

Brighton Park Community Garden: Intervention Planning Proposal

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Introduction

Healthy food access is a significant public health issue. Improved healthy food access is associated with healthier outcomes such as reduced rates of obesity and diabetes, better eating habits, and increased economic stimulation in the community (Bell et al, 2013). Inadequate access disproportionately affects low-income populations and communities of color (Bell et al, 2013). There is also a cultural component: culture-specific foods and meals might be less healthy but more familiar to make and eat, thus contributing to unhealthy food consumption. This paper will explore the impact and potential of a community garden intervention in Brighton Park, a primarily Hispanic/Latino community, as well as detailing the planning, implementation, and evaluation processes of such an intervention.

Problem Statement

Brighton Park, Chicago's 58th Community Area (CA), is located on the city's southwest side, bordered by the Stevenson Expressway (55) and 48th, Western, and Kimball streets (Stockwell, 2005). It is a primarily Hispanic neighborhood: 83.1% of the CA's 45,368 residents are Hispanic/Latino (Statistical Atlas, 2015). While over half of Brighton Park residents are US-born, the primary country of origin for non-US citizens is Mexico (Statistical Atlas, 2015). 31.4% of Brighton Park residents are not US citizens.

Brighton Park is both strengthened by community activism and weakened by economic struggle, gang violence, and inadequate access to health care and health insurance. 25% of the population receives some sort of food assistance benefit, and the median household income is around \$37,000 (Statistical Atlas, 2015). 48.2% of the population has less than a high school diploma, and 11.2% of the population is unemployed (Chicago Health Atlas, 2014). 37% of the

population lives below the poverty line (Chicago Health Atlas, 2014). From 2013-2016, the number of shootings in Brighton Park increased by 300% (Komunda, 2017). The CA also suffers from nutrition-related health issues: in the 2010-2011 school year, 47-53% of Brighton Park public school students were estimated to be overweight or obese (Choucair & Byrd-Bennett, 2013). Brighton Park's highest morbidity rates are from cancer (all types), coronary heart disease, and cerebrovascular disease/stroke (Chicago Health Atlas, 2014). There is also very little green space in the community, and community residents struggle with promoting activities for young people beyond school to reduce gang violence in Brighton Park (Estrada Interview, 2016). Inadequate food access is associated with low socioeconomic status and low educational attainment and presents problems across the lifespan in terms of health status and life expectancy, which makes it a significant public health issue for the Brighton Park community (Evans et al, 2012).

Planning

As I look into planning an intervention to improve food access in Brighton Park, I will be utilizing the PRECEDE-PROCEED model. The PRECEDE-PROCEED approach is best suited for planning a community-based intervention because it focuses on the community itself as the starting point for health promotion (Community Tool Box, 2017). This model also prioritizes the involvement of the community as a whole, and identifies people who benefit from the intervention as key stakeholders in the intervention's success (Community Tool Box, 2017). Finally, as public health is primarily concerned at upstream causes of health and health inequity, the PRECEDE-PROCEED model will help identify upstream interventions that could be best

suiting for the community as well as being specifically outcome-driven to help understand the full impact of the intervention on the Brighton Park community. (Community Tool Box, 2017).

Team

I'm intending the intervention for Brighton Park to be sustained by the community, so I have intentionally created a team made up primarily of Brighton Park residents. I also have asked the assistance of two organizations in Chicago, the Brighton Park Neighborhood Council (BPNC) and the Illinois Hunger Coalition (IHC). These agencies have a lot of experience with nutrition issues in Chicago and can be beneficial throughout my planning process.

The BPNC has an extensive staff involved in community organizing and development, and they would be great resources for intervention planning within that specific community. Sara Reschly is the Director of Community Partnerships and Mariela Estrada is the Director of Organizing. These women and the council as a whole would be beneficial to me because not only do they have experience working for the Brighton Park community, they also live within the community and would be positively impacted by improvements to Brighton Park. I will also utilize the BPNC to recruit and engage community residents for the planning, implementation, and evaluation processes of the intervention. For this paper and planning process, I will be utilizing information from an interview I conducted with Estrada in 2016.

Another person on the team is Cristine Pope, who works for the IHC. Cristine is a consultant for the IHC primarily involved in community organizing and grant-writing. The IHC works to improve nutrition and access across Illinois and address inequity in those public health issues. The IHC works in a lot of different areas of this issue, but one such area is community quality councils, which help to build collaborative relationships between communities and the

IHC. Again, this would be an agency with a lot of experience and Cristine will have plenty of guidance for me as I plan this intervention.

I recruited a team of ten members: myself, Sara, Mariela, Cristine, and six Brighton Park Community residents with a passion for improving their community. Again, I utilized the BPNC's help in recruiting these members, through a community meeting where I will meet with community members and discuss my own goals for the intervention. Sara, Mariela, and Cristine will primarily serve as consultants and provide guidance for the project, and the other six community members and I will carry out most of the legwork involved in planning and implementation. I want this intervention to feel like a community-based effort, and I cannot do that if I do not have community members on board.

Investigate

I have investigated several facets of the problem of food access in Brighton Park and intervention planning, and have detailed and synthesized my findings below. I conducted research into the both the issue of food access and also various strategies used to address it; I delved into the ecological perspective to have a theoretical basis for intervention planning; and I gathered perspectives from my community team members to ensure the intervention would be most beneficial to the Brighton Park residents.

1. Research

In conducting background research into this issue for my intervention, I utilized a research study I conducted on my own, community health assessments, and four studies assessing different strategies aimed at improving food access in communities.

