Skim Milk Tastes Like Water:
Assessing the Impact of a Nutrition Program for Women in the San Joaquin Valley

By:

Frances Marie Einterz
B.A. (Indiana University) 2013

Thesis

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF SCIENCE

in

Community Development

in the

OFFICE OF GRADUATE STUDIES

of the

UNIVERSITY OF CALIFORNIA DAVIS

Approved:

_____
Ryan Galt, Chair

_____
Natalia Deeb-Sossa

_____
Catherine Brinkley

Committee in Charge

2017

ABSTRACT

Despite large sums of agribusiness wealth, Tulare County, located in the San Joaquin Valley of California, has one of the highest prevalence of disadvantaged unincorporated communities and some of the highest rates of poverty and food insecure households in the state of California (Flegal et al., 2013; Harrison, 2008). The local food bank, FoodLink of Tulare County, is attempting to improve food security and community health with programming such as on-site gardening and community classes. In April and May of 2016, they piloted a five-week nutrition class titled Cooking for Health Matters in multiple disadvantaged, unincorporated communities in Tulare County. Overall, evidence in the literature is inconclusive as to whether sustainable behavior change is possible after attending similar nutrition courses and recommends that evaluations should be prioritized. I used a pre-class and post-class survey, a post-class focus group, and two, eight-month follow-up focus groups to evaluate the impact of the nutrition course for six women in one community, Pixley, California. The evaluation is rooted in a social ecological framework, a theory that explores the relationship between community health and community infrastructure. The evaluation found notable health behavior changes such as increased consumption of fruits and vegetables. However, access to affordable and proximate grocery stores continues to impede lasting positive health outcomes for the women and their families. Moving forward, FoodLink and other community organizations should consider:

- offering nutrition programs that better reflect the local culture and priorities of its communities;
- co-developing a curriculum with local *promotoras* and health professionals on the subject(s) of preventing diabetes, heart disease, and/or anemia;
- developing a coalition of central community figures to develop collaborative solutions to food insecurity and health disparities; and
- critically considering how health interventions are working at both the local, the personal, and the larger system/policy level to improve local communities.

INTRODUCTION

At a 2015 rural justice conference in California's San Joaquin Valley, one community member responded in frustration to a UC Davis researcher's presentation. She said: "We are tired of hearing about the problem and the data. We all know there is an issue of inequality. We want to hear solutions" (Personal Communication, 9 March 2016). A complex web of socioeconomic, health, and environmental inequalities exists in the San Joaquin Valley. (Minkoff-Zern, 2014; Karner and London, 2014; Ramirez and Stafford, 2013). These issues of inequality are often concentrated in disadvantaged unincorporated communities (DUC's), disproportionately low-income places that are densely settled and not within city limits (Flegal et al., 2013). DUC's are areas of concentrated poverty and food insecurity[1] that, governed by counties, lack significant public representation. Consequently, DUC's have been, and continue to be, financially overlooked and systematically underserved by basic services such as water, sewage, and public infrastructure (Flegal et al., 2013).

Tulare County, in particular, has one of the highest concentration of DUC's in the San Joaquin Valley, shown in Figure 1 (Flegal et al., 2013). Additionally, 38% of Tulare County's adult residents identify as food insecure, an issue highly associated with chronic diseases such as hypertension and diabetes (Seligman et al., 2010). The interrelated problems of poverty, health disparities, and community food insecurity in Tulare is easily traced to the simultaneous exploitation of land, water, and farm laborers: conditions facilitated by policy makers at all levels and agricultural producers in the Central Valley region (Ramirez and Stafford, 2013; Minkoff-Zern, 2014). Due to the complex political and economic forces that work together to create or

[1] Food Insecurity is defined by the USDA as the state in which "consistent access to adequate food is limited by a lack of money and other resources at times during the year" (2017).

worsen food insecurity for DUC's in Tulare County, community organizations and academic communities face difficulties implementing effective, long-term solutions for food insecurity and health issues. Ayia Kimura attempts to explain the challenge of creating effective solutions, writing that food insecurity is "a complex sociopolitical problem, rather than a simple deficiency of a set of nutrients" (Hayes-Conroy et al., 2014).

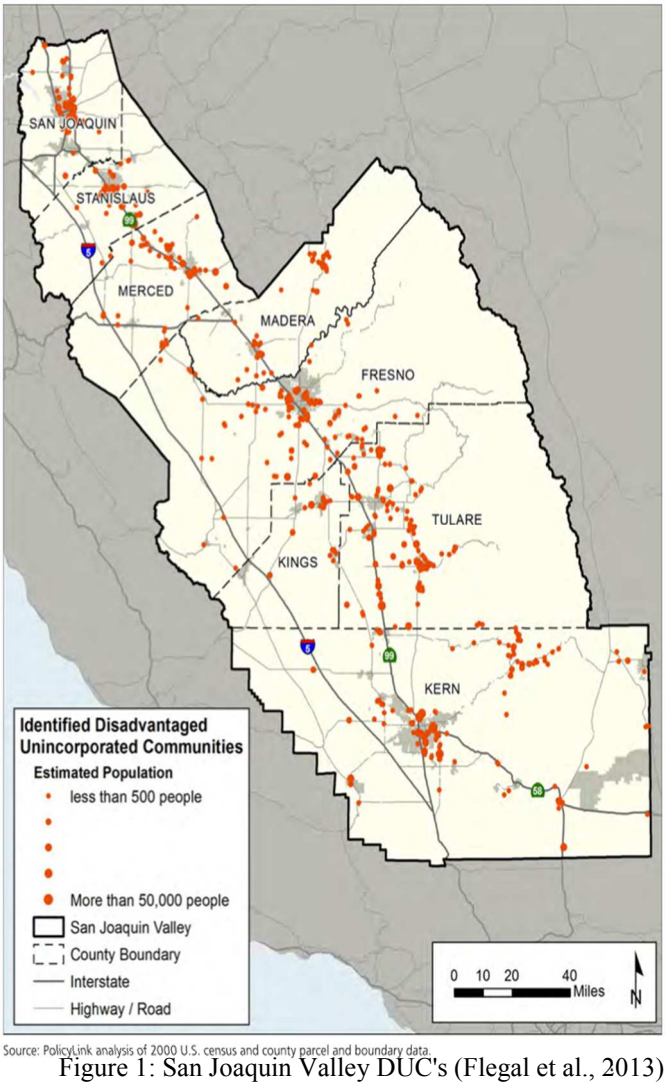


Figure 1: San Joaquin Valley DUC's (Flegal et al., 2013)

Despite the challenges to developing comprehensive solutions, FoodLink of Tulare County (FoodLink), the local food bank, is attempting to craft innovative programs that aid local communities, especially DUC's, in overcoming food insecurity and health disparities. Because the solution to food insecurity is more complex than emergency food distribution to chronically hungry households, FoodLink has begun to expand their programming in unique ways. FoodLink, led by its director and public health expert, Dr. Sarah Ramirez, is leading in a unique direction for a food bank. Sarah, originally from Tulare County, is intentionally expanding FoodLink's services beyond a food bank's typical role as a distribution warehouse. Rather than putting resources toward distribution services, Sarah is

slowly transforming both FoodLink's community role and physical space into a community center complete with educational programming such as nutrition, cooking, and gardening classes. According to Sarah, the classes are intended to work toward developing "critical consciousness" amongst the community members. Critical consciousness is a concept first defined by Paulo Freire (1974) as "learning to perceive social, political, and economic contradictions and to take action against the oppressive elements of reality" (p.19). The classes are intended to provide knowledge as well as to facilitate individual agency to improve the surrounding community's food security and health outcomes.

For the last three years, FoodLink has engaged in nutrition programming – a broad term best defined as "any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food- and nutrition-related behaviors conducive to health and well-being" (Contento, 2008).[2] FoodLink's original nutrition programming was targeted to children. However, in 2016, FoodLink became one of a few food banks in California to offer a multi-week, multi-community nutrition program for adults. FoodLink chose to use a curriculum titled: Cooking for Health Matters. Cooking for Health Matters was designed by the California Nutrition Obesity and Prevention Branch (NEOPB), a branch of the state's Department of Public Health whose main materials focus on obesity prevention. The curriculum had never been utilized by a food bank before FoodLink. Therefore, FoodLink piloted the curriculum as a five-week course on healthy eating and culinary

[2] The term "nutrition programming" can be somewhat misleading as it is a broad term used throughout the literature to describe not just classes specifically on nutrition, but also classes on cooking, healthy eating, food safety, and healthy lifestyle. It is also a term utilized to describe food tastings offered at schools or distribution sites. Each organization's usage of the term is dependent on its goals. For the purposes of this project, the class is referred to as a nutrition program or nutrition intervention due to its intention is to teach expanded topics such as food safety, healthy eating, and healthy cooking.

education for DUCs in Tulare County.

FoodLink sought to evaluate the effectiveness of the six-week nutrition program. They wanted to measure whether the nutrition program resulted in any lasting impact for the community such as changes in eating habits, increased knowledge of food safety in addition to sustained health behaviors such as healthy ingredient substitutions in recipes and increased intake of vegetables and fruit. Since its inception, FoodLink, like many community-based organizations that engage in nutrition programming, found it difficult to prioritize program evaluation due to multiple barriers such as limited staff time and funding (Johnson et al., 2007). Consequently, Sarah reached out to me as a community partner to develop an evaluation of the nutrition program.

Therefore, the purpose of the following project is to discuss the design and findings of the evaluation. I designed the evaluation to measure program impacts for women living in the disadvantaged unincorporated community of Pixley, California. I work with Pixley because it is representative of many DUCs in Tulare County: a small community whose main population works in the farm labor industry and with 80.9% of the population identifying as Hispanic/Latinx (United States Census Bureau, 2017). In order to complete the evaluation project, I utilized a pre-class and post-class survey assessment combined with two focus groups. The evaluation's theoretical framework, design, methodology, and findings will be discussed in depth in the following pages.

I have structured the Thesis to begin with a discussion of the body of literature that frames the research questions and inspires a critical perspective for the evaluation findings. Following the summary of relevant literature, I present a description of the community study site, which includes a brief explanation of the structure of FoodLink, the nutrition program and

curriculum, the Pixley community, and the impacts of my own positionality as a researcher. After describing the study site, I then present the evaluation methodology followed by the evaluation findings. Finally, the project concludes by summarizing the analysis and discussing the broader implications of the data for disadvantaged unincorporated communities including some recommendations for FoodLink.

LITERATURE REVIEW

Most recent literature on food banks and nutrition programming has been written in response to Feeding America's latest implementation of food-based nutrition guidelines. Feeding America is a nationwide network of food banks in the U.S. that provides guidelines and some food deliveries. Their most recent policy is title: "Foods to Encourage" and the policy encourages food banks to control the types of food distributed by limiting the amount of unhealthy choices available to food bank clients, a method labeled as "nutrient profiling"[3] (Handforth and Hannink, 2013; Webb, 2013; Campbell and Webb, 2013; Ross et al., 2013; Remley et al., 2013). While nutrition profiling is the most recent trend in food bank nutrition interventions, Karen Webb points out that health and nutrition education for food banks is a hugely unexplored opportunity. Generally, food banks have historically embraced narrowly delineated roles as bulk food intake and distribution warehouses. It is only within the last five or ten years that the roles of food banks have begun to expand beyond their original model (Seligman et al., 2015). Webb states, "Future partnerships are envisioned to link the food bank network more consistently with local

[3] Nutrient Profiling is an encompassing term for any method that labels food to denote or categorize its level of healthiness. It is a process popularized in Europe that is now making its way to the U.S. where municipalities and food banks are all experimenting with labeling foods with numerical calories or using symbols to denote items on a healthy menu. Some food banks use nutrition profiling as a method of limiting client choice by completely excluding unhealthy items such as soda or candy, altogether, from their distributions (Williams and Colyer, 2009).

nutritionists/registered dieticians, health care professionals, and community health clinics to address clients' immediate food needs and to connect them to other health and nutrition services" (Webb, 2013). As Webb accurately iterates, it is rare to find any studies that engage in adult nutrition interventions or evaluate food bank nutrition interventions. Most nutrition programming is done for children and not completed in partnership with a food bank (Swindle et al., 2010: de la Torre et al., 2013). California is no exception to this gap in nutrition programming and evaluation.

There are only two documented evaluations of adult nutrition programs in California food banks. Most recently in California, Feeding America partnered with the University of San Francisco and the Bristol-Myers Squibb Foundation to conduct a nutrition and health intervention for diabetes prevention (Bristol-Meyer Squibb Foundation, 2012). The Squibb Foundation's longitudinal study worked with clients at the Redwood Empire Food Bank in Santa Rosa in addition to two other food banks located in Ohio and Texas. The individuals who took part in the study ended up having lower glycemic indexes after the intervention and there was a significant improvement in fruit and vegetable intake (Seligman et al., 2015).

