

# Low-Income Individuals' Perceptions About Fruit and Vegetable Access Programs: A Qualitative Study

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## ABSTRACT

**Objective:** To examine how fruit and vegetable (FV) programs address barriers to FV access and consumption as perceived by low-income individuals.

**Design:** From 2011 to 2012, the researchers used 13 focus groups to better understand low-income individuals' perceptions about FV programs.

**Setting:** Five North Carolina counties at community-serving organizations.

**Participants:** Low-income participants aged  $\geq 18$  years were included in the study. A majority were African American women with a high school education or less, and received government assistance.

**Phenomenon of Interest:** Low-income individuals' perceptions about how FV access programs can reduce barriers and increase consumption.

**Analysis:** A socio-ecological framework guided data analysis, and 2 trained researchers coded transcripts, identified major themes, and summarized findings.

**Results:** A total of 105 participants discussed how mobile markets could overcome barriers such as availability, convenience, transportation, and quality/variety. Some were worried about safety in higher-crime communities. Participants' opinions about how successful food assistance programs were at overcoming cost barriers were mixed. Participants agreed that community gardens could increase access to affordable, conveniently located produce but worried about feasibility and implementation issues.

**Implications for Research and Practice:** Addressing access barriers through FV programs could improve consumption. Programs have the potential to be successful if they address multiple access barriers.

**Key Words:** food access, focus group, low-income, fruit, vegetable, socio-ecological (*J Nutr Educ Behav.* 2015;47:317-324.)

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## INTRODUCTION

Mobile markets, farmers' markets accepting food assistance benefits, and community gardens are all strategies to improve access to fruits and vegetables (FV) and their con-

sumption. Consumption of healthy foods, including FV, can help reduce the risk of chronic diseases, including heart disease, diabetes, and some cancers.<sup>1</sup> Unfortunately, most individuals, especially those with lower incomes, do not consume the recommended

amount of FV per day.<sup>2,3</sup> One reason low-income individuals struggle to meet these standards is that they experience unique barriers to accessing and consuming FV.<sup>2</sup> These barriers can include distance to food stores, lack of transportation, cost, convenience of preparing FV, and poor-quality FV.<sup>4</sup>

Mobile markets can reduce transportation barriers to FV because they are often located in convenient places for low-income individuals to shop. The Supplemental Nutrition Assistance Program (SNAP), a federal needs-based program, helps low-income families and individuals purchase food. At some farmers' markets, SNAP recipients can use Electronic Benefit Transfer (EBT) cards, similar to a debit card, to purchase produce. Electronic benefit cards reduce the stigma associated with SNAP by looking like a debit card instead of the traditional paper-based food voucher.<sup>5</sup> These cards are supposed to make farmers' markets more accessible for

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recipients because they can use SNAP benefits to purchase local produce. However, not all farmers' market vendors have EBT terminals to process transactions. A more recent strategy to improve FV access and consumption is community gardens, shared spaces for neighbors to grow fresh produce. Neighbors can benefit from gardens placed directly in their community because they are easily accessible and affordable. However, implementing community gardens has been a challenging process for some lower-income communities.<sup>6</sup>

Few studies have examined low-income individuals' perceptions about whether mobile markets, EBT at farmers' markets, and community gardens reduce access barriers and/or improve consumption. Therefore, the purpose of this study was to examine the relative strengths and weaknesses of mobile markets, EBT at farmers' markets, and community gardens as perceived by low-income individuals. Understanding low-income individuals' perceptions can help identify opportunities that can be used to strengthen FV strategies and improve program acceptability and implementation.

## METHODS

### Study Setting

In 2010, North Carolina was listed as 1 of the top 10 agricultural producing states in the country,<sup>7</sup> yet it also ranked in the top 10 for food insecurity,<sup>8</sup> which made it a useful study setting. The researchers conducted focus groups across 5 North Carolina counties (Table 1). These counties were selected to help ensure geographical representation from the state's 3 agricultural regions: the coastal plains, Piedmont, and the mountains. All counties were a mix of urban and suburban communities. Predominantly rural communities were not included because of difficulties in arranging easily accessible focus groups for all participants.

### Study Design

The researchers used focus groups to describe low-income individuals' perceptions about FV access strategies and how they can reduce barriers.

**Table 1.** Site-Specific Focus Group Characteristics: Geographic Region, County, Site Location, and Number of Participants

Geographic Region	County	Site Location	Participants, n
Mountains	Buncombe	Resident council office	6
Mountains	Buncombe	Church	5
Mountains	Buncombe	Community center	8
Piedmont	Durham	Community center	6
Piedmont	Durham	Recovery shelter	10
Piedmont	Durham	Small grocery store	9
Piedmont	Durham	Latino resource center	8
Piedmont	Guilford	Church	7
Piedmont	Orange	Senior center	11
Piedmont	Orange	Senior center	10
Piedmont	Orange	Family resource center	6
Piedmont	Orange	Family resource center	8
Coastal	New Hanover	Community center	7

The focus groups encouraged participants to present and defend their views to others in the group.<sup>9</sup> They also offered researchers the opportunity to learn about issues from those directly affected. Focus groups took place at locations convenient for participants. Thirteen focus groups were conducted between 2011 and 2012 with 6–10 low-income individuals per group. Before the start of each focus group, participants provided informed consent and completed a demographic survey. Focus groups lasted approximately 60 minutes. Participants were compensated with a \$25 gift card. All groups were moderated and digitally recorded by a trained qualitative researcher (LHM). This study was approved by the University of North Carolina Institutional Review Board.

### Moderator Guide

Recognizing that many factors influenced FV access and consumption, the socio-ecological framework (SEF) informed the development of the moderator guide, with the understanding that multiple factors might affect perceptions of FV access. The SEF suggested that various individual, interpersonal, community, and public policy-level factors interact with each other to influence FV access and, in turn, consumption.<sup>10</sup> Questions were written to elicit discussions about purchasing produce from mobile mar-

kets, usability of EBT at farmers' markets, interest in community gardens, and additional strategies for improving FV access. The moderator guide was tested in a pilot focus group with 6 participants in a low-income housing site to ensure that questions were appropriately worded.

### Recruitment

Participants were recruited with the help of staff at 11 community-serving organizations that provided services to and/or advocated for low-income individuals. Staff members were asked to provide information about the dietary concerns of people served by their organization, recruit low-income individuals willing to participate in focus groups, and facilitate scheduling of focus groups. Staff used word of mouth and flyers to disseminate study information to potential focus group participants. Researchers asked staff to recruit 10–12 individuals for each focus group in anticipation of a 30% no-show rate.<sup>9</sup> The goal for the study's total sample size was to continue conducting focus groups until no new thematic information was revealed (ie, data saturation).<sup>11</sup>

### Data Analysis

Analysis involved 3 phases: coding, within-group analysis, and between-group analysis. Focus group data were

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