A. Mixed-methods approach to understanding food access in rural and urban Hispanic communities: Data collection, Analysis, Interpretation

I took a community-based participatory research (CBPR) approach and to involve members of urban and rural Hispanic/Latino communities. CBPR has an important role in marginalized and at-risk populations because it helps members of the community to feel empowered and invested in the research being conducted (Hacker, 2013).

My study design was a mixed methods exploratory sequential approach, starting with a quantitative quasi-experimental design through a survey and culminating with qualitative data through focus groups to provide a richer picture of the quantitative data I have collected. I have attached my analysis of the qualitative, focus group portion of the study (*Figures 1A-1C*). I separated both the survey and the focus group participants into urban/rural population groups. I used a stratified systematic sampling approach for each community for the quantitative, survey portion of the study, to ensure adequate representation of Hispanic and Latino populations in those communities; I used convenience sampling and community recruitment/engagement for the focus group portion of the study. For the survey, I formulated questions with the help of community leaders and utilized prior survey questions from NHANES or BRFSS surveys. My survey questions were primarily focused on food access and perceptions of healthy eating. I used my analysis of the survey data to write focus group questions, again with input from community leaders and residents.

There were six participants in each focus group (urban/rural), with at a total sample size N=12, and all of the participants were of Hispanic/Latino descent. Once I collected the focus group data, I ran descriptive statistics (*Figure 1A*) and then qualitative analysis (*Figures 1B and*

IC) through Dedoose Version 7.5.16. The codes I used included: ability to cook meals within budget vs. inability, access to healthy food (adequate and inadequate), barriers to healthy food (cost, distance, convenience, and knowledge of how to cook), primary method of transportation (car, public transit, walk/bike), and perceived amount of money spent on groceries (too much vs. right amount). Notable results among males vs. females in the study were that the male participants cited expense and knowledge of how to cook as primary barriers while females reported distance and convenience. Results among urban vs. rural residents were that urban residents primarily cited convenience and expense as barriers but the two populations equally cited distance and knowledge of how to cook. In terms of ability to cook healthy meals within their budget, both communities were pretty equal in ability vs inability. No rural participants identified the use of public transit as their main method of transportation, but more rural residents reported borrowing cars rather than owning them.

The findings indicate that while inequity exists in both urban and rural Hispanic populations when it comes to food access, each population has different priorities and concerns within this public health issue. My team members from the Brighton Park community verified and reinforced concerns voiced by the participants of the urban focus group. Distance, expense, and convenience concerns related to food access align with the ecological perspective (detailed in the theory section below), the primary theory my team used in the planning process.

B. Community health assessment strategies

I conducted two community health assessments of the Brighton Park based on the methodologies laid out by Issel (2014). These assessments provided a richer picture of both the Brighton Park community as well as the specific problem of food access in that community.

The first strategy I utilized was the MAPP assessment strategy from the Public Health perspective (Issel, 2014). I worked with the BPNC to conduct the Community Themes and Strengths Assessment, the Local Public Health Systems Assessment, the Community Health Status Assessment, and the Forces of Change Assessment (NACCHO, 2017). The BPNC put together much of the effort involved in this as this type of assessment was something they had wanted to do for a while. These four analyses provided great insight in Brighton Park's strengths and weaknesses in terms of built environment, health status, and access to health care in the community. We utilized vital statistics, surveys, and focus groups to conduct these assessments. As discussed before, Brighton Park has limited green space; there is just one major park in the area, Kelly Park, and it is used by Kelly High School and various community organizations (Chicago Park District, 2016). The other primary issue enumerated by Brighton Park residents was gang violence in the community: this is impacted by the budget cuts to schools in the community as well as reduced funding for specific community initiatives (Komunda, 2017). However, residents also pointed to their collective sense of community activism to work to address this problem, from neighborhood watch programs to "safe street" programs sponsored by the BPNC (BPNC, 2017). The BPNC is a strength itself for the Brighton Park community: founded in 1997, its work includes education justice, economic justice, healthcare activism, immigrant rights, and neighborhood violence issues (BPNC, 2017).

The second strategy I used was the Rapid Assessment and Response strategy from the Rapid perspective (Issel, 2014). I utilized this strategy to go more in depth on the issue of food access in Brighton Park. Again, I utilized the help of the BPNC and utilized existing data and interviewed community residents on their perspectives on food access in Brighton Park. There

are two grocery stores in Brighton Park, and one of them is a Mexican grocery store. Many residents felt the grocery store, Pete's Fresh Market, was over-priced for their income-level and the many people they had to support: 13.2% of Brighton Park residents live in over-crowded housing (Chicago Health Atlas, 2014). Additionally, there are also many convenience stores in the area that sell cheap, convenient food that is not necessarily healthy.

C. Scholarly research

I conducted research involving specific interventions focusing on improving food access in communities. This research assisted my planning as it helped me narrow down the interventions that could be most beneficial in the Brighton Park community. I've attached COSAFFI analyses of each study (*submitted separately*), and they are summarized below.

The Vida Sana Hoy y Mañana (VSH) study, in Burlington North Carolina, aimed to increase healthy food access and promote produce consumption in primarily Hispanic/Latino communities, my population of interest (Gittelsohn et al, 2014). Though these low-income communities are more rural than Brighton Park, the study was focused on small-to-medium Latino grocery stores and therefore could be generalized to urban communities with similarly sized grocery stores. The intervention itself was focused on the stores' resources and employees to create a marketing campaign designed to promote fruit and vegetable consumption (Ayala et al, 2013). The intervention was evaluated by tienda customers' fruit and vegetable intake over time as well as the stores' successful provision of fruits and vegetables (Ayala et al, 2013). While the intervention was deemed successful in terms of increased customer consumption, it had no affect on improving and sustaining customer purchasing habits (Ayala et al, 2013). However, the

intervention made managers and employees of the stores more invested in customer consumption, which was also a successful outcome of the intervention (Ayala et al, 2013).

