



## Research Article

# Farmers' Markets in Rural Communities: A Case Study

Moya L. Alfonso, Jen Nickelson, and Danielle Cohen

### ABSTRACT

**Background:** Although the potential health benefits of farmers markets have been discussed for years, there is a dearth of literature to aid health educators in advocating for the development of local farmers markets. **Purpose:** The purpose of this manuscript is to present a case study of a rural farmers market in southeast Georgia with emphasis on operational procedures and customer satisfaction. **Methods:** A mini-ethnography was conducted over a seven-week period using participant observation, document review and brief interviews. **Results:** Observational results suggested the farmers market operates smoothly and has resulted in high levels of customer satisfaction. Challenges should be addressed, including the seasonal nature of farming and attracting those who are not already motivated to eat healthy. **Innovative strategies for reaching consumers throughout the year include taking farmers markets online. Discussion:** An ecological approach such as farmers markets, which reach of hundreds of rural customers each week, represents a legitimate population-based approach to addressing obesity. **Translation to Health Education Practice:** By working with communities to develop local farmers markets, health educators in rural communities can help increase local capacity for healthier lifestyles.

Alfonso ML, Nickelson J, Cohen D. Farmers' markets in rural communities: a case study. *Am J Health Educ.* 2012;43(3):143-151. Submitted March 27, 2011. Accepted December 31, 2011.

### BACKGROUND

Over 33% of U.S. adults aged  $\geq 20$  years and almost 19% of U.S. children aged 6-19 years are obese.<sup>1,2</sup> The steep increase in the prevalence of obesity over the past several decades has become a considerable public health concern because of its association with serious, life-threatening illnesses.<sup>3</sup> People who are obese are at greater risk for diseases like type 2 diabetes, hypertension, and cardiovascular disease; and obese children are becoming victims of these diseases that traditionally were seen in adults.<sup>3,4</sup>

Obesity disproportionately affects minority, low-socioeconomic-status (SES) and rural populations.<sup>5,6</sup> African American adults living in rural areas have the highest obesity prevalence rates of all groups

studied.<sup>5</sup> American children living in rural areas are 25% more likely to be overweight or obese than children living in metropolitan areas.<sup>7</sup>

Why rural residence increases the risk for obesity is unclear. Rural communities tend to be populated by people who are at greater risk for obesity due to age and low SES.<sup>8</sup> On the other hand, the physical or structural environment of rural communities may present challenges to healthy levels of physical activity and good nutrition.<sup>7,8</sup>

The Centers for Disease Control and Prevention (CDC) has recommended 24 specific environmental and policy strategies for communities to implement for obesity prevention.<sup>9</sup> The CDC strategies are specifically designed for communities

and local governments to implement and were selected based on available evidence of promising community interventions.<sup>10</sup> One of these strategies calls for communities to "improve the availability of mechanisms for purchasing foods from farms."<sup>9-10</sup> Farmers markets are one such strategy. Farmers'

---

Moya Alfonso is an assistant professor in the Department of Community Health at Georgia Southern University, Statesboro, GA; E-mail: moyaa@hotmail.com. Jen Nickelson is an assistant professor in the Department of Health Science, University of Alabama, Tuscaloosa, AL 35487. Danielle Cohen is a graduate student, College of Public Health, Georgia Southern University, Statesboro, GA 30460.



markets are gaining attention as a potential intervention that addresses each level of the socio-ecological model, suggesting the potential for farmers' markets to serve as one component of a multi-level, comprehensive obesity prevention effort.<sup>11-13</sup> Farmers' markets are consistent with a "community resiliency" approach to addressing health disparities through the emphasis on providing equal access to affordable, healthy food options.<sup>11</sup> At the individual level, farmers markets have the potential to improve fruit and vegetable intake, a behavior linked to the prevention of obesity and related chronic diseases.<sup>14</sup> A recent review of the literature found some evidence that farmers' market participation was associated with increased fruit and vegetable consumption despite the need for better-designed studies.<sup>15</sup> Defined by the United States Department of Agriculture (USDA), a farmers' market is a community-based retail outlet where at least two vendors sell agricultural products (e.g., produce) to consumers.<sup>16</sup> Currently, 6,132 farmers' markets operate in the United States, and this number continues to grow proportionally with the popularity of markets.<sup>16</sup> In fact, a recent survey suggested 27% of American consumers purchase foods directly from farmers on a weekly basis.<sup>17</sup> Interestingly, segmentation analyses conducted to identify racial/ethnic, income, or educational differences associated with farm-to-consumer purchasing behavior failed to identify statistically significant differences.<sup>17</sup> There are disparities in fruit and vegetable consumption associated with income, with low income individuals being more likely to consume less than five servings of fruit and vegetables per day.<sup>18</sup> Such low consumption rates may be due to limited access and high costs of fruits and vegetables,<sup>19</sup> and result in poor health outcomes.<sup>20</sup>