In addition to the evaluation through the Squibb Foundation, WhyHunger's review of nutrition programs, including non-food banks, highlights various methods of how some programs conduct evaluations but does not discuss their results. The review does include a description of the five-question survey Second Harvest Food Bank uses at the finale of their nutrition series to gauge impact for its clients (Pascual and Powers, 2012). Notably, Pascual and Powers (2012) recommend that food banks partner with academic institutions to conduct evaluations as the authors hypothesize that evaluations do not occur as a result of limited resources and staff time. One other reason that only two documented examples of food bank

nutrition program evaluations manifest is likely due to the fact that very few California food banks are engaging in multi-week nutrition interventions for adults.

Based on the directory of the California Association of Food Banks (CAFB), a network of 46 member food banks throughout the state, 10 out of 46 (22%) member food banks are engaging in any programming that they label as "adult nutrition education".[4] Of the food banks that do, only five of them are providing ongoing, multi-week class sessions for clients, similar to FoodLink's model. The other five food banks provide on-site recipe tasting or annual half-day culinary workshops that they still label as nutrition education. Of the food banks conducting a series of nutrition classes, it appears that only one, as discussed above, Second Harvest Food Bank of Santa Cruz County, has developed an evaluation tool for their nutrition class (Pascual and Powers, 2012). Evidently, nutrition programs and their impacts are relatively unexplored by California food banks and could be a new frontier for expanding services.

Because expanded, adult nutrition programs are so sparse in California, an evaluation of FoodLink's nutrition program is an opportunity to build a replicable evaluation design that may be used by other California food banks. The evaluation's measured impacts for a DUC also provide a case study example that can inspire discussion with other California food banks also working with DUCs. To best facilitate the creation of an effective evaluation, then the literature of critical nutrition studies and of social ecology are used to frame the evaluation's design and analysis.

CRITICAL NUTRITION STUDIES

The emerging field of critical nutrition studies challenges the traditional role of nutrition education. One discourse in critical nutrition studies is particularly focused on how it functions

[4] A much larger number provides nutrition education for children

to keep certain groups of people in power. For example, Biltekoff et al. (2014) point out that nutrition education is utilized as a political tool used to preserve the ideals and values of the white, upper middle class – a term that Allison Hayes-Conroy and Jessica Hayes-Conroy describe as hegemonic nutrition (2013). Hegemonic nutrition describes the manner in which nutrition advice from the federal or state government or the academy is passed to individuals and communities based on the ideals and values of the state rather than the community's idea of wellness (Hayes-Conroy and Hayes-Conroy, 2013). Belasco et al. (2011) claim that nutrition education has historically acted as a strategic initiative used to indoctrinate American values - especially for the marginalized communities such as low-income dependent on food banks or SNAP, undocumented, or immigrant populations - and fails to acknowledge the importance of cultural perspectives for health, eating, and well-being. The accepted norm of society and the state telling individuals how and what to eat is closely tied to influencing people's perceptions of what is considered morally right and morally wrong (Belasco et al., 2011). As Biltekoff et al. (2014) surmise, utilizing nutrition and food to shape a community's morality is well summarized by John Coveney's claim that nutrition is both empirical and ethical. He states that, "Nutrition provides rules about what to eat that also function as a system through which people construct themselves as certain kinds of subjects" (Coveney, 2006 cited in Biltekoff et al., 2014). Biltekoff and colleagues go on to emphasize that nutrition education constructs people as subjects within American idealism; a concept echoed in the campaign against obesity where the shaming and discrimination of the obese or overweight goes as far as to portray it as unpatriotic or as a "threat to the nation" (2014). While the authors discuss the groups of people kept in power due to nutrition education, another discussion about the mechanisms for propping those groups up is also taking place in the literature. The discourse is particularly focused on what nutrition

education is lacking: the important backdrop and connections to the associated social implications of food and health. Biltekoff et al. assert, broadly, that nutrition education fails to account for the complexity of social and cultural factors that influence individual health and wellness beyond the biological (2014).

With a slightly different take, Jessica Mudry (2009) argues that the conversation about food and healthy eating is driven by quantitative scientists who do not account for the other ways of 'knowing' food such as culture, taste, geography etc. Mudry (2009) points out that the reductionist method of studying nutrition as discussed by Marion Nestle in *Food Politics* is mirrored in the reductionist method of making healthy eating recommendations (Nestle 2003). Mudry (2009) explains that the science of nutrition makes quantitative scientists the privileged "arbiters" of food that ultimately impact moral perceptions and ideals about food and eating. Whereas Mudry (2009) focuses on a critique of those who create nutrition standards and Biltekoff et al. (2014) allude to those individuals who teach nutrition, Jessica Hayes-Conroy and colleagues summarize both by stating that nutrition interventions are "ineffective for a variety of reasons, including inattention to embodied cultural difference and social inequality, promotion of expert knowledge regimes that masquerade as apolitical truths, and the elevation of white, Western, upper-class modes of eating as morally superior to other ways of eating and knowing food" (Hayes-Conroy et al., 2014, p. 60).

Recognizing the various critiques as presented by Critical Nutrition Studies, the authors also suggest solutions to diminishing the barriers discussed above. Allison Hayes-Conroy, Jessica Hayes-Conroy, and Adel Hite suggest ways to begin moving away from the traditional hegemonic nutrition model (2014). Collectively, they advocate for community or even

individual-driven nutrition advice that departs from an adherence to strict government guidelines and recognizes the intertwining influences of individual diet and environment on an individual's health (Hayes-Conroy et al., 2014; Biltekoff et al. 2014). Hayes-Conroy and colleagues advocate for shifting from hegemonic nutrition interventions to a community-driven understanding of wellness (Hayes-Conroy et al., 2014). The perspective change that defines health and wellness from a community's standpoint rather than being pressured from society's viewpoint also shifts the accountability of health outcomes away from shaming individuals (Hayes-Conroy et al., 2014; Mudry 2009). The authors also promote the idea of considering nutrition education critically before implementation and that nutrition education should consider the broad impacts of food from the growing practices to the individual's socio-political and cultural influences that impact individual health (Biltekoff et al. 2014; Mudry et al. 2014; Hayes-Conroy and Hayes-Conroy 2013). Generally, there is an understanding and acknowledgement that food and nutrition are inherently political. Critical nutrition studies provides a valuable lens for evaluating and providing feedback to organizations looking to improve overall community wellness using nutrition and food.

Critical nutrition studies claims it is imperative to consider the multitude of forces, sociological, economic, political etc., that impact the food system and its consumers. Food banks, as part of the emergency food system, work with food insecure population whose lives are also impacted by many factors and elements beyond just hunger and food access. Therefore, as critical nutrition studies states, successful programming should consider the socio-cultural and political influences that impact an individual's daily life and health behaviors. Social ecology is one useful theoretical frame that addresses the broader societal influences on an individual's health.

SOCIAL ECOLOGY AND NUTRITION EDUCATION

Kenneth McElroy et al. (1988) proposed social ecology as a framework for health promotion. The framework attempts to account for the factors in an individual's broader community – the ecology – that may impact healthy behaviors. McElroy et al. suggest that health behaviors are impacted by five interrelated spheres of influence (see Figure 2) (1988). Figure 2 shows an individual placed within their interpersonal environment, which sits within the interrelated hierarchical environments of institutions, community, and finally the largest social structure and policy systems. The figure portrays each smaller sphere impacted by the larger ones that encompass it. In total, the five spheres are delineated here:

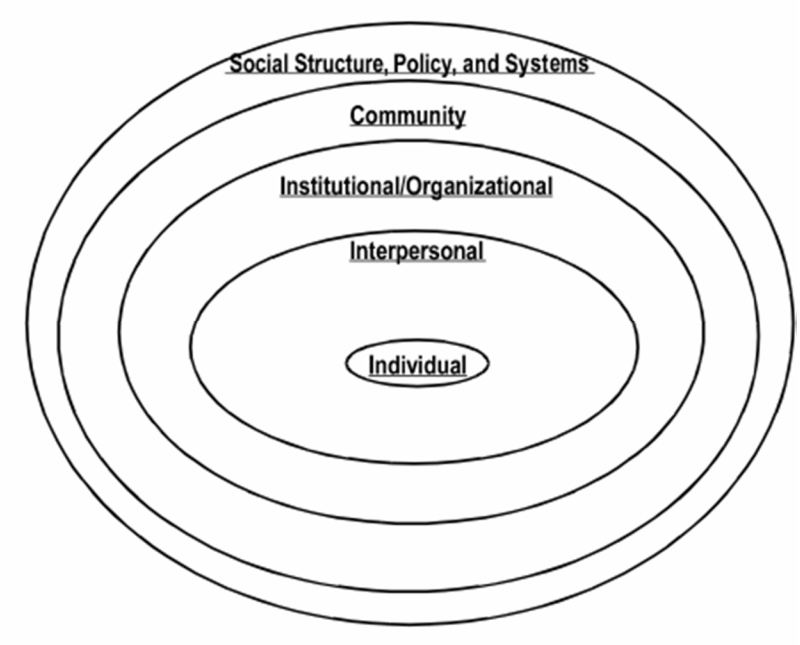


Figure 2: Social Ecology's Spheres of Influence (McElroy et al. 1988)

1. **Social Structure, Policy, and Systems:**
   Societal norms and the local, state, federal policies and laws that regulate or support healthy actions
2. **Community:**
   Social networks, cultural norms, and systems, or standards (public agenda, media agenda)
3. **Institutional/ Organizational:**
   Rules, regulations, policies, and informal structures (worksites, schools, religious groups)
4. **Interpersonal:**
   Interpersonal processes and primary groups (family, peers, social networks, associations) that provide social identity and role definition
5. **Individual:**
   Individual characteristics that influence behavior such as knowledge, attitudes, beliefs, and personality traits

The assertions of McElroy and his colleagues' base argument is that creating a space for knowledge acquisition is not enough to change an individual's health behavior (1988). Instead, a person's broader social ecology, made up of social, organization, and community influences, must also be conducive to changing the behavior (McElroy et al., 1988). However, since the portrayal of social ecology as interrelated spheres, some debate has emerged regarding its utilization for health interventions.

Daniel Stokols specifies that using the social ecological model to change behaviors is best done by creating interventions that provide both knowledge acquisition and "environmentally-focused interventions" (1992). For example, to increase the utilization of bikes in one British community, Collins et al. suggest a two-fold approach that may include charging motorists a fee for every mile and providing free bike maintenance classes (2010). Similarly, Moore et al. posit that "higher level policy interventions may be limited in their effectiveness if they are undermined by a lack of attention to lower level factors that may compromise their successful implementation." (2011). Gregson et al. insist that changes at the interpersonal and individual level, however, are unlikely to succeed without higher spheres also working to reinforce the interpersonal changes (2001). The work of Gregson and colleagues is specific to a nutrition education intervention in which they developed an evaluation logic model with indicators to measure change at each sphere of influence (2001). This logic model is somewhat unique in its marriage of evaluation and social ecology. Most nutrition programs are designed using social ecology but not necessarily evaluated using the social ecological framework (Contento, 2008).

Social ecology has been utilized for nutrition program design and implementation since the early 1990s, especially for the USDA's Supplemental Nutrition Assistance Program (SNAP) nutrition classes (Contento, 2008). Based on Isobel Contento's review of nutrition programs, the most successful nutrition interventions are designed to account for, or also change, at least two spheres of influence in addition to education (2007). There is clear consensus about the importance of social ecology in nutrition program interventions. However, not typically being utilized for evaluators purposes, FoodLink's nutrition program poses a unique opportunity to consider how the nutrition program engages with the various spheres of influence of the Pixley community.

LESSONS FROM THE LITERATURE

Very few food banks in California engage in nutrition programming. For the food banks that do, there is little evidence of evaluation methods, which is understandable given limited resources. Consequently, evaluating FoodLink's nutrition program is an important opportunity to impact future food bank's nutrition programs and evaluation methods. This makes it imperative that the evaluation design can be easily replicable by other food banks or by FoodLink staff for future programming. Additionally, as a project, the evaluation's goal is to measure impact. Therefore, findings from this project, in addition to providing feedback for FoodLink'a programming, act as a case study for other San Joaquin Valley food banks interested in developing nutrition programs for low-income communities and DUC's.

The field of critical nutrition studies is a useful lens for framing feedback from the evaluation. I use critical nutrition studies to frame the extent to which FoodLink's nutrition program falls under the category of hegemonic nutrition intervention and the extent to which it

incorporates the Pixley community's cultural perspectives and priorities about health. The field of critical nutrition studies is also useful for other California food banks to consider the implementation of nutrition programming as an appropriate avenue for expanded services – especially in the DUC's of the San Joaquin Valley. Finally, in designing and developing the evaluation, social ecology inspires the second research question regarding the extent to which any health intervention can be effective, if the community environment is not conducive to healthy lifestyles. Therefore, I will use the framework of social ecology to determine which spheres of influence are the most impactful (negative or positive) for the community's health.