The second study researched the impact of community gardens in rural communities in Missouri. Again, this population is more rural than the population I am intervening on. The study was conducted in two parts: a post-survey administered to a convenience sample of people who participated in the community garden, and the a random telephone survey administered to people living within five miles of a community garden (Barnidge et al, 2013). The garden was established by a coalition initiated by the Healthier Missouri Communities (Healthy MO), a community-based research project conducted by the Prevention Research Center in St. Louis (PRC-StL) (Barnidge et al, 2013). The findings of both surveys displayed an association with community garden participation and increased fruit and vegetable consumption (Barnidge et al, 2013). The post-survey, while it had its limitations, indicated that the community gardeners had an increased perception of healthier eating based on their participation in the community garden (Barnidge et al, 2013). The population-based phone survey also had limitations but one strength was that it not only measured garden participation, it also measured frequency of participation, which helped to show that increased participation rather than simply participation alone was more directly associated with healthy eating (Barnidge et al, 2013).

The third study compared the impact of traditional nutrition interventions (such as meal programs and food pantries) with the impact of alternative interventions (i.e. community gardens) in Montreal, Canada (Roncarolo et al, 2014). The most interesting finding of the study was that individuals tend to self-select into specific interventions: more vulnerable populations tend to utilize traditional nutritional interventions, while less vulnerable populations participate

in alternative interventions (Roncarolo et al, 2014). The researchers posited a few reasons why this may be the case: first, alternative interventions may be more demanding (i.e. someone would have to participate in the garden to reap the benefits); and second, low-income populations may have less knowledge about the the alternative methods (Roncarolo et al, 2014). However, the researchers did find that the alternative methods contributed to healthier lifestyle changes and increased consumption of fruits and vegetables more than the traditional interventions (Roncarolo et al, 2014).

The final study researched the impact of an exposure and incentive program initiated in farmers markets in low income communities in Rhode Island, and was specifically aimed at individuals and families receiving food assistance benefits (Bowling et al, 2016). The intervention involved fruit and vegetable tastings and cooking demonstrations along with purchasing credits for those purchasing produce with food assistance benefits (Bowling et al, 2016). The population studied was 46.2% Hispanic, and enrollment and programs were conducted in Spanish and English (Bowling et al, 2016). The researchers noted a high retention rate as well as an increased fruit and vegetable and decreased soda consumption among participants (Bowling et al, 2016). Another important finding was that the participants were using the food assistance incentives to supplement their healthy food budget rather than replace it, meaning that the participants didn't use their benefits to buy more unhealthy foods even though their healthy foods were being purchased through the farmers markets (Bowling et al, 2016). Additionally, the impact of eating more healthy food itself was the primary driving force to participate in the program, more so than the incentives (Bowling et al, 2016).

2. *Theory*

When planning a public health intervention, it is imperative to discuss public health theory to help explain the rationale behind the intervention. For this planning process, I utilized the ecological perspective laid out by Glanz, Rimer, and Viswanath (2015). The ecological perspective on health behavior consists of five principles: there are multiple influences on health behavior, environmental contexts are significant determinants of health behaviors, influences on behaviors interact across levels, ecological models should be behavior-specific, and multilevel interventions should be most effective in changing behaviors (Glanz, Rimer, & Viswanath, 2015). A multilevel intervention would impact on interpersonal, intrapersonal, community, and organizational levels, and these levels would interact with each other to influence behavior (Glanz, Rimer, & Viswanath, 2015). The ecological perspective also focuses on the environment: shifting the environment can have a major impact on shifting behavior to choosing healthy lifestyle choices, so an environmental-based community intervention would be most beneficial (Glanz, Rimer, & Viswanath, 2015). Finally, planning an intervention that is behavior-specific (that is, involving behavior modification directly) will help my intervention planning process.

3. *Community*

In consulting the Brighton Park residents on my team and various members of the BPNC, one issue related to food access that was brought up was lack of knowledge of how to cook healthy foods on a budget (Estrada Interview, 2016). This barrier to healthy eating was also highlighted throughout my research. Therefore, my intervention should help to address this barrier as well as the issues of food access and gang violence in Brighton Park, the primary concern of most Brighton Park residents.

Prioritize + Decision-making

After conducting background research, assessing the Brighton Park community, and consulting community residents, I wanted to implement an intervention that would be both beneficial to the Brighton Park community and sustainable for residents to maintain. I also wanted to draw on the strengths of the community, specifically the BPNC and the community residents' interest in the betterment of Brighton Park (Estrada Interview, 2016). The research has shown that alternative methods for improving food access can contribute to higher rates of healthy food consumption and behavior modification. We decided on the following intervention: implementation of a community garden (individual plots and community plots) with accompanying weekly nutrition classes about how to garden, how to cook healthy meals, and how to utilize cultural influences in healthy meal prep.

Improving food access and healthy eating habits in the Brighton Park community by establishing a community garden could help address some of these health issues, increase green space in the area, and promote community engagement. The Brighton Park residents on my team were most invested in this intervention because they felt the addition of more green space and community involvement could help assist with the violence issues plaguing the community. We also decided to implement cooking classes to assist participants in learning how to cook the food they were growing; this was both a prevalent concern that came out of my research study and an aspect of the farmers market intervention that my team was also really drawn to. The BPNC already has implemented some cooking and nutrition classes, so we will utilize their model and grow upon that (Estrada Interview, 2016).