Farmers' markets enable access to fresh, typically organic produce at a low cost.<sup>21</sup> Farmers' markets have been in play for over 70 years, and evidence to suggest that farmers markets increase consumption of fruit and vegetables emerged over a decade ago.<sup>22</sup> Further, recent research suggests a general recognition that inadequate access

to local farmers markets may be associated with increased risk of cardiovascular disease, suggesting a potential openness/demand for increased access.<sup>12</sup> A 2011 longitudinal evaluation of the effects of access to sources of health foods on adolescent females' risk of overweight/obesity found that access to farmers markets reduced the odds of overweight/obesity over time.<sup>13</sup> However, farmers' markets were only recently recognized by public health leaders as a potential strategy for addressing obesity.<sup>9</sup>

Farmers' markets have become an increasingly popular community development strategy in the past decade, offering a variety of benefits for farmers, customers, and communities.<sup>17</sup> Benefits such as increasing farmers' profits, providing healthier options for customers, supporting the local economy and supporting community bonds have led to the recent popularity of farmers markets.<sup>23</sup> For a comprehensive discussion of benefits of farmers' markets and other efforts to buy locally, see Tessman and Fisher.<sup>24</sup> Specifically, markets in rural areas have become more prevalent due to the plethora of local farmers, the prevalence of lower incomes in rural areas, and a call for healthier lifestyles.<sup>25</sup>

Commonly referred to as "direct marketing," farmers' markets are able to eliminate the "middle man" (i.e., supermarkets), also known as "short circuit" food supply chains.<sup>26</sup> The geographical distances which exist between the farmer and the supermarket have resulted in extensive damage to the environment.<sup>25</sup> Shipping or driving produce to supermarkets (average of 3000 miles in distance) requires an enormous amount of fuel. The fuel needed to transport produce has contributed to air quality issues. Fuel expenditures are significantly lower when a farmer drives to the local farmers' market or customers walk or bike to the market in their neighborhood.<sup>25</sup> In addition to the fuel required for the produce to arrive at the supermarkets, customers must drive to the supermarket to procure produce. This reliance on gas-fueled transportation can be eliminated or reduced if markets are located in customers' communities. Trips to the store will decrease, thereby reducing the amount

of gasoline emitted by supermarket shoppers. The locality of markets also increases physical activity by promoting bicycling or walking to the markets.<sup>25</sup>

By allowing consumers to buy directly from the farmer, consumers have the ability to ask questions and gain insight into the farming processes. By increasing their awareness and knowledge about the produce they are about to purchase, they become smarter consumers, healthier decisions can be made and a farmer-customer trust is fostered.<sup>25</sup> For local markets, this is especially beneficial because trust can lead to strengthened social networks and social capital.<sup>27</sup> Further benefits of farmers' markets include direct marketing and selling of products by the farmers. Farmers gain a reputation as a reliable seller, increase their customer base, and increase their profits. Vendors can even lower their costs to community members since they do not need to pack or ship the produce.<sup>25</sup>

At farmers' markets, consumers spend money on local produce, crafts and prepared foods, which cycles directly back to the local economy.<sup>16</sup> Local farmers have the opportunity to gain popularity and increase sales to local consumers through farmers' markets. According to the USDA's Farmers' Market Manager Survey,<sup>16</sup> a vendor who participates in a seasonal market will sell approximately \$1,070 in products per month (depending on region and products). In the southeast, the average monthly sales are \$927 for year-long market vendors and \$520 for seasonal market vendors. This survey also found that 80.6% of market customers in the southeast region of the U.S. shop at farmers markets because they wish to support local agriculture.<sup>16</sup> An additional economic benefit which has been attributed to farmers' markets is that local stores which are near the market have increased sales during market seasons as customers supplement their market purchases with products from local stores.<sup>28-29</sup> This form of local economic support aides in community solidarity and increases the trust between consumers, farmers and local business owners. Such results build community capacity and social networks which assist



in community development and individual health outcomes.<sup>27</sup>

The most commonly cited barrier to shopping at local farmers' markets is the misperception that costs are higher than they are at supermarkets. In fact, farmers' markets were recently found to have lower prices (approximately 20% lower) than traditional food retailers.<sup>30</sup> Given the early state of the literature, challenges associated with farmers' markets remain understudied and, thus, are absent from the literature. Anecdotal evidence suggests potential challenges include identifying and securing grant funding, finding local businesses that are willing to provide locations during off hours, overcoming technological barriers to accepting EBT and credit cards<sup>20</sup> and reaching a broad range of community members.

## PURPOSE

Despite the growing popularity of farmers' markets and recent studies reporting associations between access to farmers markets and improved health outcomes among youth,<sup>13</sup> farmers' markets are not currently established as a community-level, evidence-based intervention (EBI) in the CDC's Guide to Community Preventive Services. In this paper we discuss farmers' markets as a potential evidence-based intervention for obesity prevention. In doing so, we provide an overview of the benefits and challenges of farmers' markets, provide a case study of one farmers' market in rural Georgia, and conclude with recommendations for future research and recommendations for translation to health education practice.