Because the evaluation project directly impacts the food bank and the local community of Pixley, the following section provides the context of the study. This includes a description of FoodLink, the nutrition classes, Pixley, and my own positionality as it impacted the evaluation design and findings.

STUDY SITE

FOODLINK OF TULARE COUNTY: FOOD BANK PROFILE

Food banks were originally created, and still work, as a main hub for emergency food system services in the United States. The Emergency Food System provides free or low-cost food to low-income households and is funded by federal and state programs as well as through donations. Food banks are the large warehouses that take in, separate, and supply food to regional food pantries, soup kitchens, churches, or schools. Figure 3 provides a visual summary describing how a food bank typically functions.

Janet Poppendieck (1999) has challenged the Emergency Food System and food banking as a band-aid solution that allows the upper class to ignore the harsher realities of inequality that lead to hunger. As such, Poppendieck points out that food banking, a temporary solution since the 1970s, is unable to sustainably solve the systematic issues of hunger in communities (Poppendieck, 1999). Perhaps in response, food banks have begun to move beyond emergency food distribution to expand their programming in unique ways. FoodLink is one food bank leading that initiative. In recent years, FoodLink focused on nutrition education for children through three programs: Nutrition On the Go, Healthy School Farmer's Markets, and Happy Kitchen. These three programs all doubled with distributions of fresh vegetables and fruit to children at schools, summer programs, and distribution sites.

It is unusual for California food banks to offer programs beyond distributions or child nutrition education programs. FoodLink, however, recently moved to a new location in order to expand educational opportunities. FoodLink reaches 8,000 people each month through its distribution services and hopes to continuously decrease those numbers as it offers programming to provide families with more agency over their food access and intake. Their new site is

complete with a community garden, community kitchen, and an increasing number of on-site classes. FoodLink made a particularly innovative decision to provide adult nutrition education and a unique choice to use a curriculum outside of the commonly utilized SNAP or WIC programming (Townsend, 2006). At FoodLink, I worked directly with two staff members[5]. Sarah has a Ph.D from Stanford and an MPH from Columbia University. After graduate school, she intentionally returned to Tulare to work with her childhood community to implement community-based solutions for improving the food system and community health.

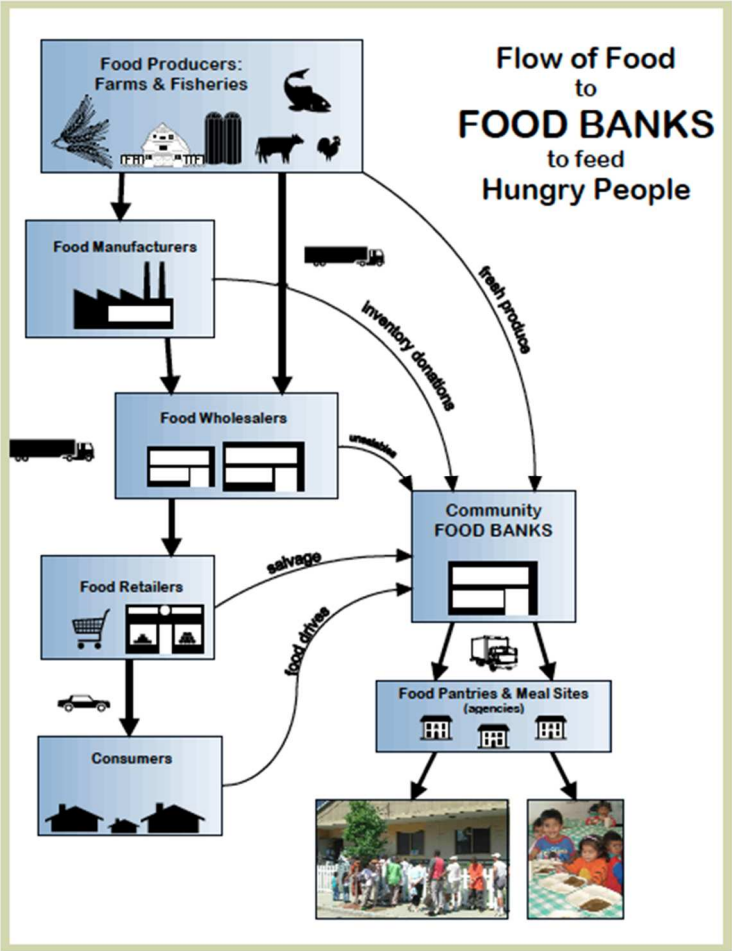


Figure 3: A visual diagram showing the distribution of food to and from food banks (The GFN Sourcing Toolkit 2017)

The second staff member also grew up in Tulare County. She does some outreach and education for the food bank and she was integral to making sure the Cooking for Health curriculum was taught to disadvantaged unincorporated communities in Tulare County. The nutrition program curriculum and class design are discussed in the following section.

[5] Some details have been changed for purposes of confidentiality.

OVERVIEW OF THE NUTRITION PROGRAM: COOKING FOR HEALTH MATTERS

California's Nutrition Education and Obesity Prevention Branch (NEOPB), part of California's Department of Public Health, provided funding and a curriculum for FoodLink to begin their adult nutrition program. Using NEOPB's curriculum and funding came with some conditions. For one, NEOPB had to approve of the specific communities in which the nutrition programming would take place. All of the communities, Allensworth, Earlimart, Richgrove, Tipton, and Pixley are labeled by California as disadvantaged unincorporated communities (DUC's). Additionally, NEOPB demonstration recipes were required to come from NEOPB or from their partner, Champions for Change.[6] No expenses of the nutrition courses could be reimbursed to the food bank until food bank staff submitted shopping receipts proving they utilized NEOPB-approved recipes for the weekly course.

The full curriculum utilized, Cooking for Health Matters, was provided to FoodLink in only the English version and is designed as six modules that teach three areas of knowledge:

1) Food Safety
2) Healthy Eating Behavior
3) Healthy Cooking

As the class was taught, each weekly lesson lasted approximately an hour and a half in each community. The main instructor also combined the fifth and sixth lesson to make the class five weeks long instead of six weeks long. The weekly class session always began with the instructor reading the curriculum out loud for the first half hour of the class. Most locations did not have a

[6] Champions for Change is an organization that is branding itself as a movement toward improving health in local communities. They have multiple programs such as healthy recipes, weight management, and healthy drinks. The movement partners with California's Department of Public Health.

kitchen on-site. Therefore, the instructor often used easily transportable hot plates to begin a cooking demonstration that could last from forty-five minutes to an hour. The classes generally ended by handing out small portions of the prepared dish accompanied by a recipe handout. Some weeks, FoodLink also sent produce boxes to the classes for the women to take home. Initially, however, building momentum for the classes encountered some challenges.

The classes were difficult to set up and to implement. The first challenge became apparent when NEOPB could only offer the Cooking for Health Academy curriculum in English. As a result, the first community class start-date was delayed because a FoodLink staff member needed to translate the entire curriculum into Spanish, the main language spoken by the target audience of the class. There was also an issue setting up and running classes – often an hour or more away from the FoodLink headquarters – because finding a community center, church, or alternative location to host the classes was challenging. Teaching the classes could also be discouraging. The cooking classes were open for anyone living in the community to participate and therefore did not specifically target any one subgroup of individuals, but participation was low and sometimes no one showed up at all.

The first classes began in March of 2016 in Earlimart. Because the class curriculum was new to the food bank staff and the communities, the instructor asked that I not be involved with the Earlimart class. However, when nutrition classes began in Allensworth six weeks later, I began driving down every Thursday to foster relationships with the Allensworth community. Simultaneously, I began developing the survey tools for the third community, Pixley. In Pixley, the instructor taught the five classes in the timespan of three weeks by hosting the class twice in one week (Tuesdays and Thursdays).

PIXLEY, CALIFORNIA

Pixley is a Disadvantaged Unincorporated Community (DUC) in Tulare County. Tulare county has a disproportionately high percentage — 39%- of its population living in DUC's (Flegal et al., 2013). In Tulare county, over 80% of the population living in DUC's are identified as people of color and 75% of the population living in DUC's are considered low-income[7] (Flegal et al., 2013). In Pixley, the median household income, $29,531, is defined as low income (U.S. Census Bureau, 2017). Additionally, approximately 80% of the Pixley community identifies as being Hispanic/Latinx and of Mexican descent (U.S. Census Bureau, 2017).

Because Pixley is a relatively small, low-income community of about 3,310 people and a representative DUC (U.S. Census Bureau, 2017), it was chosen it as a case study community for the evaluation. A group of 10 women, between the ages of 28 and 40, consistently attended the classes. About four other women from the community showed up on single days but did not attend more than once. Most participants were monolingual Spanish speakers. All the women had children in school and had a mix of work experiences either as domestic workers or working in the fields as farmworkers. They all found out about the program from a key community gatekeeper, Eva, who runs the adult learning center next to the elementary school and interfaces with the women on a daily basis through their children's school. Pixley is a tight-knit community where collecting information as a white, wealthy, well-educated woman in a largely low-income, Hispanic community impacted my ability to effectively gather data. Therefore, I will now discuss my own positionality and its impact on the evaluation.

[7] Low-income is defined as below 80% of the state household median which is equivalent to $37,994 (Flegal et al., 2013).

POSITIONALITY

Nina Wallerstein et al. (2005) provide recommendations for academic-community partnerships and one key to developing successful collaborations is, as a researcher, to listen in order to "uncover the role of power dynamics". As a researcher, recognizing my own power and privilege while working in a community of color was an imperative step to collaborative processes as summarized by Wallerstein et al.: "Many of us who are white or middle-class academics working in communities of color may fail to recognize the ways in which 'unearned privilege' may foster stereotyping or maintain internalized oppression among community members who assume they themselves have less to offer" (2005, p. 52). As part of my own self-reflection I took over twenty trips to Tulare to build relationships and then eventually moved to live just outside of Visalia (40 miles north of Pixley) for four weeks during the summer 2016. These actions were not enough to reduce the imbalance of power between myself and the women in Pixley, and I was a community outsider, better defined as a "professional stranger" (Eng et al., 2013). I am a well-educated white woman from the Midwest who arrived in the Tulare County community representing a major research institution, UC Davis. Consequently, there was a significant cultural barrier and power differential between myself and the class participants with whom I interacted. This was exacerbated by the immense financial and physical freedom I had to leave the county whenever I wanted. The inherent divide made it difficult for me to build trust with community members or gain an insider's view of the community.

While I had very positive relationships with some food bank staff, the divide was also felt by a few of the staff at the food bank who felt my presence as a research scientist to be a reminder of their own uncomfortable or failed relationship with higher education. Some of them may have had negative experiences with prior academic professionals and therefore may have

also cultivated some lingering resentment (Eng et al., 2013) During my time working with the food bank, I attempted to balance this power differential with the food bank staff members through multiple strategies. Over the course of nine months, I volunteered on other projects, attended board meetings, helped with food distributions, and spent an afternoon calling donors.

Ultimately, my positionality also naturally influenced how the Pixley community interacted with me and with each other when I was hosting focus groups. My inability to fluently speak and understand Spanish created another significant barrier to gathering information. Forced to go through a translator, and as an unfamiliar face to the Pixley women, interactions were disjointed, which made it difficult to glean information. Additionally, as a community outsider, it is unclear how much community trust I had earned. During focus groups, side conversations happened in Spanish that I was unable to record or build upon as a facilitator or as an observer. However, to build familiarity with the Pixley women, I attended as many nutrition classes as possible, intending for my constant presence and awkward small talk to increase trust. However, three weeks was, realistically, not enough time to build meaningful and co-learning relationships within one community (Wallerstein et al., 2005).

Overall, my positionality likely impacted my data collection as I remained a community outsider to FoodLink and to Pixley. It is plausible to assume that the responses and interactions observed may have been different or more revealing if I were Spanish-speaking or a familiar community member. With my own positionality in mind and in constant reflection, I designed an evaluation.

RESEARCH QUESTIONS AND HYPOTHESES

1) To what extent did a nutrition program change food consumption behaviors or influence knowledge about food consumption?

   Hypothesis: The literature shows that nutrition program interventions have inconsistent results (Contento, 2008). Therefore, I anticipate that the women's level of knowledge about healthy eating will have increased in response to topics discussed in class but that the women will not have implemented any lasting behavior changes specific to lessons learned in the nutrition program.

2) What community assets or community barriers are most influential on the physical or mental health of women living in Pixley?