Program theory + Logic model

According to Issel, development of a program theory is essential when developing a health intervention (2014). *Figure 2* displays the program theory developed by my team in planning the community garden intervention for Brighton Park. Program theories are comprised of two main components: the process theory and the effect theory (Issel, 2014). The process theory is the basis for implementer inputs, the “organizational plan,” and the “service utilization plan” (Issel, 2014) behind the intervention; in this case, the organizational plan will be the garden staff and cooking class staff, the initial development and establishment of the community garden and the team and supplies necessary, and the structure of the cooking classes and garden participation. The service utilization plan will be how we engage and retain community members via flyers, social media, and community meetings (all conducted with cultural competency) (Issel, 2014). The effect theory picks up where the process theory leaves off; it posits the outputs and short term and long term health effects intended by the intervention (Issel, 2014). For this intervention, the outputs will be the produce generated by the garden and and cooking skills taught in the classes, the short term health effects will be increased healthy food consumption and nutrition knowledge, and the long term health affects will be reduced rates of nutrition-related chronic diseases and increased environmental well-being as well as a potential reduction of gang violence in the Brighton Park community.

My team also developed a logic model for the community garden intervention (*Figure 3*). This logic model was developed with the assistance of the Metrics for Healthy Communities’ logic model template regarding fresh produce access. A logic model is composed of resources/inputs, activities, outputs, outcomes (short, intermediate, and long term), and impacts (“W.K.

Kellogg Foundation logic model development guide,” 2005). Resources and inputs include the community garden development plan, the research behind the intervention, the community garden site, funding for the intervention, and staffing for the garden and classes. Activities would be the community gardening and the cooking classes, and outputs would include number of garden plots, number of participants in both the garden and the classes, food produced/grown, and cooking skills gained. Short term outcomes would be participants' increased knowledge of how to grow and cook healthy food and their sense of increased food security, as well as increased proximity of the community to fresh produce. Intermediate goals include increased consumption of healthy produce, increased self-report of health and wellness, and increased social connectedness. Longterm outcomes would be reduced rates of nutrition-related chronic conditions, decreased health inequity, and decreased gang violence in the Brighton Park community.

Program goals + objectives

The primary goal of the community garden intervention is to increase healthy food access in Brighton Park. Secondary goals would be to increase Brighton Park community green space and social connectedness and decrease gang presence and violence in the community.

Process Objectives

1. The garden will be established by July, 2017, and will typically be active and available from April until November each year following, maintained by community residents as a staple in the community.
2. The classes will run weekly while the garden is open (18 classes the first year, 25 the subsequent years).
3. 50% of the community residents will establish plots in the garden.
4. 30% of the community residents will attend at least one class in the first year and at least 5 classes in the second year.
5. 85% of the classes will be evaluated by the participants as satisfactory in a survey administered at the end of each class and then the end of the class sessions as a whole.

Outcome Objectives

1. By the end of the first year, participants of the garden will report increased knowledge of how and when to grow specific vegetables and fruits compared to community residents who did not participate in the garden.
2. By the end of the first year, participants of the classes will report increased knowledge of how to cook healthier foods and meals compared to those who did not participate in the classes.
3. By the end of the first year, participants in the garden and classes will report healthier lifestyle choices compared to those who did not participate.
4. By the middle of the second year, community residents will feel empowered to teach their own classes and impart their gardening knowledge to new participants.
5. By the end of the second year, community residents will be able to run the garden and classes with minimal guidance from the original implementers.

These goals and objectives were discussed and created with input from my team and the BPNC. Evaluation of the outcome objectives involving increased knowledge and behavior changes will be assessed via post-survey and is discussed below.

Plan for implementation

In planning the timeline, implementation and classes, and budget of the community garden in Brighton Park, I and my team consulted the American Community Garden Association website, the Peterson Garden Project website, the Urban Harvest website, and *Start a Community Food Garden: The Essential Handbook* by LaManda Joy (2014).

1. Timeline of Major Activities

A. Site location: May 1, 2017 - May 22, 2017

We will be working with the BPNC and the Peterson Garden Project to help identify a place in the community that would be a spot of the community garden. We'll be looking primarily in and around Kelly Park and contacting the Chicago Park District to see if we can work with them, but we'll also be contacting the administrations of the various schools,

churches, and the Chicago Public library branch in the community to see if they have property we can utilize. Underused resources by institutions such as these because it involves them as stakeholders in the garden's success (Joy, 2014). Another option would be working with landowners of empty lots in the community, which can be a beneficial relationship in community building and again brings in another stakeholder, but sometimes is more of a short-term solution if the landowner ends up selling the property (Joy, 2014). For the cooking classes, we'll be meeting with the restaurant and grocery store owners in the community to see if they would be willing to let us use their kitchens during off hours in the for classes. We'll also meet with school administrations in the community, since their kitchens will be used less during the summer while students are out. This would be more desirable than the restaurant owners because we'd potentially be able to offer classes on flexible schedules for community residents who have inflexible work hours.

B. Fundraising (first year): May 1, 2017 - November 1, 2017

The community garden, while beneficial for the community in the longterm, will be expensive to implement and establish. Therefore, we will be relying on community donations and grant funding to help us establish the garden. We will also work with the BPNC for support and meet with business owners in the community for supply donations. Fundraising efforts will be ongoing throughout the intervention and will be a part of the evaluation of the success of the intervention after the first year. We'll also have a community plot that we'll sell produce from to raise money for garden maintenance.