## METHODS

### Setting

Statesboro is located in the southeast region of Georgia, and is the county seat of Bulloch County. Although Statesboro is not classified as a rural community by the U.S. Census Bureau, Bulloch County is classified as a rural community. Statesboro has higher than state average poverty rates, with its primary employer being Georgia Southern University (GSU). In 2008, 30.3% of adults who lived in Bulloch County were obese,

compared to 27.8% of Georgia adults.<sup>31</sup> Additionally, the rates of diabetes were higher among those living in the Bulloch County, with a prevalence rate of 10.7%, compared to 9.9% in Georgia and 8.3% nationally.<sup>31</sup> Residents of Bulloch County tend to be less physically active than the statewide and national average.<sup>31</sup> Thus, given the prevalence of risk factors for chronic disease, community-driven interventions must be implemented in order to prevent and manage obesity and its associated conditions.

The Main Street Farmers' Market in Statesboro has been in existence since 2008. It is held on Saturdays during peak growing season in Georgia in a local bank parking lot. Early Saturday mornings, a large, colorful sign is posted on Main Street indicating the market is "open." The farmers' market is located roughly a block from the downtown, red brick courthouse. Customers park along the street and in parking lots of other local businesses that are closed on Saturday mornings. Directly across from the Market is the Averitt Center for the Arts, a local organization devoted to local artists and art education. The Center is open at the same time as the market, so community members, particularly those with children, can attend. There is an ATM machine located directly to the side of the farmers' market so customers can obtain cash for their purchases. The market consists of two long aisles with four rows lined with vendors selling their products. The number of vendors varies from week-to-week and was not counted during this study. The number also varies throughout the day as some vendors pack up and leave toward the end of the morning when customer attendance wanes. Most vendor booths are manned by two individuals; however, the number varies based on the size of the booth. For example, a small booth near the entry gate to the market consists of a single vendor selling a narrow range of products (e.g., homemade granola, vegetables from an organic home garden, homemade root beer). Toward the rear of the market, is a much larger booth comprised of a farmer and his family selling vegetables from their harvest (e.g., a mix of squash, peppers). Not

all booths sell food. Toward the far corner of the market, there is a large booth ran by an older couple who sell homemade crafts (e.g., birdhouses, various art work made of wine bottles).

### Research Design

The Main Street Farmers' Market is still developing and is not yet mature enough to show a local decline in obesity rates. As with most community-based interventions, the long-term benefits (e.g., reductions in obesity at the population level) often take time to manifest.<sup>32</sup> The overarching objectives of this case study were to: (1) conduct a preliminary assessment of the farmers' market's stage of development through documenting the development and operation of the farmers' market, and (2) gauge consumer satisfaction with the farmers' market, as consumer satisfaction is a preliminary indicator of potential intervention success.<sup>33</sup> Although the results of this case study are primarily beneficial to the local community, they can shed light on the benefits and barriers to local farmers' markets and suggest directions for next steps in establishing farmers' markets as an evidence-based intervention for increasing community capacity to address obesity. Consistent with the early developmental stage of the market, a qualitative formative evaluation design was used to answer the guiding objectives. More specifically, a 'mini-ethnography'<sup>34</sup> was conducted in fall 2010.

### Procedures

Ethnographic methods including unstructured participant observation, brief interviews and document review were used. Background information and observations were collected using the farmers' market's online resources. Observations related to the use of social networking sites and official websites were conducted and analyzed. The primary source of data collection was unstructured participant observations which included attending the weekly farmers' market and watching interactions between vendors and customers as well as daily operations. The third author conducted unstructured participant observation for one hour on Saturday mornings in fall 2010 over a seven-week period. Field notes were



recorded based on observations and interpretations made during observations.

While observing, informal interviews also were conducted. Convenience sampling was used to select individuals for the interviews. Interviews lasted between two and five minutes. Lastly, one formal interview with the market manager was conducted. This interview lasted one hour, and included a variety of questions regarding how she and her market board execute this service, as well as her opinions and insight into the farmers' market. Consistent with the nature of mini-ethnographies, interviews were not audio-recorded so quotes are not provided. In addition, systematic, quantitative data (e.g., purchases, demographics) were not collected. Detailed notes were analyzed using content analysis. Codes were developed and used to determine themes that cut across methods. Data analysis procedures were consistent with those described in Ryan and Bernard.<sup>35</sup>

## RESULTS

### *Objective 1 - Documenting Operation*

Prior to the farmers' market implementation, a committee of key stakeholders (e.g., vendors, local farmers) conducted Internet research to gain general knowledge about farmers' markets and their operational procedures. Specifically, research was conducted to identify how other rural farmers' markets were put into practice. The market committee then applied for grant funding to hire a manager and provide financial incentives for local entertainers to perform at the market. With the help of the market manager, the assistant manager, weekly volunteers and subcommittee volunteers, the market is executed on a weekly basis in the downtown area of Statesboro, Georgia from April to November. In addition, the market has expanded to an online environment and the local university. The focus of this paper is on the market held in the downtown area (i.e., The Main Street Farmers' Market).