   Hypothesis: I anticipate that the class, as developed by the state of California, will not reflect the same eating or health priorities as the community of Pixley. Additionally, through my own experience of working and living near Pixley, I observed very little community infrastructure in the area that facilitates healthy behaviors. For example, public transit is difficult to access and schools and grocery stores are far from town centers. Therefore, it seems likely that based on the spheres of influence presented in social ecology, then local, interpersonal and community ties such as local churches and social networks will have positive impacts whereas the broader social structure, policies, and county infrastructure will have more negative or neutral impacts.

METHODOLOGY

OVERVIEW OF METHODS IN THE LITERATURE

Before developing the methods for evaluating the nutrition class, I conducted a literature review to understand what methods are commonly used to evaluate nutrition programs. Using a combination of a pre-class and post-class assessment along with qualitative data collection is a consistent theme throughout the literature. However, in a review of programs by Contento and Randall (2002) there is no set methodology for nutrition intervention evaluations. Some evaluations utilize more rigorous mixed methods while other rely on less extensive, single post-assessment questionnaires (Contento and Randall 2002). The most popular methods for evaluation nutrition interventions are seen in the work of Swindle et al. (2007), Chen et al. (2010), and Kohls and Wells (2011). Swindle et al. (2007) developed an evaluation in Denver for low-resource populations that uses a pre-class and post-class survey which is then supported by a three and six-month follow-up to measure the effectiveness of a nutrition intervention. Similarly, Chen et al. (2010) studied an intervention for an ethnically diverse group of 604 children and families. Even though the intervention was with children, Chen and colleagues (2010) measured impacts on the household by using a pre-class survey and post-class survey that was given to the parents. The authors also conducted a follow-up focus groups with the parents (Chen et al., 2010). One final project evaluated a children's cooking program, Come Cook With Us. They utilized a combination of pre-intervention and post-intervention surveys with interviews and participant observation to measure the impact of the children's cooking program (Kohls and Wells, 2011).

Some evaluations include additional measurements. For example, one culinary/food literacy class targeting at-risk youth evaluated its efficacy by combining surveys and focus

groups with a photo voice method, which places cameras in the hands of community members so they may visually represent and communicate their lived experience (Thomas and Irwin, 2011; Lopez et al., 2005). For a food bank in Rhode Island, BMI was measured at the beginning and again at the end of the six-week class in addition to a written survey and a focus groups (Flynn et al., 2013). Flynn and colleagues (2013) also collected grocery shopping receipts before and after the cooking class and at the six-month follow-up focus groups.

As is generally shown by the examples above, a foundational evaluation combines a pre- and post-assessment with qualitative methods such as post-assessment interviews or focus groups. Although the themes of the literature created some foundation from which to work, there were a few challenges that ultimately influenced the final evaluation methods. Limited resources and time, as well as some friction with food bank staff also impacted the ultimate evaluation design of using a pre-class survey, post-class survey, and two sets of follow-up focus groups.

CHALLENGES

The evaluation methods were both driven by the evaluation's objectives and inspired by successful models in the literature. However, the design is limited because the methods are not comprehensive in measuring every possible outcome of a nutrition program. The methods proposed for this evaluation do not include any biometrics, measurements of unique physical attributes. Biometric measurements are appropriately utilized for larger, random control trials and studies whose objective(s) are to measure an intervention's impact on diseases or disease risk.

For example, for a school-based intervention for children at high-risk for cardiovascular disease, the evaluators measured cholesterol levels, blood pressure, BMI, and body fat (Harrell et al., 1998). Similarly, Wieland et al. (2016) designed a participatory community-based nutrition

intervention to decrease risk of cardiovascular disease and used random control trials to measure BMI, blood pressure, waist circumference, and weight. However, biometrics were not included in the FoodLink evaluation, because the objective was to measure impacts on knowledge acquisition rather than physical changes. Additionally, taking biometric measurements requires more time, specific staff training, or hiring additional personnel. These are resources FoodLink (and many food banks) did not have.

In addition to the acknowledged limitations of the methods, the comfort level of a FoodLink staff member also influenced the development of the final evaluation design. While conducting an evaluation of the nutrition program, the staff member felt personally scrutinized throughout the process. Despite the evaluation being focused on the curriculum content, community bridges to health, and community barriers to health, the staff member expressed some concern that their job was at stake pending the results of the evaluation.

It is natural that staff close to the design and delivery of a program would experience insecurities about an evaluation. However, the misunderstanding of the project goals impacted the methods of the evaluation. I had originally intended on evaluating all six disadvantaged unincorporated communities, but the on-staff instructor refused to support the evaluation beyond Pixley. I had also originally intended to engage in a full participatory project, but I only made the survey participatory. The evaluation was therefore limited in the breadth of its data collection and consequently, the depth of its statistical analysis was also stunted. Additionally, it was designed from a top-down approach whereas a community-designed evaluation has the potential to ask more impactful questions because the community understands its priorities better than any outsider (Keiffer 2005). Consequently, as other food banks pursue similar evaluations, it is important to clearly communicate the purpose and function of an evaluation and to clarify that it

is not an evaluation of a person or staff member. Instead, it should be emphasized that it is intended to improve a program's longevity.

To model a straightforward and effective evaluation method for food banks, I chose to combine a pre-class survey and post-class survey with two sets of follow-up focus groups. Importantly, the methods are robust enough to conduct a meaningful evaluation (Chen et al., 2010; Kohls and Wells, 2011) and are easily modified to include additional measurements as appropriate. The proposed surveys are readable and time-efficient and can be modified for a different program's objectives. Finally, the focus groups are easy to facilitate so that any food bank staff member can model them without additional training. All the methods are intentionally designed to minimize staff training, resources, or time while still maximizing effective measurement.

METHODS

The project methodology is based on culinary and nutrition program evaluations completed by Swindle et al. (2007), Contento's literature review of program evaluations (2007), and Thomas and Irwin's methodology for evaluating a nutrition class for low-income youth (2011). Swindle et al.'s program evaluation utilized a combination of surveys and interviews whereas Contento's literature review shows that many program evaluations combine surveys and focus groups (2007). I chose to utilize surveys and focus groups to measure a difference between baseline behaviors and final behaviors for nutrition course participants. The pre-class survey was delivered during the first session of the course and the post-class survey was completed at the end of the full nutrition class. I also hosted two sets of focus groups. One focus group took place one week after the completion of the nutrition class (May 2016) and two focus groups took place eight months later (January 2017). The design and utilization of the quantitative and qualitative

methods used to evaluate the class are discussed below.

THE PRE- AND POST-CLASS SURVEY

I collaborated with academic mentors and food bank employees to develop the first draft of a pre- and-post survey instrument that includes components of previously validated survey designed by Banna et al. (2010). The survey was created in English, first, and then translated into Spanish.

I validated and amended the Spanish version of the survey based off the validation method used in Banna et al. (2010). They developed a procedure for validating face validity of a Spanish-language assessment tool. According to Banna et al.:

> An ideal evaluation instrument for these USDA programs should exhibit adequate validity and reliability in the target population. In addition, it should be sufficiently brief to avoid detracting from the education portion of the intervention and should include key behaviors discussed in the education sessions (2010, p. 80).

Banna and colleagues improved each survey version using semi-structured interviews with groups of nutrition attendees to achieve a validated tool. The interview sessions sought to improve the readability of the survey tool and receive general feedback to improve the content and questions of the survey tool (2010).

Due to limited resources and time, I also chose to utilize some of the questions from Banna et al.'s validated tool in the evaluation's survey (2010). During the last class with the Allensworth community, the first series of classes I attended, two women attended and I replicated Banna et al.'s interview formats. Together, we discussed each survey question and I received feedback for improving or changing questions. For example, for each survey question, I asked the participants to paraphrase the question by asking, "In your own words, what is this

question asking?" I then used Banna et al.'s suggestion to probe with follow-up questions such as, "what words might you change in this question?" The Allensworth participants offered multiple wording suggestions and suggested additional questions. After using their feedback to amend the survey, I then used the survey for the final evaluation in Pixley. The final surveys (pre-class and post-class) can be viewed in Appendix A.

The pre-survey and post-survey tools were designed with a mix of multiple-choice questions and fill-in-the-blank questions. The surveys measure the following:

1) Learning goals for attending the class
2) Knowledge of food safety
3) Healthy eating and cooking habits taught by the curriculum
4) Access to grocery stores

FOCUS GROUPS

Paulo Freire (1970) advocates for mutual dialogue and learning in groups; focus groups are an opportunity for building solutions-oriented discussion in addition to "analyzing systems of care and barriers to service utilization, and planning, developing, and evaluating programs and policies" (Keiffer 2005, p. 147). As shown above, they are a common and suitable evaluation tool for gathering in-depth information about a certain topic or understanding factors influencing behaviors (Kieffer 2005). As the project sought to understand how behavior changes may be impacted by the surrounding community, then focus groups were a natural tool for data collection. Due to the challenges of a language barrier, I hired an undergraduate research assistant, Priscilla Cortez, from a university that is close to Tulare County. Priscilla had also been born and raised in Tulare County and was studying to be a translator. She graciously worked

with me to lead and translate the focus groups. She also transcribed the conversation from the focus groups as well as the surveys.

As noted above, the focus groups occurred twice: at the finale of Pixley's three-week class session and again, eight months later. I used a semi-structured set of questions (see Appendix B) to stimulate conversation between participants and measure three potential outcomes of the nutrition course:

1) The nutrition course's ability to meet the goals of community participants
2) Any changes in eating habits, cooking habits, or physical activity attributable to the nutrition course.
3) Barriers within the community that may be inhibiting participants from reaching 1 and 2.

RECRUITMENT

Survey:

All women in attendance the first day of class had the option to take the survey. Whoever was also in attendance the final day of class also had the option to take the post survey, as well. One limitation occurred in passing out the final, post-survey. I could not be present for the last day of class in Pixley and therefore the class instructor was responsible for handing out the surveys and unfortunately, she printed and handed out the pre-survey for the last day of class. Fortunately, the two surveys are not too significantly different but it did impact some data collection as some data was missing.

First Focus Group:

The women were notified by the instructor on the penultimate week of the class that a "community discussion" and potluck would occur on the last day of the class following their final lesson. The women self-selected to join the community discussion. The discussions were

spoken in a mix of Spanish and English. Some of the women spoke a mix of both languages while others spoke in strictly Spanish.

Follow-Up Focus Group:

Eight months after the first focus group, Priscilla called the women who were in attendance in the Pixley nutrition classes to set up a convenient time for a second focus group to take place in January of 2017. Due to scheduling conflicts, the women split up into two focus groups —focus group A was scheduled to have three participants but only two showed up and focus group B included three participants. Despite being separate, many of the same themes and discussions occurred in both focus groups A and B. Therefore, throughout the analysis, the follow-up focus groups will be referred to as focus group A and focus group B but themes will be discussed as an ensemble. The women were compensated for attending the second focus group as a final token of gratitude for sharing their stories and their knowledge.

METHODS OF ANALYSIS

The pre-class and post-class surveys were compared to determine any changes in baseline knowledge for class participants. Because there was such a small sample size, t-tests were not used. Instead, the response percentages and percent changes are reported. The focus groups were coded and analyzed based on outstanding themes. For example, community assets, community barriers, healthy eating, knowledge, and behavior were all themes actively sought. As an iterative process, parent or child codes were added as necessary. The evaluation findings are discussed in the next section.

FINDINGS

In total, 14 individuals took at least one of the pre-or post-surveys. Of those fourteen participants, six participants completed both the pre-and post-survey. Consequently, only the six participants who completed both have a baseline survey with which to compare changes, the results of which are discussed below. Because the sample size is so small, it is not possible to utilize any tests of statistical significance. Five participants attended the first focus group in May, Rosa, Luz, Sofia, Telvis, and Maria[8] and the same five women attended the follow-up focus group in January. One additional participant, Natalia, did not participate in the first focus group but heard about the follow up focus group from the other women and asked if I would interview her over the phone – which I did. Her interview is utilized to provide feedback to FoodLink but is not included in the findings or analysis. Because the results of the survey and the focus groups complement each other, I discuss the findings under five categories below:

1) Initial Knowledge and Behavior Acquisition
2) Long-Term Knowledge and Behavior Acquisition
3) Perceptions of Health
4) Community Assets
5) Community Barriers

INITIAL KNOWLEDGE AND BEHAVIOR ACQUISITION

Overall, the nutrition program clearly had an impact on how the women defined and engaged in "eating healthy," although, it is unlikely that the curriculum accomplished its goal to teach food safety or healthy recipe substitutions. During the first focus group, following completion of the

[8] Names have been changed for reasons of confidentiality.

class, the women disclosed their own understandings of "eating healthy." The initial focus group very broadly discussed healthy eating as lowering intake of fat, red meat, and salt coupled with higher vegetable consumption. These sentiments were eloquently summarized by one participant, Telvis, at the beginning of the focus group that healthy eating is, "*Mas, más verduras, este y no tanto- comer tanto grasa, o aceite.* [More vegetables, and not too much — to eat too much fat, or oil]." Emphatically, lowering fat and salt intake was discussed most frequently in the initial focus group.