C. Site development and supply gathering: May 30, 2017 - June 14, 2017

Once the sites have been chosen, we'll need to develop the land and prepare it for gardening. A lot of details of the development of the site will depend on the location we choose. We'll start with cleaning up the site as needed and finding available water sources such as willing neighbors, nearby fire hydrants, and the resources of the space we utilize (Joy, 2014). We'll then need to organize the plots based on what we aim to grow, and how many community members we recruit. We'll also likely have to build a storage facility for the supplies, and a fence around the plot, and we've allocated money in our budget (described below) for that (Joy, 2014). We'll be looking to get most of these supplies donated, but have allocated the budget for the rest. Supply donation is another way of involving community stakeholders (Joy, 2014).

D. Volunteer garden + cooking class staff recruitment and training: May 15, 2017 - June 21, 2017

We will recruit initial gardening volunteers through flyers and community meetings. Many communities have experienced gardeners who are willing to help out and lead (Joy, 2014). This would be most beneficial so we can conduct gardening training sessions in multiple languages as the Brighton Park community is primarily Hispanic. Again, we'll draw on former BPNC models and volunteers for the cooking and nutrition classes. Our goal with all the classes and gardening is to empower the community residents to be able to teach these classes in future years of the garden, to pay forward their knowledge and build relationships in the community. Since this will be implemented during the summer, we'll want to get students involved as much as possible; we'll work with the local school administrations to engage these students.

E. Community recruitment and engagement (first year): June 5, 2017 - October 25, 2017

Again, we will post flyers and hold community meetings to engage members, and work with the BPNC to draw on their methods for community engagement, since they have been building relationships in the community for years. Once we have volunteers recruited, we'll use a variety of methods to engage and retain them: Joy recommends utilizing social media for tech-savvy gardeners, and flyers protected by plastic sheets to post in the garden for those who are not comfortable with or do not own computers (2014). Since the gardens must be tended to in order to be successful, it's imperative that we keep volunteers engaged. A sense of ownership of the garden and increased cooking skills from the classes will also keep participants engaged (Joy, 2014).

F. Garden opening party: July 4th, 2017

This will be a kick off event for the garden, planned intentionally on July 4th since residents will potentially have the day off and will be able to attend. Since more people will be home, this could be a greater opportunity for gang violence to occur, so having an event to engage community members on that day could be key for the community. We will have a potluck but have also allocated money for party supplies.

G. Gardening + Cooking classes (first year): July 5th, 2017 - November 1, 2017

We'll try to hit the ground running with gardening as soon as everything is established. Plots will be first come first serve: the volunteers who helped us set up the garden and who will be teaching the cooking classes will get first priority, and we will also establish a community plot for anyone to work in. The classes will take place weekly, mostly in the evenings for convenience, and will cover gardening techniques, cooking techniques, and recipes. The garden will be maintained for as long as weather allows, likely mid-October, and the classes will run

until the last week of October when we will hold a small party to celebrate accomplishments of the participants and administer a post-survey.

H. Clean up and evaluation of first year: October 16, 2017 - November 20, 2017

Once the weather no longer permits gardening, we'll ask our volunteers and those who have plots to help clean up the garden to prepare it for it for subsequent years. We'll administer post-surveys to those who participated in the garden but not the classes around this time, and we'll meet as a team to evaluate the planning process and intervention (evaluation process discussed below).

2. Implementation: class structure

The classes will be taught by volunteers with experience in gardening and cooking, and we'll try to recruit nutritionists to guest-teach. Cristine Pope from the IHC will guide us in finding these "guest teachers." The classes will be an hour to 90 minutes long, and will be mostly up to the teacher in terms of format. As discussed earlier, we will also adopt similar class structure models from nutrition classes already enacted by the BPNC (Estrada Interview, 2016). The Peterson Garden project website has many different class topics and ideas; we'll utilize their guidance in class planning and structure.

3. Budget:

After consulting our sources and evaluating community resources, our team has evaluated the intervention to cost \$3,387.71, without donations or supplemented funding, for the first year of implementation (*Figure 4*). We've applied for grant funding for this project and will be fundraising (discussed above). Most of the money will be for needed supplies for the

establishment of the garden, so subsequent years will be less expensive. We also expect to cut costs by gathering as many donated supplies (tools, hoses, etc) as possible.

4. Anticipated barriers and adaptations

This project could have multiple barriers: community resistance, lack of cooperation from community officials, inadequate funding and resources. Methods for community engagement and retainment have been discussed above, but we anticipate that the community will have many willing participants as that is one of the strengths of Brighton Park (Estrada Interview, 2016). We will try to cut costs as necessary and get donations for supplies as much as possible.

Process evaluation plan

The primary way we will be evaluating the success of the garden experience and classes will be post-surveys we administer at the end of the sessions. We will assess: increased perception of cooking skills, increased perception of gardening skills, increased knowledge of healthy food and lifestyle choices, and participant satisfaction with the quality of the garden and cooking class experiences. We will also conduct a post meeting with the BPNC and key stakeholders from the project. At the end of the first year, our team will meet to evaluate the intervention as a whole, utilizing the RE-AIM framework and AEA guidelines.

RE-AIM stands for reach, effectiveness, adoption, implementation, and maintenance (Glasgow, Vogt, & Boles, 1999). We will evaluate how effectively we engaged the Brighton Park community; how well the garden and community classes accomplished what we intended in our goal, program theory, and logic model development; how well the Brighton Park community engaged and adopted the project; how well we stuck to our budget and adapted the intervention

as barriers occurred, and how well we structured the interventions so that Brighton Park community members could take it over and sustain it for years to come.

The AEA guidelines include: systematic inquiry, competence, integrity/honesty, respect for people, and responsibilities for general and public welfare (American Evaluation Association, 2014). To follow these guidelines, we will ensure our survey tools adhere to the highest technical standards available have validity and reliability, and are culturally competent (American Evaluation Association, 2014). We will also make sure our evaluation in both the survey and meeting will be conducted with integrity and honesty and respect for all individuals. Finally, we will evaluate not only the tangible successes of the intervention but also the “broad assumptions, implications, and potential side effects” (American Evaluation Association, 2014).