Once the market advisory board was established, they collaboratively created a set of guidelines which are used to determine vendor eligibility. Once eligible vendors were

identified through outreach to local farms, committee members spoke directly with local farmers and invited them to participate. Additionally, local crafters, bakeries, food establishments and talent (e.g., local musicians) were invited to participate.

The final step in the planning process was to market the event to customers. Using Internet applications such as social networking sites (e.g., [www.facebook.com/statesborolocallygrown](http://www.facebook.com/statesborolocallygrown)), flyers and posters, local media, as well as a heavy reliance on word of mouth efforts, the market advertised to local residents. The social networking efforts were used to promote local farmers who would be at the market, showcase specific products, and provide local citizens with pertinent market information. A logo was created to brand the farmers' market and make it a locally known entity.

The overarching goals of the Main Street Farmers' Market include achieving broad reach in the region through the use of a variety of communication and outreach strategies (e.g., word of mouth, flyers posted in local businesses, etc.) and encouraging community members to buy and sell locally. One goal of the market is to reach all demographic populations of Statesboro. Currently, there is a large presence of family and older populations at the farmers' market. Observational results suggested that most market attendees are Caucasian and fit within the family demographic (e.g., 25 to 50 years of age) as children are commonly seen visiting the market with their families. In fact, this turnout is so large; the market brings in approximately 500 people weekly. The family environment attracts many people who may not have had the opportunity to buy fresh and local produce otherwise. Additionally, the market reaches out to the low income community of Statesboro by having Electronic Benefit Transfer (EBT) use available for the Supplemental Nutrition Assistance Program (SNAP). However, not all vendors are equipped to accept EBT.

The market uses a slogan "Know your food, know your neighbor" to promote buying and selling of locally grown produce and baked goods. This idea of "eating

locally" is a cultural trend that is gaining momentum.<sup>16-17</sup> The market advisory board promotes this through its strict vendor eligibility requirements, which include selling locally grown or produced products which use mostly organic materials. This applies to farmers, crafters and bakers who participate in the market.

Results suggested key operational components of the farmers' market include provision of vendor resources (e.g., booths), collaboration with other organizations (e.g., Georgia Southern University [GSU]), community outreach and marketing through a variety of channels, and educational efforts. Many helpful resources can be found online. Information for community members, vendors, and market details are available on the farmers' market's website ([www.mainstreet-statesborofarmersmarket.com](http://www.mainstreet-statesborofarmersmarket.com)). Included on this site in the vendor resource section are the *Operational Guidelines*. This document clearly defines vendor and product requirements, as well as details their responsibilities. Additional online resources included the market's social networking pages.

The farmers' market has a history of partnering with multiple local organizations and groups, which has increased their ability to reach a broad range of demographic groups, which may not be reflected at the downtown location where observation occurred. For example, observational results suggested the following organizations actively participate in the farmers' market: the GSU Dietetics Association, GSU Psychology Club and local health representatives. Their presence introduced formal education to the market. For example, GSU students provide dietary education through pamphlets and health recipe flyers using foods available at the market to attendees. Interestingly, however, GSU clubs and organizations were not represented at the market during the seven weeks of observation. The market also promotes social capital through bringing together diverse members of the community who can share their talents and knowledge with each other, thus creating a sense of connection that can serve as an asset during times of need.<sup>27</sup> The strong university-community partnership



also increases community capacity to address obesity through the farmers' market as students serve as ever ready sources of enthusiastic labor and benefit in return from applied health education and community organizing opportunities.

The reader should note that not all efforts to reach different community segments have been successful. For example, an effort was made to reach working community members who do not have access to Main Street on Saturday mornings through holding a market outside of the regional hospital. However, very few customers attended the market. Unfortunately, formative evaluation was not conducted, so insights as to the reasons for this lack of success remain unknown. Future evaluation efforts will include gathering formative research data that can be used to inform promotional and outreach efforts. Future goals include reaching East Georgia Medical Center, GSU and other local communities. From the promotion of local talent and farmers, to the market's efforts of flexibility to reach the entire town's population, community outreach efforts are consistently employed in order to bring in many customers.

In response to high demand, an online farmers' market was recently launched (i.e., [statesboromainstreetmarket.locallygrown.net/market](http://statesboromainstreetmarket.locallygrown.net/market)) that runs throughout the year. The online market is open every other week during the growing season and weekly during the winter months (November-April). The first two orders are free so that consumers can determine whether they would like to shop online on an ongoing basis. Submission of a third order prompts an automatic annual membership fee of \$25. Credit cards are not yet accepted. Each participating vendor places their produce list and quantities online on Sunday evenings. Online orders are due Tuesday nights to allow for farmers and vendors to prepare for order delivery. Customers pick up their order at two centrally located organizations in the community – the GSU Botanical Garden or a local bakery – on Thursday evenings. With supervision, students assist customers with their orders upon pick up. Vendors includ-

ing farmers deliver their products by 5 p.m. to the site supervisor ensuring products are fresh. Sites are open for pick up no matter what the weather holds.