During the first focus group, the women expressed negative connotations with red meat and fat that did not necessarily exist before the class. These themes were particularly prevalent in the first focus group discussions about protein sources. One participant, Luz, stated, "Yeah. I cut down a lot on the red meat. That was an everyday thing um, eating red meat with vegetables, so to cut it down I add a little bit of chicken, I cook salads now. You know." Her friend, Sophia, responded to this by expressing her contentious relationship with fish as a protein source saying: "*Si, porque, a mí, a mí en mi casa casi no me gusta el pescado y yo sé que es bueno.* [Yes, because, for me, for me in my house, I don't like fish much but I know that it's good]." From the discussion, it was clear the participants equated healthy protein sources to white meat and lower fat content.

However, for some participants, incorporating the lessons was more difficult due to taste preferences. The survey results regarding protein (Figure 4) re-emphasized the sentiments of the first focus group. On average, the intake of beans and fish increased after the class; whereas, the

intake of nuts decreased. The survey results confirm the negative rhetoric the women express about fat and oils (red meat and nuts) and the struggle to increase consumption of white meats (chicken, fish, and turkey). The discussion of fat and red meat paralleled the discussion the women had about sodium intake during the initial focus group.

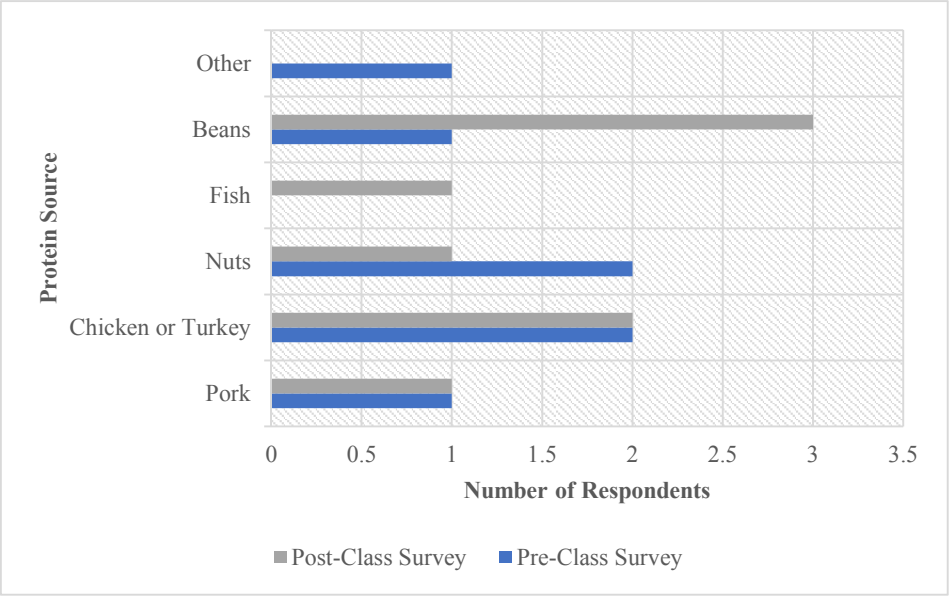


Figure 4 Types of protein consumed before and after the Nutrition Program

One notable behavior about which the women discussed repeatedly during the first focus group was the importance of consuming less salt. Telvis specifically stated, "*Aprendí menos sel.* [I learned less salt]." This statement catalyzed a flurry of discussion about sodium. Rosa admitted to buying a box of Ocean salt because the nutrition educator had brought some in and cooked with it: "*Como el otro día compré la sal que ella trajo.* [For example, the other day, I bought the salt that she [the nutrition instructor] brought]." Maria agreed and then made everyone laugh because her husband claimed she was spending too much time in the grocery store aisles:

> *Pues sí la leemos, yo- ya, yo tengo esa costumbre ya de leer* [I already have that habit of reading them.] When I, I am in the store and I am looking for something I start reading for, "Oh no this have - *¿Cómo se dice mucho sodio?* [How do you say a lot of sodium]?

Maria's statement was particularly poignant. She indicated that she was engaging in two learned actions: lowering salt-intake and reading nutrition labels. Significantly, Sofia echoed Maria's

sentiment that the class also taught her, "*Saber cómo leer lo de atrás.* [To know how to read on the back [nutrition labels]]." Despite the enthusiasm from a few participants about reading nutrition labels, there was inconsistent evidence between the first focus group discussion and the survey results. The survey shows no significant change between the beginning of class and the end of class utilization of nutrition labels (3 weeks later). According to the survey results, only one person out of the six participants increased the frequency of reading nutrition labels while grocery shopping.

However, Telvis's first claim that she increased her fruit and vegetable intake was reflected more generally by the group in the surveys. Tables 1 and 2 show the average daily intake of fruit increased from 2.3 servings before the nutrition course to 2.8 servings by the end of the class. However, such a small sample size is easily swayed by the large increase shown by participant six in Table 1. Overall, the survey reveals that the other women were eating consistent servings of fruit from week 1 to week 3. Furthermore, Table 2 reveals that the average servings of vegetable intake also increased from 2 daily servings to 2.7 daily servings. The increase in average of vegetable servings is likely more accurate as multiple participants (1,2,3, and 6) all claimed to have increased the number of vegetable servings per week.

Table 1: Servings of Fruit Each Day		
	Pre-class survey	Post-class survey
Participant 1	2	2
Participant 2	3	3
Participant 3	3	3
Participant 4	3	2
Participant 5	3	3
Participant 6	0	4
Class Average	2.3	2.8

Table 2: Servings of Vegetables Each Day		
	Pre-class survey	Post-class survey
Participant 1	1	2
Participant 2	3	4
Participant 3	2	3
Participant 4	3	2
Participant 5	3	3
Participant 6	0	2
Class Average	2	2.7

Overall, the data after three weeks of class revealed that the women did acquire knowledge and learned that fat, red meat, oils, and salt should be avoided. Participants also, were beginning to demonstrate some behavior changes. It is possible that, on average, increased their daily servings of vegetables and fruit but a larger sample size may better confirm those findings. According to the focus group, the women were also beginning to read nutrition labels more often. However, both the survey result and first focus group are limited by the short, three-week time period. A longer amount of time may reveal different results for either or both.

Long-Term Knowledge and Behavior Acquisition

The eight-month follow-up focus groups (focus group A and focus group B) showed that the women integrated more knowledge and behaviors from the nutrition class than they had immediately after the class. There was less discussion about behaviors they should avoid (eating lots of salt, fat, and oils). Instead, the women focused more on their more immediate, actionable behaviors such as increasing varieties of fruits and vegetables.

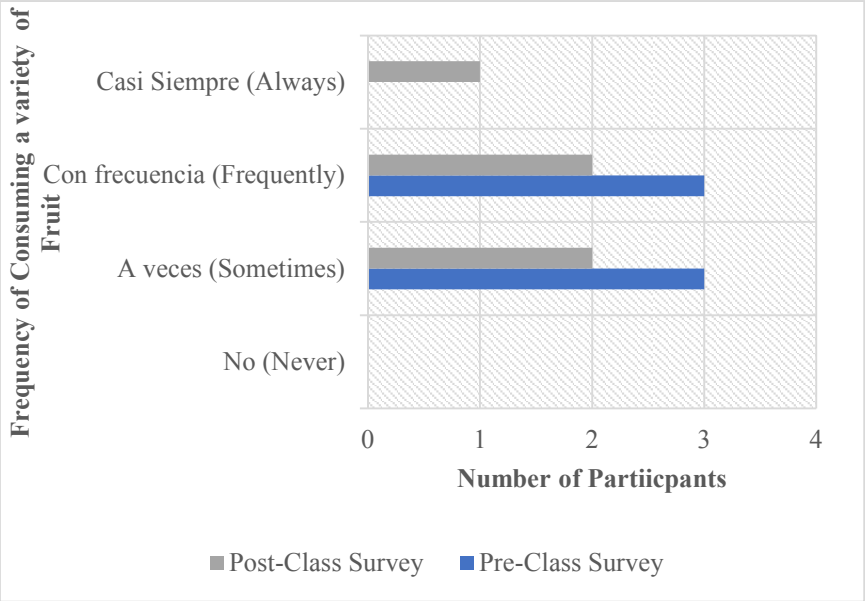


Figure 5: Survey Results: frequency of consuming a variety of vegetables, daily

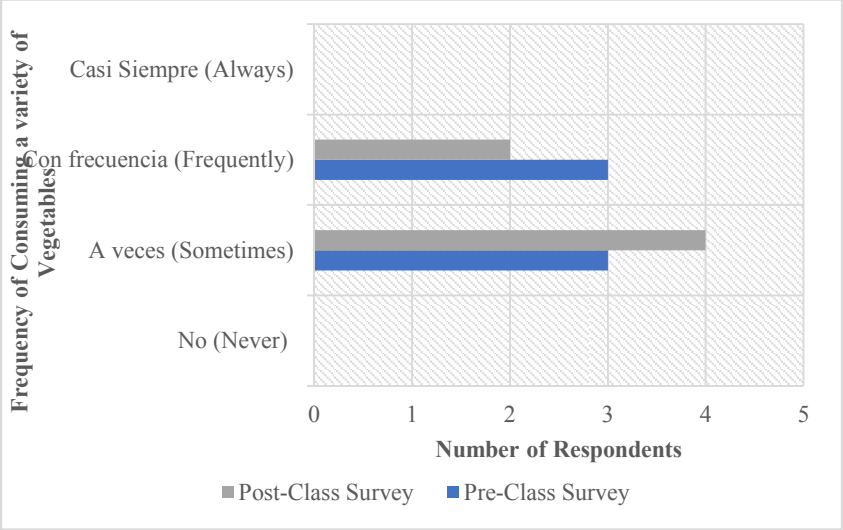


Figure 6: Survey Results: frequency of consuming a variety of fruit, daily

As shown in figures 5 and 6, the post-class survey manifested only a slight change in the variety of fruits and vegetables being consumed, daily, after three weeks. Based on the result of figure 5, the number of women claiming to have consumed a variety of vegetables on a frequent basis decreased from three class participants to two participants. However, one participant did noticeably shift from consuming a variety of fruit frequently to

always consuming a variety. However, the survey was limited by the short time frame, whereas the eight-month follow-up focus group told a slightly evolved story.

During focus group A, Luz pointed out that just in one day she had eaten a wide variety of vegetables: "Yesterday we have, baby carrots, and broccoli. And what else? Lettuce and corn, and what else? And green beans." She followed up by saying this type of variety was becoming a daily routine: "And another thing is that I try to use in every food I serve, put vegetables on the side." A few days later during focus group B, Maria also spoke about her improved relationship to vegetable varieties. The class boosted Maria's confidence to begin trying new types of vegetables – she stressed the impact of one particular lesson on purple potatoes as a turning point for her: "*Frutas de temporadas y me gustó mucho esas papas moradas grandes que me ensenñaron en la clase … voy a seguir comiéndolas.* [I've started trying new fruits and vegetables in season. I really liked the purple potatoes that the nutrition instructor taught us in class…I'm going to continue eating them]." The increased fruit and vegetable consumption reflected by the focus groups mirrors similar results by Seligman et al. (2015) whose preventative diabetes intervention also resulted in increased fruit and vegetable consumption as a significant behavior change and a positive on as increased fruit and vegetable intake is associated with lower risk of coronary heart disease and incidence of stroke (Joshipura et al., 2015; Hung et al., 2004). Overall, eight months after the class, the women increased their intake of vegetables varieties and were trying a greater amount of unfamiliar foods.

The impact of eating a greater variety of vegetables also transferred into buying behaviors as explained by Luz: "Now I buy more fruits and vegetables than I used to. Because back then I used to buy a lot of junk food and meat but now I buy a lot of fruits and vegetables."

Maria also talked about her appreciation for a wider range food as having an influence on her grocery shopping. She stated:

> *Hay además una sección en el supermercado que no es orgánico, donde hay frutas y verduras de diferentes lugares (exotic fruits), como duraznos y una fruta en forma de estrellas. La fruta de Estrella las preparan como la calabaza, yo solo compré una libra para ver si me gustaba… y me gusto.* [There is another section in the supermarket that is not organic but has exotic fruits and veggies. For example, peaches and fruits that have the shape of a star. I prepared the star fruit like squash, I only bought half a pound to see if I will like it…and I did].