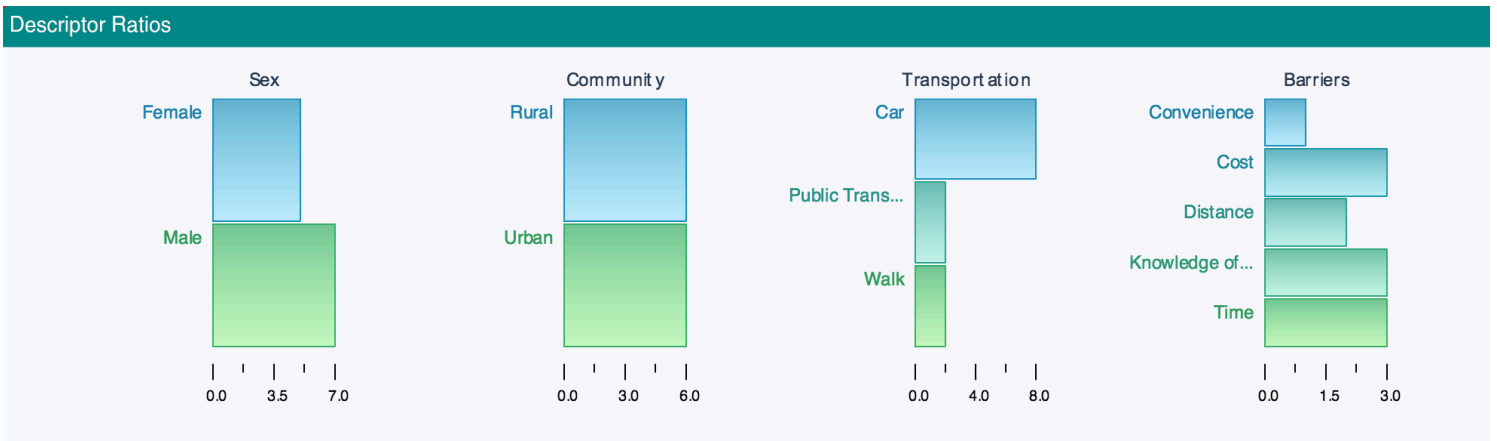
Reflection

Systematically approaching each step of the intervention planning process, both for this project and for the entirety of the semester, was both beneficial and challenging. I learned the benefit of taking a team-based approach to intervention-planning. It was also helpful to write out the narrative of the planning process as this type of process is the best way in which I learn. The feedback for various portions of the project over the semester helped me refine my work. This type of project gives me a good basis for program and intervention planning in my future career as a public health professional.

While most of this process was hypothetical, being able to practice data analysis, intervention process and evaluation planning, and different methods of research to fully explore the issue of food access (an issue I’m passionate about) in an academic setting will be beneficial to me as I develop as a public health professional, and I appreciate the experience. However, it

made some aspects of the project more difficult: it was hard to ground the work I was doing in terms of real life, practical experience, and I feel that some of my results and project planning (i.e. budget) could have been more refined and realistic in that sense.

Figure 1A: descriptive statistics from research study - dedoose
(qualitative/focus group sample analysis)



Sex: 41.7% female; 58.3% male

Community of residence: 50% rural; 50% community

Transportation (main method): 66.7% car (25% of total borrowed car); 16.7% public transit; 16.7% walk

Barriers to cooking healthy food (primary barrier): 8.3% convenience, 25% cost, 16.7% distance; 25% lack of knowledge of how to cook; 25% time

Figure 1B: mixed methods analysis (male vs. female) - dedoose
(qualitative/focus group sample analysis)