At the Main Street Market, participating farmers play a key role in community education through sharing information with consumers about their products. Vendors spend time with each customer answering questions, explaining their production processes and sharing production tips, and providing recipes and other sources of nutritional information. Most vendors are very excited about educating the public, others are not as approachable. For example, a few vendors sat behind their tables, did not greet customers as they walk by, and did not make much effort to sell their products. On the other hand, discussions sometime ran longer than warranted, were filled with farming jargon and were focused on selling products. The amount of time vendors spend with customers does impede customer flow, particularly during the peak hours of the market (i.e., 10 a.m. to 12 p.m.).

#### *Objective 2 – Customer Satisfaction*

Overall, the farmers' market is inviting and friendly. Walking into the market, the first vendor sells flowers, followed by others selling a slew of fresh produce, aromatic baked products and homemade soaps and detergents. The entrance alone makes a customer feel welcomed. The market managers are located in the middle of the market, making it simple to field questions as well as allowing them the ability to view all sections of the market. And, despite the busy atmosphere, the managers are friendly, speak with everyone, and are eager to help the market customers.

The overall atmosphere of the market enables families and friends to unite and serves as a meeting spot for social ties and increasing social networks. Family and friends often block traffic by stopping to catch up with one another in the aisles. Many conversations revolve around high rates of customer satisfaction. During the interview with the market manager, multiple customers approach the table and express their satisfaction with the market. Customers

commonly suggest products and vendors' tables to friends, families and strangers. Impromptu conversations between customers occur frequently.

The market was originally held only once a month. However, the demand was very high for a weekly market. Currently, the farmers' market is carried out every Saturday to meet demand. The implementation of an online market was in direct response to this high demand. There is little to nothing known about the effects of online farmers' markets on local economies and health outcomes in rural communities.

The market is open from 9 a.m. to 1 p.m., but sometimes vendors close down their tables early. Even though the busiest hours are from 10 a.m. to 12 p.m., the last hour does still receive customers who tend to express dissatisfaction with vendors who close early.

Although a few vendors did not appear approachable and others closed their booths early, the combination of friendly customers and constant flow of compliments to the market managers provided evidence of customer satisfaction. The market was clearly a social event, which provides a variety of social and health benefits to the customers.

#### **DISCUSSION**

Farmers' markets are a potential evidence-based intervention for obesity prevention. This paper presented a case study of one farmers market in rural Georgia. The results may be used to provide key stakeholders with information that could be used to improve the Main Street Farmers' Market in Statesboro, Georgia. In addition, this information also may be used to inform other rural communities interested in starting their own farmers markets. Using ethnographic methods, the development and operation of the market was described, and the level of customer satisfaction was gauged. Overall, case study results suggest that the Main Street Farmers' Market is running smoothly and is well received; however, there are areas in need of improvement.

The Main Street Farmers' Market has two primary goals, to: (1) reach a broad range of



segments in the region, and (2) encourage community members to buy and sell locally. The market uses an ecological approach to achieve its goals. Utilizing online and paper print marketing materials, targeting efforts to a variety of community member groups, and building local partnerships are core intervention strategies that will increase the odds of achieving market goals and ensure sustainability.<sup>27</sup> An ecological approach allows the market to influence the community from the individual, environmental and policy making levels.<sup>27</sup> The market advisory board should continue to research innovative market ideas and continue to follow the current trends in rural farmers markets. The market advisory board also should consider strategies for increasing vendor participation that do not result in excessive competition. Offering new and unique products will produce an even greater turnout and keep current customers coming back.<sup>31</sup>

Continuing to grow the market is vital to its survival. In keeping with their goals of reaching a variety of community groups and promoting buying and selling local, the market needs to continue using a variety of promotional strategies and communication channels. Additional formative research designed to gather consumer feedback from doers (i.e., those who frequent the market) and non-doers (i.e., those who do not frequent the market) could lend insight into effective promotional strategies and communication channels. Community-based prevention marketing (CBPM),<sup>36</sup> an innovative community-level intervention development framework could be used to inspire a community-driven social marketing campaign targeted at specific segments at risk for negative health behaviors associated with obesity. Consumer research could inform efforts need reach additional at-risk community groups (e.g., low-income African American community members). CBPM by design empowers communities to address local issues and increases social capital.<sup>36,37</sup> Furthermore, a collaborative effort between GSU and the community might reduce “town and gown” tensions that exist in Statesboro.

Although the desire to reach the community at large is consistent with typical public health approaches, evidence suggests that more specific targeting through audience segmentation is more effective in bringing about behavior change.<sup>38,39</sup> By aiming to address all community members, the market is taking on a very large challenge, which may result in wasted effort and resources and diluted intervention effectiveness. The market is family oriented and tends to entice people who already eat healthy or locally. This finding is consistent with other studies that report those who frequent farmers’ markets may be at least risk for negative health outcomes (i.e., the ‘worried well’).<sup>17</sup> The market also accepts SNAP EBT, which provides access to individuals unable to afford fresh foods with personal funds; however, not all vendors have the equipment needed to process EBT. To expand the target population, the managing entity should aim efforts specifically towards those who need more of an incentive to eat healthy. Consumer research including audience segmentation could be used to identify potential target audiences whose participation would result in a larger return on investment in terms of behavior change.<sup>39</sup> This consumer research may inform marketing strategies as well.