Maria has gained confidence to try new foods while grocery shopping. In addition to these new behaviors, the women still referred to the basic lessons of the class that they discussed in the first focus group. In both follow-up focus groups, the women consistently summarized lessons learned in class as: "*Poco sel, poco grasa, cocinar vapor, usar horno*. [Not to use too much salt or too much fat, to steam vegetables, and to use the oven]." After agreeing on this mantra during focus group A, there was a pause in which both Sofia and Luz said something in Spanish that I couldn't understand. They started to giggle. Luz, turned to me and pointedly stated, "*Es más buena la leche de 1% aunque sabe a agua.* [The one percent milk is much healthier, even though it tastes like water]."

Overall, the second set of focus groups confirmed there was sustained knowledge acquisition as a result of the class regarding the importance of low salt and low fat intake. The women were less forthcoming about protein sources as they were in the initial focus group, but they did manifest new behaviors learned from the class. Significantly, the women were not eating a variety of vegetables immediately following the class but, after an additional eight

months, they perceived that their intake of vegetables and new foods increased. There was clearly a large shift that took place over the course of time that impacted both consumption and shopping behaviors.

PERCEPTIONS OF HEALTH

The initial findings of the focus groups and the survey also revealed that some goals of the food bank were not met. One goal of the curriculum was to teach food safety and a goal for FoodLink staff was to teach recipe substitution. The FoodLink staff specifically asked that I measure if class participants gain the knowledge to make familiar recipes with healthier ingredients. However, neither the survey nor the focus groups tangibly manifest success in either of these areas. One of the survey questions asking about recipe substitution was left unanswered b everyone except for two people and when the women were asked to rate which topics they learned most about, food safety and recipe substitution went unrated. It seems likely that these questions or topics were either not discussed by the instructor to the extent originally intended or not viewed as a priority to the class participants even if they were a priority to staff at the food bank or NEOPB. It is notable, however, that the women's goals (seen in Table 3) never indicate a desire to learn about food safety. Their focus is on learning to be healthy. This discussion was largely reflected throughout the surveys and focus groups.

Table 3: Participants' initial goals for taking the nutrition class
Teach me to live a healthy life and to prepare my family healthy food
Learn to cook healthy
Learn more [about health]

The surveys and all focus groups reflected the difficulty of defining the complex concept of "health." The women stated multiple times that they want to be more healthy but did not specify parameters or types of "health" despite a common understanding that 'to be healthy' is

an ideal state of being. The broad use of the term "health" was most apparent at the beginning of the survey. The women wrote down their goals for taking the class. Notably, they expressed goals that naturally fall into three categories as seen in Table 3. A few of the class participants broadly stated that they sought to learn more about health. Others were looking to learn lessons on how to cook healthy. The remaining participants want to create a healthier life for themselves and their households. The first focus group, following the three-week class, reflected similar perceptions of health as an ambiguous, yet archetypical concept. When asked to speak more specifically on what defines "health", the women referred to it most often as: "To feel well – to be without sickness." During the first focus group, Maria echoed this by defining it as, "*Para estar bien del corazón, de la alta presión* [To be well from the heart, for high (blood) pressure]." Overall, participants referred to "health" as a nebulous and broad state of being but did not necessarily associate habits or behaviors with its maintenance in the focus groups.

Table 4: Perception of Health Status

	Pre-class survey	Post-class survey
Participant 1	5	7
Participant 2	8	7
Participant 3	7	7
Participant 4	6	4
Participant 5	4	8
Participant 6	4	4
Average	5.67	6.17

Despite the ambiguity surrounding the concept of health, the women did perceive that their health improved after the class. Table 4 shows that the women's overall perception of their health in three weeks increased from 5.67 to 6.17 on a scale of 0 to 10 (with 0 the lowest and 10 the highest). The increase in average is greatly weighted, however, by participant 5 whose health

status doubled whereas only one other participant - participant 1 - perceived any increase. Two of the participants perceive that their health status is the same and one decreased markedly. The survey, however, is only measuring after three weeks of time. By the follow-up focus group, eight months had passed and the women in both focus groups talked more about their health statuses. In the both focus group A and focus group B, the women stated that they felt their health improved tremendously - likely as a function of time that allowed the women to incorporate lessons from the nutrition class. Figure 7 and figure 8 show, during the focus group B and focus group A, the women rated how their state of mental, spiritual, and physical health had changed since the nutrition class. A score of 1 means it got worse, a 3 means it is the same, and a 5 refers to being demonstrably better.

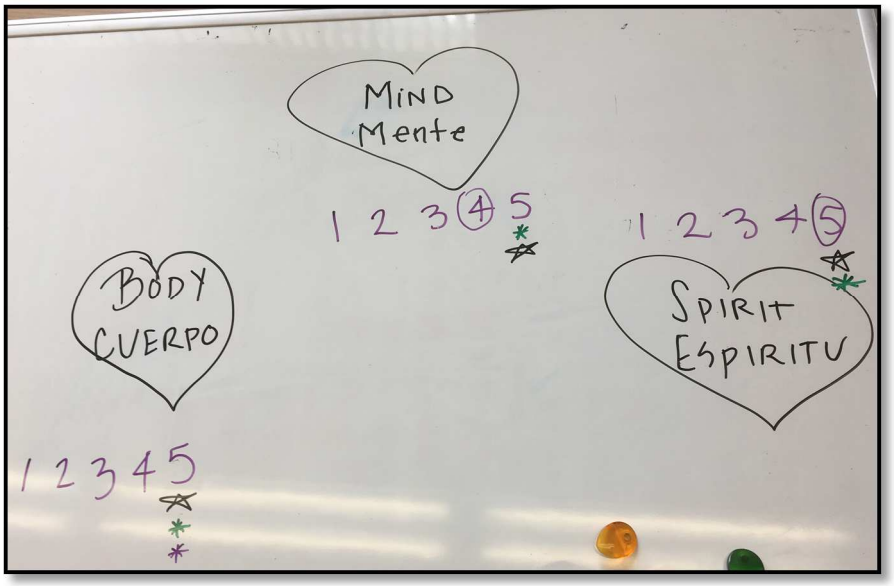


*Figure 7: 8-month follow-up focus group B results (n=3): rating individual health 8 months after the nutrition program, *there is no difference between the stars or the circles, the women chose to mark their rating in different ways each time, but the color of marker is associated with the same individual.*

Both Figures 7 and 8 show that, since the beginning of the nutrition class, their health improved in all three areas. For Luz, she said that both spiritually and mentally she was in a good place because "we are more comfortable that we are giving, uh, more healthy food to our kids. We feel like more …how can I say…. kind of excited that we know are that we are not giving food that damage our kids' health." Maria, during focus group B also said that her mental health improved because of the nutrition class. She stated:

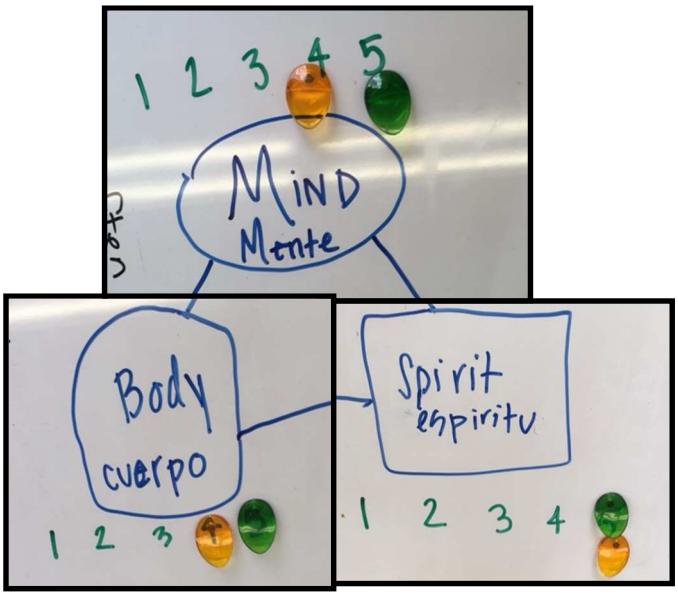


Figure 8: 8-month follow-up focus group A results (n=2): rating individual health 8 months after the nutrition program. Each magnet represents an individual.

> *Hace un ano atrás, al mismo tiempo que empecé las clases, a mi hija le detectaron cholesterol alto. Esta situación me ayudó a incoporar el uso de frutas y verduras y cocinar al vapor para así y ahora ella no lo tiene como antes* [A year ago, around the time I was taking the cooking classes, my daughter was diagnosed with high cholesterol. This situation helped me to incorporate more fruits, vegetables, and to cook with steam and now, her cholesterol levels decreased].

Maria's daughter was eight years old at the time of the focus group and knowing that her daughter was much healthier as a result of Maria's cooking and influence, made Maria feel better. The focus groups and surveys revealed that 'health' is a feeling –knowledge that the

household is not sick - and much of it hinges on the health of the family in addition to themselves individually. Finally, the women perceived that overall health improved for themselves and their families after taking the nutrition classes.

COMMUNITY ASSETS FOR HEALTH

As discussed in the work of McElroy (1988) and Stokols (1992), there are various spheres of influence that impact an individual's health behaviors. The follow-up focus groups were intentionally designed to explore which aspects of the Pixley community facilitated community health. Through the second set of focus groups, it becomes clear that the participants' homes, school, and social networks play a significantly positive role. These are all parts of the first three levels of the spheres of influence as described by Collins et al. (2001). Homes are individual, social network is interpersonal, and schools are institutional/organization. The women first discuss their houses as sources of food, health, and fun. During the discussion, Telvis spent a lot of time drawing her home garden (Figure 9) and talks about it as beautiful and practical: "I grow fruit — lots of oranges — and vegetables in my garden." Rosa also talked about working her home garden for health and aesthetic pleasure:

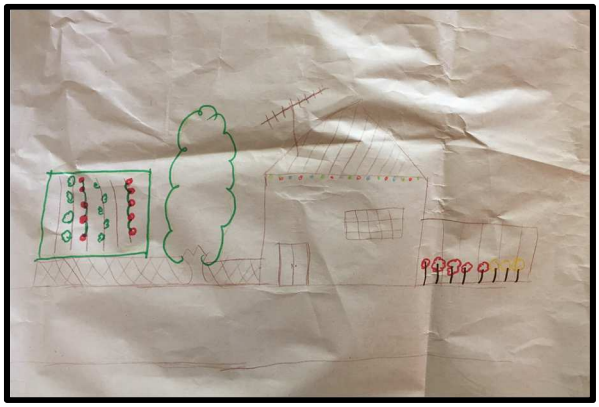


Figure 9: Focus group B: drawing of a home and garden in Pixley. One of three illustrations showing the intricate details of the garden – an important fixture for all three women in focus group B.

> *En México tenía una huerta, con árboles frutales y todo tipo de vegetales como naranjas, granadas, chirimollas. limas, mandarinas, lechugas, tomates. Acá tengo ajíes y tomates y roses.* [In Mexico, I had a plot of land with fruit trees and all types of vegetables such as oranges,

pomegranates, limes, mandarins, lettuce, and tomatoes. Here, I have chiles and tomatoes, and roses].

For all the women, the home was clearly associated as a source for healthy food. Maria admitted that eating healthy, consistently, was difficult for her, but firmly stated the one exception to this struggle, "*Yo como saludable en casa.* [I eat healthy at home]." As a space for gardening and healthy eating, the home already played an important role, but it was also a central space for building a social network. In focus group A it was explained by Luz as a main source of fun and a central space for her friends. She says, "That's what I do [for fun] like, barbeque at my house, y'all", and Sofia stated, "That is where I spend time with my husband." Their houses were described as physical structures of health and security. However, they were also figurative foundations of the social network of people that are at the inner sphere of the women's daily lives. As they talked in both focus group A and B, it became increasingly apparent that their broader social network was also extremely influential to their daily lives and eating behaviors. One community member in particular, Eva, had been a main catalyst for assembling the women together as a friends' group and encouraging the women to take the nutrition class.

The women were all in consensus about how they found out about the Nutrition Classes. They repeatedly stated that, "I heard about the classes from Eva." Eva was a Pixley resident that directed the childcare and adult learning center that is attached to the Pixley Elementary School. My first encounter with Eva was when a young child — approximately six years old — came to the back door of the adult learning center holding hands with another barefoot child. He was calling for Eva and saying, "My friend, he came to school without shoes today. Eva, do you have shoes? He needs shoes." Eva told the two young children to wait and she reappeared with an entire box of used shoes for the little boy to try on. As evidenced, Eva is an important figure for

the children, and, as the women talked about her influence on them, it became increasingly apparent that Eva is a pivotal community gatekeeper for the children as well as the women. For example, Luz described Eva in the following manner:

> She is always, always trying to bring us, like, nutritious programs and stuff that can help us to inform about things or be used for health. Like now she take to give us Zumba. Is that not it, Sofia? I am telling them that the only thing we have right now is the programs that the lady Eva brings us in the school. That is, the classes of the nutrition and things of information for us. Now the classes that she is giving us is this Zumba…. right?