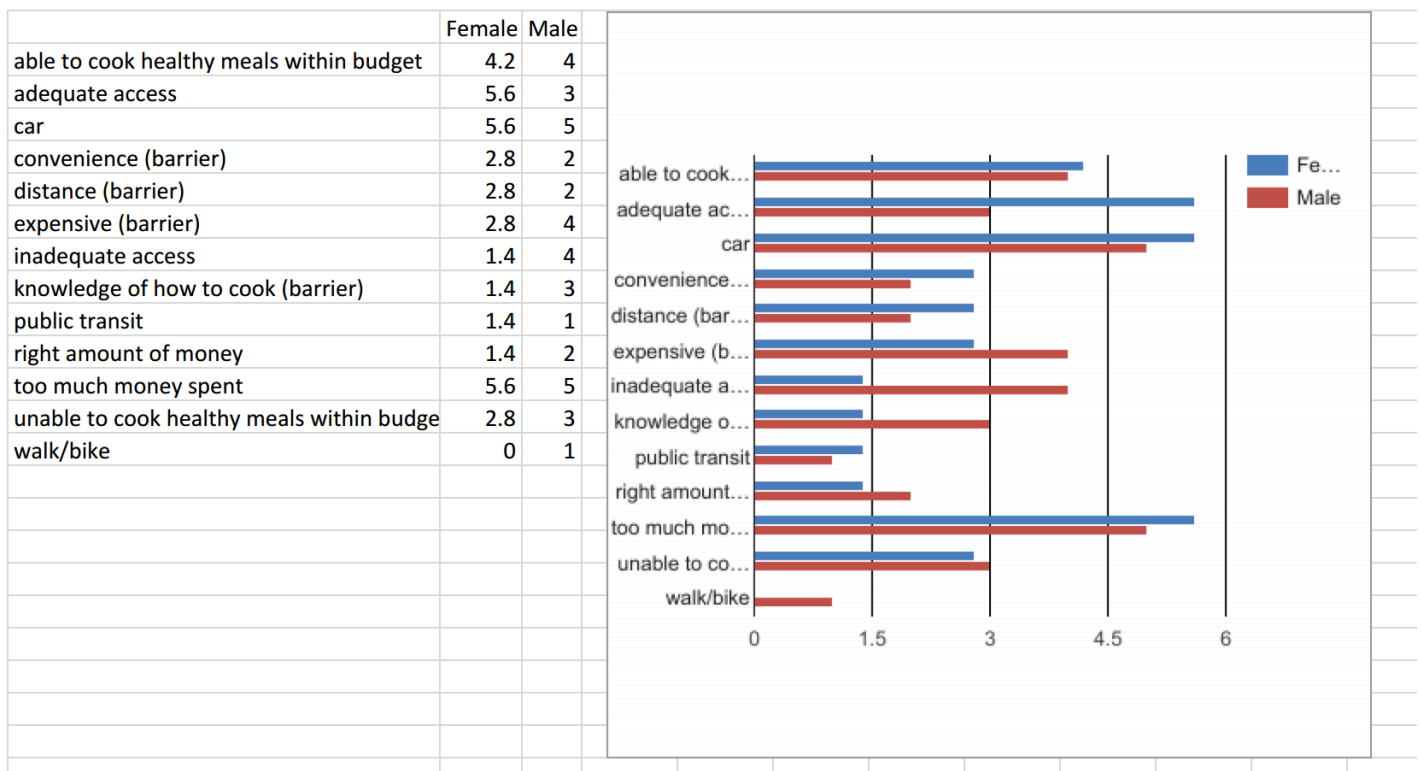


Figure 1C: mixed methods analysis (rural vs. urban) - dedoose
(qualitative/focus group sample analysis)

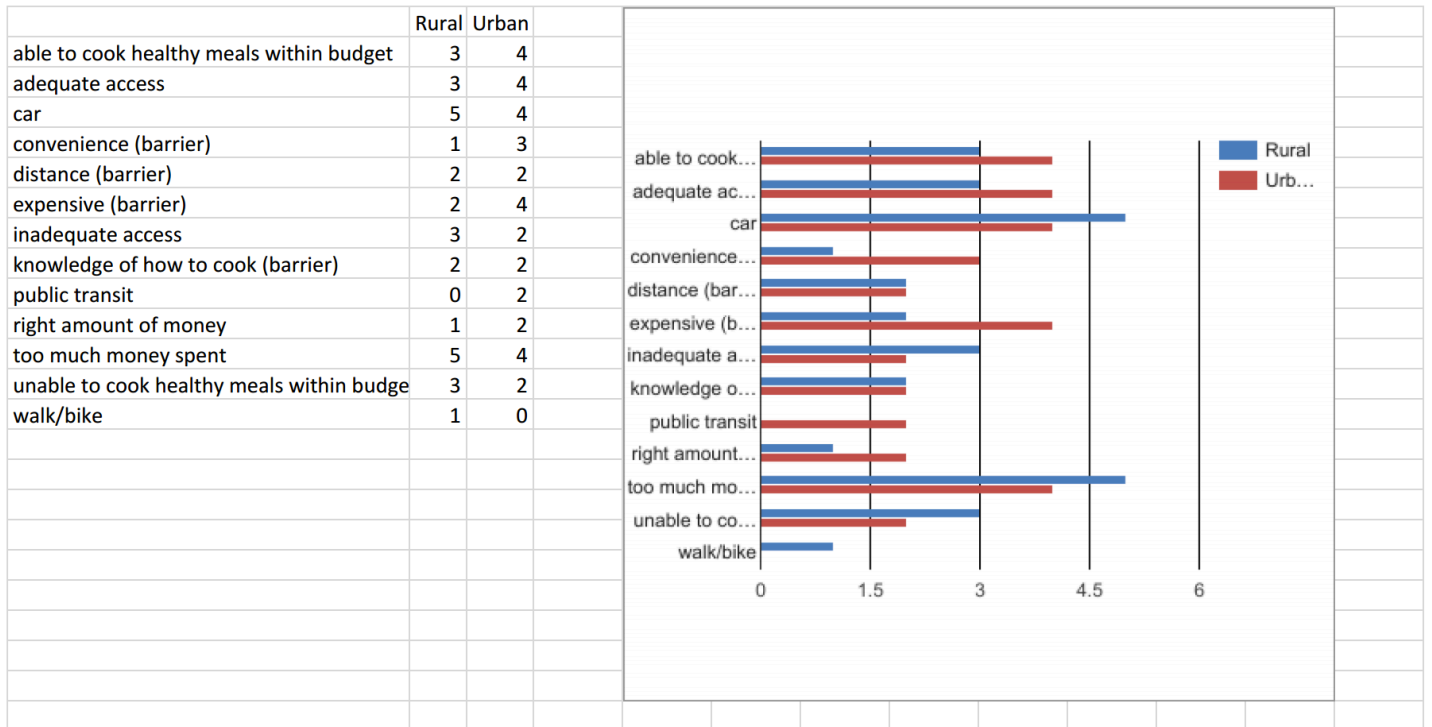


Figure 2: Program Theory for Community Garden Intervention
(adapted from Issel, 2014)