Currently, few GSU students participate in the farmers’ market – either onsite or online. Recently, a market was offered on campus; however, it has not been rigorously evaluated. Formative evaluation may find that it is difficult to encourage students who are moving from one class to another to stop and buy produce. Additionally, by separating the GSU market from the community market, the tensions between GSU and the Statesboro community may increase. Incorporating students into community events and programs may aid the effort to close the gaps between the two populations. Additional formative evaluation research should be conducted prior to the implementation of additional markets in order to increase the odds of success and sustainability. For example, consumer research (e.g., focus groups) with GSU students could be used to identify barriers

to participation in current market activities, benefits to offer in exchange for market participation, and suggestions for promotional and placement strategies.<sup>39</sup>

Student organizations are an inconsistent part of the market. Having student-run booths will provide students with public speaking, customer service, and teaching experiences, which could lead to student and professional development. Additionally, the community might benefit greatly from hearing and seeing demonstrations by students who have formal training in topics of nutrition, physical activity and sustainability, as well as a variety of other farmers’ market-relevant topics. Providing the public with a reliable source of educational information increases the community trust and bond that the market aims to achieve through their slogan “Know your neighbor, know your food.” A variety of university organizations could be included in the market. Rather than waiting for them to contact the board, the market board should reach out to these organizations. Formative research with secondary audiences such as community-based organizations could be used to identify effective outreach strategies.

Results suggested that most vendors are eager to inform customers about their products. Although one-on-one communication with consumers increases consumer satisfaction, it also risks frustration among customers waiting in sometimes long lines. Such closed conversations make it difficult to approach the vendor for fear of being rude. Whereas the educational component of farmer-consumer interactions is vital to promoting healthy nutritional behavior, these discussions could easily be a group discussion rather than a one-on-one conversation. This will make the tables more approachable for other customers. Additionally, it is important for the customer to ask questions regarding their products as well. By asking questions and increasing understanding of the processes used to make the food, customers can become better consumers. This will require the vendors to explain their products with little farming jargon, which is common among vendors at farmers’



markets.<sup>30</sup> Formative research with farmers could be used to identify training strategies for improving marketing processes.

Currently, market customers demonstrate high levels of satisfaction with the program. Through conversations with customers, and observing interactions at the market, high level of consumer satisfaction became apparent. With an average of 500 customers attending the Saturday markets, and with growing popularity, the market's goals are feasible. By increasing efforts to reach other target segments, and bringing the market to those with little access to fresh produce and transportation to the Saturday market, the Main Street Farmers' Market is well positioned to reach its short term and, ultimately, long-term goals.

Finally, future formative research should identify strategies for preventing vendors from closing early. Although the busiest hours are from 10 a.m. to 12 p.m., the last hour attracts additional customers. This makes it important for vendors to remain open until 1 p.m. Offering a dependable source of produce will improve the vendors' relationships with the community and will allow them to turn a larger profit. Closing tables early results in lost revenue from customers who prefer to attend the market later and might result in decreased customer satisfaction among those who arrive after peak hours.

The purpose of this case study was not to generate generalizable results, but to provide one rural farmers' market with information that could be used to strengthen its role in the community. This study also demonstrates methods that can be used to help local farmers markets in rural communities strengthen their efforts to address rural health, including obesity prevention. Whereas ethnographic methods were ideal for the case study objectives, there were limitations associated with this approach. First, only one team member conducted participant observation. Although the reliance on a single researcher is common in anthropological studies, one observer can only capture a 'slice' of reality. Future ethnographic explorations of farmers' markets should rely on a

team approach to data collection, a form of investigator triangulation. Further, participant observation is time consuming; reliance on a team approach would reduce individual researcher burden, thereby, improving data quality. In addition to unstructured and participant observations, future research should include a structured observation as well, to include more objective data. For example, a structured observation guide could be used to assess variation in participation in booths at the market.

Another innovative method that could be used to document the role of rural farmers' markets in rural communities is Photovoice ([www.photovoice.org](http://www.photovoice.org)). Photovoice is a participatory research method that is used to bring about social change, making it an ideal method to use in determining key stakeholders' (e.g., farmers, vendors, consumers) perceptions of the market. In this method, stakeholders could document their farmers' market experience with photographs and then discuss these experiences in a group forum.<sup>40</sup> This method helps to engage the community in the assessment process and to create ownership in program development.<sup>40</sup> Photovoice could play a key role in gathering consumer research necessary for creating interventions with high odds of success.

Future evaluative research on the farmers' market should assess vendor satisfaction. It is difficult to approach vendors when their main goal is selling their products. Vendors spend most of their time educating customers about their products and do not have much time to discuss the market with researchers. Given vendors' current participation in the online market, the use of a brief, structured questionnaire distributed via email represents a potential approach for overcoming this methodological barrier. In addition, future research should include efforts to engage community members from at-risk segments (e.g., those with high rates of poor nutrition or obesity) including interviewing people who do not attend the market to help determine barriers to participation. Most importantly, additional longitudinal research should be conducted to determine the long-term outcomes of

farmers' markets and their role in community-based, obesity prevention efforts.