A few days later during focus group B, Rosa also explained that Eva was always trying to bring in new programs for the adult women, saying, "Yesterday, we have a meeting [with Eva]…we were talking about if we could start to do a class on therapy exercises." There was an overall appreciation for Eva and the programs that Eva was bringing to the community. Telvis confirmed this by saying, "It's fun. I love going [to Zumba]." The women also revealed that many of them began attending the nutrition and Zumba classes because Eva was willing to bring the classes to the school. Beyond that, though, Eva encouraged the women to attend.

Eva and the classes she hosted were technically an offshoot of the local school system and Zumba classes were held in the middle school gym. In addition to building a strong social network of friends through nutrition and exercise classes at the school, the women were also building a sense of community and belonging at the school. This was best evidenced by Maria's statement: "*Reunimos de la escuela con PTO [Parent-Teacher Organization]* [We meet with the school for PTO [Parent-Teacher Organization]]." As demonstrated by the women's involvement with the PTO, the school was also a space for civic engagement in their community. Many of

them were on multiple committees and Sofia explained that a few of them worked together at the school: "*Convivencias con el director, donde se hacen preguntas y damos nuestra opinión y nos retroalimentamos unos a otros.* [We are a group that meets with the Principal where we ask questions and give our opinions about how to improve the school]." For the women, the school was essential for building out the larger social network where they are engaged in the community but also invested in each other and their extracurricular classes and activities such as Zumba, nutrition, and physical therapy.

The important pillars of their school, social network, and homes were described as invaluable to the women as they continued fostering their individual and household health. However, they did discuss some barriers that may have been impacting their ability to integrate the lessons from the nutrition curriculum and broader barriers that may impact the health of the entire Pixley community.

BARRIERS TO HEALTH

Despite such a strong social network, the women also pointed out aspects of the community they would have liked improved. The most prominent discussion surfaced concerning the proximity of grocery stores to Pixley. The placement of grocery stores is also an important structure that could be identified under the larger spheres of influence such as the system or community sphere (Collins et al., 2001). The women expressed frustration about the time sink of leaving Pixley to do their grocery shopping. Luz said that leaving Pixley for groceries was necessary "because here [Pixley], it's expensive. Because we don't have enough stores right here and they put their price high because they know- they know that we don't have any options except to leave." Lack of options for purchasing food meant that the women traveled to either Visalia or Tulare, a forty-minute drive or a twenty-five-minute drive, respectively, for any fresh food or groceries.

Table 5: Survey Results: Frequency of Going to Grocery Store		
	Pre-class survey	Post-class survey
Participant 1	Every 15 Days	Every 15 Days
Participant 2	Every 15 Days	Every 15 Days
Participant 3	Each Week	Each Week
Participant 4	Every 15 Days	Every 15 Days
Participant 5	Each Week	Each Week
Participant 6	Each Week	Every 15 Days

The time it required to go to and from the grocery store was a significant barrier to the women as was demonstrated by their survey responses shown in Table 5. The table shows that most of the participants went to the grocery store approximately once every two weeks – likely due to the amount of time investment it requires to drive there and grocery shop. When asked if public transportation was an option, a larger system infrastructure under the framework of social ecology, the women expressed mistrust for it. Maria said, "*No sé como usar el transporte público…me gustaría que alguien me enseñara y así no perderme.* [I'm not sure how to use the public transportation … I would like to go with someone who knows how to use it so I don't get lost]." After explaining about the inconvenience of the grocery stores placed so far out of town, the women then talked enthusiastically about the most recent development in Pixley: the presence of a new Dollar General. It was just around the corner from the community center where the focus group was taking place. The women pointed to it and I noted how green the newly installed sod was, in stark contrast to the run-down roads riddled with pot holes and the fenced-in dirt yards surrounding it. Telvis turned back to me and proclaimed: "*El Dólar General es el pequeño Walmart.* [The Dollar General is the little Walmart for us]."

The inconvenient distance to grocery stores was potentially one barrier to consistently accessing or consuming fresh fruit and vegetables. Previous studies have shown that dissatisfaction with the quality, affordability, and accessibility of a shopping environment is associated with decreased consumption of fruits and vegetables (Blistein et al., 2012 ; Cummins, and Taylor et al., 2009). Blistein et al. (2012) emphasize that both the distance and subjective satisfaction of a shopping environment play a role in impacting individual behaviors. Additionally, as discussed by Gregson and Foerster (2001) and Collins et al. (2010), interventions are most successful when change is conducive at the larger spheres of influence while knowledge acquisition occurs for the individual and interpersonal levels. FoodLink's nutrition program is working at the individual educational level, but some healthy behaviors may be inhibited from having a lasting impact if the larger system or policies, such as the placement of grocery stores or ease of public transit, are not simultaneously in place.

In addition to the frustration of only being able to grocery shop once every two weeks, the women also pointed out that incorporating lessons from the nutrition classes were difficult for another reason: some of the food introduced is not necessarily culturally appropriate. When asked to choose which challenges making cooking healthy difficult, 80% of the survey respondents say it was difficult because their children or husbands have different eating habits or preferences than the women. One woman's husband also presented a barrier to incorporating other habits learned in the nutrition class. Maria pointed out how her husband shamed her in the grocery store: "My husband said, 'What are you doing? Why are you standing long time there?' My husband *me dice* [tells me], *'¿Porque ves tanto?* [Why do you look at it so much?]' and I'm like 'what the heck?'" Clearly, Maria was facing some pressure from her husband who is

frustrated by the extra time it is taking her to grocery shop, even though Maria is engaging in an important behavior that likely has positive impacts on the family's health.

The follow-up focus groups also confirmed the survey results that the family members made it difficult to incorporate specific lessons. The women pointed out that they were unable to use certain recipes from the nutrition class, specifically the ones with brown rice or quinoa. During focus group A Sofia said, "*Los Niños no les gusta eso con forma de bolitas, ¿creo que es quinoa?A ellos no les gustan. Yo creo que no les gusta porque a mi marido no le gusta.* [The kids don't like the little balls… I think it's called quinoa? They don't like it. I think they don't like it because my husband doesn't like it]." Luz agreed with her, and pointed out that, as a family, it was too unfamiliar: "Maybe because we are not used to it, those kind of stuff." Sofia pauses and then asks, "*Los Peruvianos lo comen, verdad?*[The Peruvians are the ones that eat that, right]?" Sofia and Luz's statements about unfamiliarity underlined the cultural inappropriateness of the quinoa and brown rice recipes. The foreignness of some of the recipes of the curriculum, coupled with picky household eaters, made it difficult for the women to transfer some specific lessons from the class to their household. The influence of Sofia's husband is also remarkable and reminiscent of Maria's interaction with her husband. He is clearly impacting Sofia's ability to incorporate nutrition lessons as his taste preferences have also impacted the taste preferences of the children.

Another barrier to achieving health that the women discussed was the prevalence of illness in their communities. During focus group B Rosa mentioned the issue of anemia in the community. She said, "Anemia is a big problem for our children and adults… and supplements do not work". Telvis also discussed the struggle of eating for anemia: "*Tengo problemas de salud al comsumir pastillas de fierro, por lo tanto busco alimentos que lo tengan, creo que*

broccoli, remolacha e hígado. [I have health problems when consuming iron pills therefore I need food that has iron, I think broccoli, beets, and liver]." In addition to anemia, Maria often discussed high blood pressure, as mentioned above in her response to defining health. When asked what other topics about which the women wished to learn more, responses in both the initial and eight-month focus groups focused on diabetes prevention. Maria and Luz both mentioned the need to learn about Diabetes prevention and Maria said, "*También conozco personas estarán … que quieren, más aprender sobre pre-diabetic que es antes de la diabetes. Porque "pre" es casi diabetes.* [I also know people that will be … that want to learn more about pre-diabetic that is before diabetes. Because "pre" is almost diabetic]." The prevalence of high blood pressure, anemia, and diabetes was of concern to the women and was clearly one barrier they felt inhibited individual and household health. FoodLink may consider co-creating a curriculum or tailoring the current curriculum with local *promotoras* (local community health educators) to include preventative measures for high blood pressure, anemia, or diabetes through multiple health behaviors, including food consumption.

Overall, there are four clear barriers to health that the women perceive impacting them. The first is the access to affordable and quality groceries. The second barrier is that some recommendations made by the nutrition class are not culturally appropriate. The third barrier, that their children and/or husbands are not always supportive of the nutrition class lessons, is strongly related to the second. Finally, there is great concern about the diseases within the community for both children and adults and a desire for future classes to address them.

CONCLUSION

The evaluation shows that the women gained some knowledge about health eating and that some behaviors changed as a result of the nutrition class. Overall, the women's knowledge of healthy eating behaviors, as defined by the curriculum, appear to have increased. They demonstrated increased knowledge that healthy eating includes behaviors such as lowering fat, salt, and red meat intake. The follow-up focus group also revealed that long-term behavior implementation included reading nutrition labels and increased vegetable and fruit intake. There were also some differences shown by the pre- class and post-class survey, particularly in the ways that the women perceived or defined their own health statuses. In determining community assets and barriers impacting the women, it was evident that access to grocery stores presented a large barrier. However, the women also shared that a strong social network played a vital influence on their life. They also increased their sustained intake of vegetables and fruits in volume as well as in variety. The women also mentioned the importance of low-fat milk and whole grains. However, eating some of the food was difficult for them. For example, skim milk and fish were described as lacking flavor and whole grains were a point of contention. The issue of whole grains was most notable because the women pointed to culturally inappropriate aspects of the curriculum, particularly quinoa and brown rice in recipes.

As demonstrated, the chosen methods, although limited, were effective in developing a comprehensive evaluation of the nutrition program. The focus groups were especially comprehensive and revealed much about the women's perceptions and experiences. The survey was greatly limited by sample size, but still adequately complemented the focus group questions and especially highlighted issues of accessibility. These methods are easily adaptable to any food bank seeking to perform a program evaluation for their nutrition program. The survey has been

validated and is available in both Spanish and English. The survey is also easy to complete and takes very little additional time (10 minutes) within the nutrition classes. Finally, the methods are replicable and require very little time or resources for food banks. Most food bank staff members could utilize them to gain insightful information to inform and improve their programs. Additional recommendations for FoodLink, and food banks generally, are included below.

RECOMMENDATIONS FOR FOODLINK OF TULARE COUNTY

The issue of some culturally inappropriate recipes or differing learning goals is not completely unexpected. The nutrition program lessons are based on federal nutrition guidelines, established in a process largely disconnected from the communities of color and the culture of disadvantaged unincorporated communities of California - this is the archetype of the hegemonic nutrition model described by Hayes-Conroy and Hayes-Conroy (2014). As the field of critical nutrition studies explains, nutrition standards are created through a long process that involves lobbying by the larger agricultural industry - one that already exploits the communities of the San Joaquin Valley (Harrison, 2008; Nestle, 2002). Therefore, this curriculum, and the nutrition course, fail to account for the community's existing knowledge and assets about wellness and health, as suggested by Biltekoff et al (2014). Natalia made a statement that spoke directly to this issue. She said,

> *El término "diet" se utiliza mucho en clases. Sin embargo, este término para nosotros tiene un conotación restrictiva, lo asociamos a que tenemos que comer menos por ejemplo para bajar de peso, a lo mejor apoyo sicológico nos seria útil para cambiar esta percepción.*[The term "diet" is used a lot in classes. However, this term for us has negative connotations, this means that we associate with

eating less for us to decrease weight. Maybe better psychological support [from the instructor] would be useful for us].

For Natalia, the class felt like it implied that something about her eating habits was inherently wrong. She expressed some shame about the specific use of the word "diet", a phenomenon common in nutrition education as discussed by Biltekoff et al. (2014). FoodLink and other community organizations working in DUCs may consider an alternate approach to nutrition education. Rather than relying on a curriculum created by the state, based on federal nutrition guidelines, which is distanced from local communities, it may be more appropriate for the food bank to develop a class that builds on the traditions of the women that starts from, or at least incorporates, their learning goals. For example, FoodLink may look toward books or nutrition classes that draw from *Decolonize Your Diet* which is a recipe book that developed Mexican-American plant-based recipes for health. Some feedback from the women also indicates that the participants are particularly concerned about diabetes, high blood pressure, and anemia in their communities and they are interested in learning more to help prevent these problems. Therefore, future classes or workshops catered to these questions and needs may also be an impactful next step.

The women also pointed to their families as barriers to incorporating class lessons. Their children and husbands refused to eat certain recipes or, in Maria's case, her husband questioned her reasons for checking nutrition labels. In this instance, the responsibility of changing the family's health falls to the mothers of the family who encounter resistance from their family members. Therefore, it may be fruitful for FoodLink to expand marketing and classes to encourage the men and children in the communities to also attend the nutrition classes so that they can better support the women.

