seniors aged, physical changes and other health issues developed, such as altered taste and smell, sleep changes, and chronic conditions. Sensory changes may cause fluctuations in appetite. Although these changes often may be overlooked, they can place seniors at increased nutritional risk with age.²¹ Not only is memory loss frustrating, research has shown it can increase the likelihood of insomnia, which further contributes to the effects of inadequate sleep and chronic disease.^{21,27} Sleep patterns have been tied to the development of chronic diseases such as diabetes, coronary heart disease, and high blood pressure.²⁸ Few researchers have focused on the association between food access and physical changes with aging.^{27,28} Future research should investigate seniors' food access and financial security.

Theme 5: Social Influences Play a Role in Decision Making

Social influence appeared to affect the eating behaviors of seniors by getting them to eat balanced meals at the senior center or out with family rather than relying on quick, easy meals of lower nutritional value (cereal, toast, etc) alone in their rooms. Researchers have found that seniors living alone were at higher risk of losing interest in food.²⁵ Participants said they would accept offers to eat out with family and friends regardless of the food or restaurant, which suggests how important social interactions are for seniors.

Seniors used congregating for meals as well as activities such as games, lectures, parties, and other social gatherings. Little research has been done to connect food habits and seniors' social interactions. Furthermore, living in enriched environments with opportunities for social interaction can provide seniors with improved health outcomes, which justifies the idea that

social interaction may be correlated to longevity.²⁸

This study had limitations. Females tend to live longer than males, which is likely why the study population was largely female.²⁸ Because of study locations, the sample was primarily non-Hispanic white (91%), although this is similar to state demographics. More research is needed that oversamples minority senior individuals; they may be at even greater risk of food insecurity than the general population. Previous research with low-income younger minority adults found higher rates of food insecurity.²⁹ Thus, these findings are tentative and need confirmation with a more diverse sample. This project was designed to focus on community-dwelling seniors, so data regarding individuals with physical limitations were limited.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Research on food security and food access among seniors is limited. Yet, the baby boom cohort in America continues to grow because individuals are living longer than in the past. This study found the environmental constructs of food access and food security were of utmost importance in seniors' consumption patterns. Whereas county 2 participants reported more food insecurity, with 34% of them having low or very low food security, 13.4% of county 1 participants also fell into these categories. These rates are too high: county 2's rates are 2.5 times higher than that found in American households in 2014.¹⁹ Both SNAP and congregate dining offer food assistance but SNAP use was considered unacceptable by some because of the negative stigma attached to the program or because they lacked program knowledge about income criteria.

More effort needs to be made to educate seniors about SNAP. Education and breaking down the age-old barrier of negative stigma connected to this program may allow seniors to feel comfortable enough to use the program. Furthermore, future research should include more minority older adults to gain insight into how food insecurity affects their food choices.

Physical changes that occur with age also influenced the way many seniors accessed food. Most seniors had limited incomes and therefore used traditional strategies such as coupons to save money. Seniors also relied on the alternative food system, using sources such as gardening, reciprocity, and family assistance. Research should try to identify how much the alternative food system adds to the dietary intake of seniors.

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CONFLICT OF INTEREST

The authors have not stated any conflicts of interest.