This case study represents a first step in developing a locally-driven, evidence based intervention for increasing community capacity to affect obesity, while increasing overall social capital.

## TRANSLATION TO HEALTH EDUCATION PRACTICE

Health professionals should consider communicating the potential public health implications of farmers' markets in their communities to key stakeholders, including local college or university representatives. In the current political and economic environment, farmers' markets serve as a potentially popular means of supporting local economies, improving environmental health outcomes (i.e., reducing reliance on transportation), and reducing costs associated with obesity through a focus on modifying the local ecology to support healthy behavior. Recent research has supported the potential for farmers markets to improve health outcomes, particularly among women<sup>12</sup> and children.<sup>13</sup> Also, the national effort to allow low-income community members to purchase food from farmers using their EBT cards demonstrates the support for farmers' markets at the policy level.<sup>20</sup> Further, the lack of demonstrated relationships between demographic, income, and educational factors and farmers' market participation<sup>17</sup> indicates a potential for participation among at-risk groups if farmers' markets are promoted effectively. With the increasing popularity of farmers' markets, health educators can make an impact on community health by collaborating with their local communities to initiate a farmers' market.

## REFERENCES

1. Flegal KM, Carroll MD, Ogden CL, et al. Prevalence and trends in obesity among U.S. adults, 1999-2008. *JAMA*. 2010;303:2235-241.
2. Ogden CL, Carroll MD, Curtin LR, et al. Prevalence of high body mass index in U.S. children and adolescents, 2007-2008. *JAMA*. 2010;303(3):242-249.
3. Koplan JP, Liverman CT, Kraak VI (eds.).



*Preventing Childhood Obesity: Health in the Balance*. Washington, D.C.: National Academies Press; 2005.

4. U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute. *The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*. (NIH Publication No. 00-4084). Available at [http://www.nhlbi.nih.gov/guidelines/obesity/prctgd\\_c.pdf](http://www.nhlbi.nih.gov/guidelines/obesity/prctgd_c.pdf). Accessed July 27, 2011.

5. Jackson JE, Doescher MP, Jerant AF, et al. A national study of obesity prevalence and trends by type of rural county. *J Rural Health*. 2005; 21(2):140-148.

6. Wang Y, Beydoun MA. The obesity epidemic in the United States—gender, age, socioeconomic, racial/ethnic, and geographic characteristics: a systematic review and meta-regression analysis. *Epidemiol Rev*. 2007;29:6-28.

7. Lutfiyya MN, Lipsky MS, Wisdom-Behounek J, et al. Is rural residency a risk factor for overweight and obesity for U.S. children? *Obesity*. 2007;15(9):2348-2356.

8. Tai-Seale T, Chandler C. *Nutrition and Overweight Concerns in Rural Areas: A Literature Review. Rural Healthy People 2010: A Companion Document to Healthy People 2010. Volume 2*. College Station, TX: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center; 2003.

9. Keener D, Goodman K, Lowry A, et al. *Recommended Community Strategies and Measurements To Prevent Obesity in The United States: Implementation and Measurement Guide*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2009.

10. Kettel Khan L, Sobush K, Keener D, et al. Recommended community strategies and measurements to prevent obesity in the United States. *MMWR*. 2009;58(RR07):1-26.

11. Davis R, Cook D, Cohen L. A community resilience approach to reducing ethnic and racial disparities in health. *Am J Public Health*. 2005;95:2168-2173.

12. Jilcott SB, Keyserling TC, Samuel-Hodge CD, et al. Linking clinical care to community resources for cardiovascular disease prevention: the North Carolina Enhanced WISEWOMAN

project. *J Womens Health*. 2006;15:569-583.

13. Leung CW, Laraia BA, Kelly M, et al. The influence of neighborhood food stores on change in young girls' body mass index. *Am J Prev Med*. 2011;41(1):43-51.

14. Bazzano, LA. The high cost of not consuming fruits and vegetables. *J Am Diet Assoc*. 2008;106(9):1364-1368.

15. McCormack LA, Laska MN, Larson NI, Story M. Review of the nutritional implications of farmers' markets and community gardens: a call for evaluation and research efforts. *J Am Diet Assoc*. 2010;110:399-408.

16. United States Department of Agriculture (USDA). *National Farmers Market Manager Survey, 2009*. Available at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5077203&acct=wdmgeninfo>. Accessed November 1, 2010.

17. Blanck HM, Thompson OM, Nebeling L, et al. Improving fruit and vegetable consumption: use of farm-to-consumer venues among U.S. adults. *Prev Chronic Dis*. 2011;8:1-5.

18. Centers for Disease Control and Prevention. *Behavioral Risk Factor Surveillance Survey: 2009*. Available at: <http://cdc.gov/brfss>. Accessed February 8, 2011.