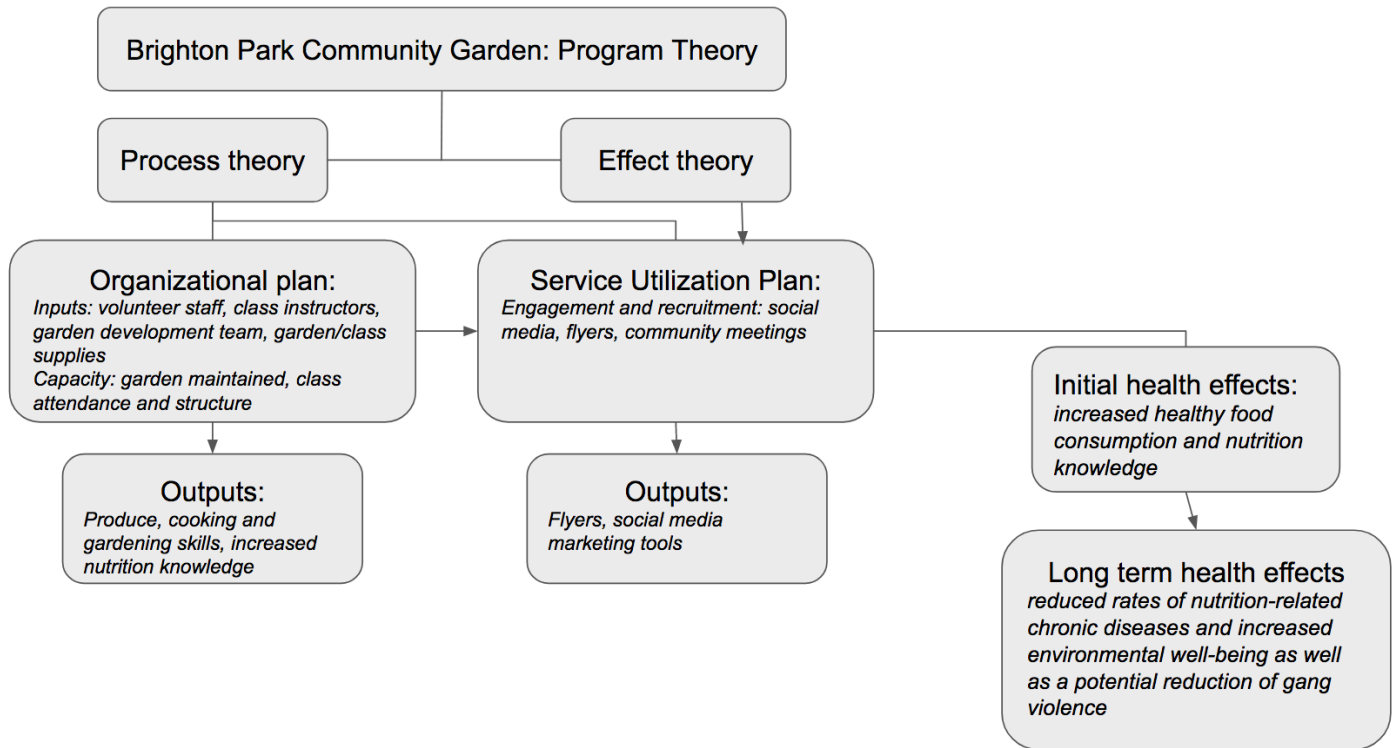


Figure 3: Logic Model for Community Garden Intervention
(adapted from Metrics for Healthy Communities; W. K. Kellogg Foundation)

Resources/Inputs	Activities	Outputs	Outcomes		
			Short	Intermediate	Long term
<ul style="list-style-type: none"> development team community garden development plan evidence-based research garden site funding volunteers 	<ul style="list-style-type: none"> community gardening cooking classes 	<ul style="list-style-type: none"> number of garden plots number of participants (both the garden and the classes) food produced/grown cooking skills gained 	<ul style="list-style-type: none"> participants' increased knowledge of how to grow and cook healthy food increased food security, increased proximity of the community to fresh produce 	<ul style="list-style-type: none"> increased consumption of healthy produce increased self-report of health and wellness increased social connectedness 	<ul style="list-style-type: none"> reduced rates of nutrition-related chronic conditions decreased health inequity decreased gang violence

Figure 4: Budget - Estimated Cost Breakdown of Community Garden Intervention
(adapted from Urban Harvest)

Item	Unit Cost	Quantity	Total
Plots			\$1,330.94
Vegetable beds (blocks + foundation)	\$37.50	12	\$450
Pollinator bed (blocks + foundation)	\$37.50	1	\$37.50
mulch (vegetable beds + pollinator bed)	\$25/yd	8 yards	\$200
sand base	\$3.43	8	\$27.44
soil (vegetable beds + pollinator bed)	\$43	12	\$516
Shipping/delivery (all items)	\$200		\$100
Garden elements			\$480
Shed	\$350	1	\$350
Compost bin	\$50	1	\$50
fence	\$80	1	\$80
Irrigation			\$117.98
hoses	\$20.99	2	\$41.98
nozzles	\$8	2	\$16
hose reels	\$30	2	\$60
Tools			\$375
hand trowels	\$6	5	\$30
shovels	\$22	2	\$44
rakes	\$22	2	\$44
wheelbarrow	\$80	1	\$80
pruners	\$10	1	\$10
5 gallon buckets	\$4	2	\$8
tomato cages	\$159/pack	6/pack	\$159
Recurring (yearly) supplies			\$283.79
fertilizer	\$39	4	\$156
hay bale	\$19	2	\$38
seeds, transplants, onion sets, sweet potato slips, garlic bulbs	\$75	--	\$75
fire ant control	\$14.79	\$1.00	\$14.79
Cooking classes + miscellaneous			\$800.00
prepared food	\$500	--	\$500
cooking supplies	\$150	--	\$150
party supplies	\$150	--	\$150
Total			\$3,387.71

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