19. Yeh M, Ickes SB, Lowenstein LM, et al. Understanding barriers and facilitators of fruit and vegetable consumption among a diverse multi-ethnic population in the USA. *Health Promot Int*. 2008;23(1):42-51.

20. Lock K, Pomerleau J, Causser L, et al. The global burden of disease attributable to low consumption of fruit and vegetables: implications for the global strategy on diet. *Bull World Health Org*. 2005;83(2):100-108.

21. Lyson T, Gillespie GW, Hilchey D. Farmers markets and the local community: bridging the formal and informal economy. *Am J Alternative Agr*. 1995;10(3):108-113.

22. Govindasamy R, Zurbruggen M, Italia J, et al. *Farmers Markets: Consumer Trends, Preferences, and Characteristics*. New Jersey Agricultural Experiment Station, New Brunswick, NJ; 1998.

23. Abi-Nader J, Ayson A, Harris K, et al. *Whole Measures for Community Food Systems: Values-Based Planning and Evaluation, 2009*. Available at <https://www.foodsecurity.org/pub/WholeMeasuresCFS-web.pdf>. Accessed July 23, 2011.

24. Tessman N, Fisher A. *State Implementation of the New WIC Produce Package: Opportunities and Barriers For WIC Clients to Use Their Benefits at Farmers Markets, 2009*. Available at <https://www.foodsecurity.org/pub/WIC-FarmersMarketReport.pdf>. Accessed July 23, 2011.

25. La-Trobe H. Farmers markets: consuming local, rural produce. *Int J Consumer Stud*. 2001;25(3):181-192.

26. Mardsen T, Banks J, Bristow G. Food supply chain approaches: exploring their role in rural development. *Eur Soc Rural Sociol*. 2000;40(4):424-438.

27. Martinez S, Hand M, Da-Pra M, et al. *Local Food Systems: Concepts, Impacts, and Issues*. Economic Research Service (ERR-97); 2010. Available at [www.ers.usda.gov/publications/err97](http://www.ers.usda.gov/publications/err97). Accessed July 27, 2011.

28. Leibtag E, Baker C, Dutko P. *How Much Lower Are Prices at Discount Stores? An Examination of Retail Food Prices*. Economic Research Service (ERR-105); 2010. Available at [www.ers.usda.gov/publications/err105](http://www.ers.usda.gov/publications/err105). Accessed July 27, 2011.

29. Centers for Disease Control and Prevention. *National Diabetes Surveillance System*. Available online at: <http://apps.nccd.cdc.gov/DDTSTRS/default.aspx>. Accessed July 18, 2011.

30. Brown A. Farmers' market research 1940-2000: an inventory and review. *Am J Alternative Agr*. 2002; 17:167-176.

31. Centers for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2008.

32. Minkler M, Wallerstein N. (eds.). *Community-Based Participatory Research for Health: From Process to Outcomes, 2<sup>nd</sup> Ed*. San Francisco: John Wiley and Sons; 2008.

33. Fink, A. *Evaluation Fundamentals: Insights into the Outcomes, Effectiveness, and Quality of Health Programs, 2<sup>nd</sup> Ed*. Thousand Oaks, CA: Sage Publications; 2004.

34. Angrosino MV. *Doing Cultural Anthropology: Projects for Ethnographic Data Collection, 2<sup>nd</sup> ed*. Prospect Heights, IL: Waveland Press; 2002.

35. Ryan GW, Bernard HR. Techniques to identify themes. *Field Method*. 2003;5(1):85-109.

36. Bryant CA, McCormack Brown K, McDermott RJ, et al. Community-based pre-





vention marketing: a new planning framework for designing and tailoring health promotion interventions. In: DiClemente RJ, Crosby RA, Kegler MC., eds. *Emerging Theories in Health Promotion Practice and Research: Strategies for Improving Public Health*, 2nd edition. San Francisco, CA: John Wiley & Sons, Inc.; 2009: 331-356.

37. Nickelson J, Alfonso ML, McDermott RJ, et al. Characteristics of 'tween' participants and non-participants in the VERB™ summer scorecard physical activity promotion program. *Health Educ Res.* 2010;26(2):225-238.

38. Forthofer MS, Bryant CA. Using audience-segmentation techniques to tailor health behavior change strategies. *Am J Health Behav.*

2000;24:36-43.

39. Kotler P, Lee N (eds). *Social Marketing: Influencing Behaviors for Good*, 3rd ed. Thousand Oaks, CA: Sage Publications; 2008.

40. Wang CC, Burris MA. Photovoice: concept, methodology, and use for participatory needs assessment. *Health Ed Behav.* 1997;24(3):369-387.



**American  
Red Cross**

## The Red Cross Makes Teaching Easier

**Newly updated! Responding to Emergencies, our semester-long First Aid/CPR/AED course, includes:**

- Instructor's manual with in-depth lesson plans
- Multi-media classroom presentation
- Extensive video library
- Electronic test bank
- Affordable digital and print training materials
- Nationally recognized certification

**Teach this course. Visit [redcross.org/RTE](http://redcross.org/RTE)**