As FoodLink serves a multitude of different communities, it is clear that Pixley is an important case study offering lessons in cultural humility and cultural competency. Each community is distinguished by its own culture, social networks, and health issues. Therefore, it is important for food bank staff and programming to consider each community through a reflective lens of cultural humility. Melanie Trevalon and Jann Murray-Garcia (1998) define cultural humility for physicians in the following manner:

> It is a process that requires humility as individuals continually engage in self-reflection and self-critique as lifelong learners and reflective practitioners. And it is a process that requires humility to develop and maintain mutually respectful and dynamic partnerships with communities on behalf of individual patients and communities (p. 118).

Cultural humility and cultural competence reflect an acknowledgement that no one is an expert in identifying health or nutrition needs apart from the community and the individuals that live there. Participating in a process of cultural humility better prepares food bank staff members to understand the nuances and specific needs of the new and different communities in which they conduct programming. Each community space will have different health priorities and to assume that a 'one size fits all' curriculum will be effective demonstrates a lack of cultural humility. Instead, should FoodLink continue to engage in nutrition programming, it may be beneficial to spend some time interviewing community members before initiating the program in order to understand their unique health needs. This way, the curriculum and program implementation can be modified as necessary in order to best serve the community.

FoodLink classes may also be improved by engaging with the women more actively. Because the class instructor was hired without pedagogical background or facilitation training,

the class participants rarely engaged in active dialogue or participatory class activities. The teaching style, instead, was to read directly from the handouts, a style that makes class participants into passive receivers. Minkler and Cox suggest that Paulo Freire's philosophy of "education for critical consciousness" is particularly relevant for health education and that a leader's role should be "one of asking questions of the group which will help its members see the world not as a static reality, but as a limiting situation which challenges them to transform it" (1980, p. 313). Overall, a trained teacher or facilitator with a commitment to creating space for student's self-expression and examination may better foster a praxis of critical awareness and positive improvements in community health. Additional training for food bank staff who are also leading classes may improve both the nutrition class and other programs. For example, sending FoodLink staff to the free FEAST facilitator training[9] offered by the Oregon Food Bank may be one foundational step.

As FoodLink and other food banks continue to move forward with community programming, it is important to consider their programming through the lens of social ecology, considering how the external spheres of influence impact behavior and daily life. As the women pointed out, their commutes to grocery stores is one large obstacle in their daily lives and eating habits. Creating programming that specifically accounts for both the microspheres and microspheres of influence on an individual's health may be a powerful step toward community health and change (Collins et al., 2001). For example, an effective intervention may be one

[9] The Food Education Agriculture Solutions Together (FEAST) facilitator training is a free training offered by the Oregon Food Bank that provides basic facilitation workshop and training for community facilitators. It's broader mission is described as the following:
"FEAST is a community organizing process that allows participants to engage in an informed and facilitated discussion about **F**ood, **E**ducation and **A**griculture in their community and begin to work toward **S**olutions **T**ogether to help build a healthier, more equitable and more resilient local food system" (Oregon Food Bank, 2016).

modeled off the case study of the Victorian Neighborhood Renewal in Australia where government, community organizations, and neighborhoods assembled as a targeted and systematic response to spatial concentrations of health inequality (Klein, 2004). The renewal project was effective in building intersectional community relationships between government and organizations and improved local community outcomes such as education, employment, and crime rates (Klein, 2004).

Despite the larger systems barriers for the women, the strength of the women's social network is a very important asset. The women living in the Pixley community emphasized the invaluable role of Eva, a community gatekeeper and advocate. Within social network analysis, Eva would likely defined as the node with greatest centrality or community connections, otherwise known as the community "connector" or "hub" (Borgatti et al., 2009). Therefore, as a community organization attempting to produce effective community programming to maximize effective solutions, then working directly with individuals that will have the most influence on the target community members may be an effective next step. For example, one issue DUC's face is lack of local representation except at the county level. FoodLink may consider performing a social network analysis modeled off of the work of Penelope Hawe and Laura Ghali (2008) in which they mapped the social relationships in a high school to improve health promotion. They determined that health interventions may best succeed after identifying the nodes most central to marginalized groups (Hawe and Ghali, 2008). FoodLink could use social network analysis to organize with the community "hubs" or "connectors" across multiple disadvantaged unincorporated communities into a working group or coalition. As trusted voices of their own communities, such a coalition may be best capable of co-developing longer-term solutions to

food insecurity, health, and grocery store access for disadvantaged unincorporated communities in the San Joaquin Valley.

LESSONS LEARNED AND RECOMMENDATIONS FOR FUTURE STUDENTS

Throughout my time in graduate school, I read through a plethora of journal articles, books, and other graduate student theses in which the research was presented as a neat parcel and package. Few, if any, offered transparent insights regarding the iterative, and often discouraging, process of achieving a graduate degree or accomplishing a research project. The infamous CV of failures is one exception in which Prinecton faculty member, Dr. Johannes Haushoffer, posted all of the academic positions or fellowships he did not receive and his article submissions that were rejected (Haushoffer, 2016). In general, however, the trials, errors, and failures that one experiences throughout this process are not openly confronted and therefore, I have attempted to acknowledge them throughout this thesis. For future students in any graduate program, but especially the UC Davis Community Development Graduate Group, working within the connective space of the community and the research institution is often challenging, frustrating, and slow. Few have a clear roadmap for navigating this space. However, this is my attempt to delineate these challenges and the lessons I consequently learned so that they may be useful to other graduate students.

For one, my status as a community outsider and my geographical location made conducting the project and building community trust particularly difficult. Pixley was more than a four-hour drive from where I lived. Therefore, in my attempt to build community relationships, I would make the drive (down and back in one day) twice, and sometimes three times, a week. It was exhausting and as a result, the quality of my own graduate coursework suffered. As someone completing a Master's Thesis, I recommend not doing this. If attempting to engage in a participatory methodology, then carefully consider how often and how easily one can interact with the community and key colleagues. You will protect your emotional and physical sanity and

you will also likely learn more in your classes. Additionally, the more time that can be spent in a community builds greater trust, an asset that should not be underrated.

Because I had shortened interactions in the Tulare communities, there was a fundamental misunderstanding of my work that occurred outside of the area. Near the end of my project, it became clear that the nutrition educator had difficulty trusting me because, from her perspective, I only worked once or twice a week and therefore she perceived me to be lazy. She was unaware of any responsibilities outside of my work with the food bank and this inherent mistrust made it difficult to work productively in moving the project forward. If I had been able to live closer for a longer period of time, then I likely could have built more trust with my community partner — a key piece of any community engaged project.

For both the community organization and any researcher or consultant entering a working relationship, it is absolutely imperative to delineate roles and responsibilities through a contract or memorandum of understanding (MOU). An MOU clearly defines roles and responsibilities of all staff, community partners, and researchers/interns which is beneficial to both overworked staff and students. It should also set clear boundaries, timelines, and payment plans so that everything is neatly tracked and there is clarification from the outset. Without this kind of plan in place, boundaries of my relationship to the food bank were unclear. For example, discussions of ownership of data or program outputs needed to be clarified from the beginning of the relationship, but instead led to tension mid-way through the project. The MOU would create a solid foundation and is beneficial to setting a foundation of a positive working relationship for both parties.

Finally, I want to be transparent that there were various moments of trial. I greatly struggled. Following a particularly frustrating summer living in Tulare, I left the San Joaquin

Valley for six months and avoided thinking about or working on the research project altogether. This was a crossroads in which I sincerely considered starting a completely new and different thesis. All of this has been written to essentially say that I was prepared, I put in the work, I was flexible, and, yet, I still encountered unresolvable challenges. I can recommend to future students that a great amount of preparation is certainly helpful, but it is never foolproof. It is important to identify excellent and supportive mentors, to set reasonable expectations and boundaries through the help of an MOU, and to carefully consider and navigate your relationship with the community. Finally, embrace introspection, take time for self-care, and be your own self-advocate.

ACKNOWLEDGEMENTS

I am grateful to the executive director of FoodLink, Dr. Sarah Ramirez, for inviting me to partner with her organization, trusting me to work with the food bank's communities, and her ongoing mentorship. Thank you to the entire staff at the FoodLink food bank for your patience and willingness to answer my myriad of questions. I am especially grateful for the nutrition instructor who graciously offered me space to sit in on nutrition classes and aided me by handing out surveys.

This thesis never could have come to fruition without the dedicated perseverance, competence, and overall delightful demeanor of my undergraduate research assistant, Priscilla Cortez. She received my multitude of phone calls, translated hours of conversation, and scheduled the focus groups with nothing but calm grace and good cheer.

I also offer gratitude to my entire thesis committee: Dr. Ryan Galt, Dr. Natalia Deeb-Sossa, Dr. Catherine Brinkley. You all provided excellent guidance, good humor, and thoughtful insights that made this adventure a profoundly impactful learning experience.

Finally, I am forever beholden to the communities of Pixley and Allensworth. The women living in these two communities shaped the entire project. They shared their knowledge, time, food, and laughter. I am indescribably grateful for the opportunity to have worked with and learned from them.

REFERENCES

Banna, J. C., Becerra, L. U. Z. E. V., Kaiser, L. L., & Townsend, M. S. (2010). Using Qualitative Methods to Improve Questionnaires for Spanish Speakers: Assessing Face Validity of a Food Behavior Checklist. *Journal of the American Dietetic Association*, *110*(1), 80–90.

Belasco, W., Bentley, A., Biltekoff, C., Williams-Forson, P., & de la Peña, C. (2011). The Frontiers of Food Studies. *Food, Culture and Society*, *14*(3), 301–314.

Bilketoff, C., Mudry, J., Kimura, A. H., Landecker, H., & Guthman, J. (2014). Interrogating Moral and Quantification Discourses in Nutritional Knowledge. *Gastronomica*, *14*(3), 17–26.

Blitstein, J. L., Snider, J., & Evans, W. D. (2012). Perceptions of the Food Shopping Environment are Associated with Greater Consumption of Fruits and Vegetables. *Public Health Nutrition*, *15*(6), 1124–9.

Bristol-Meyers Squibb Foundation. (2013). *Together on Diabetes: Partnership with Feeding America.* Retrieved from http://www.bms.com/togetherondiabetes/partners/Pages/feeding-america.aspxdiabetes initiative.

Borgatti, S.P. Mehra, A. Brass, D.J. & Giuseppe, L. (2009). Network Analysis in the Social Sciences. *Science, 323*(892).

Campbell, E. C., Ross, M., & Webb, K. L. (2013). Improving the Nutritional Quality of Emergency Food: A Study of Food Bank Organizational Culture, Capacity, and Practices. *Journal of Hunger & Environmental Nutrition*, *8*(3), 261–280.

Christopher, S., Burhansstiopanov, L., & Knows His Gun-McCormick, A. (2005). "Using a CBPR Approach to Develop and Interviewer Training Manual with Members of the Apsaalooke Nation." In B. Israel, E. Eng, A. Schultz & E. Parker (Eds.), *Methods in community-based participatory research for health (*pp. 128-145). San Francisco, CA: Wiley.

Collins, K., Tapp, A., & Pressley, A. (2010). Social Marketing and Social Influences: Using Social Ecology as a Theoretical Framework. *Journal of Marketing Management*, *26*(13), 1181–1200.

Contento, I. R. (2008). Nutrition Education: Linking Research, Theory, and Practice. *Asia Pacific Journal of Clinical Nutrition*, *17*(1), 176–179.

Coveney, John. (2006). *Food, Morals, and Meaning: The Pleasure and Anxiety of Eating*, 2nd ed. New York: Routledge.

Cummins S, Smith DM, Taylor M et al. (2009) Variations in Fresh Fruit and Vegetable Quality by Store Type, Urban–Rural Setting and Neighbourhood Deprivation in Scotland. *Public Health Nutrition* 12, 2044–2050.

de la Torre, A., Sadeghi, B., Green, R. D., Kaiser, L. L., Flores, Y. G., Jackson, C. F., & Schaefer, S. E. (2013). Niños Sanos, Familia Sana: Mexican immigrant study protocol for a multifaceted CBPR intervention to combat childhood obesity in two rural California towns. *BioMed Central Public Health*, *13*(1), 1033.

Eng, E., Strazza, K., Rhodes, S.D., Griffith, D., Shirah, K., & Mebane, E. (2013) Insiders and Outsiders Assess Who Is "The Community". In B.A. Israel , Eng, E., Schulz. E.A., & Parker, E.A. *Methods for Community-Based Participatory Research for Health*. Pp. 133-160. San Francisco, CA: Jossey-Bass

Freire. P. (1974). *Pedagogy of the Oppressed*. New York: Seabury Press.

Flegal, C., Rice, S., Mann, J., & Tran, J. (2013). *California Unincorporated: Mapping Disadvantaged Communities in the San Joaquin Valley.* Retrieved from www.policylink.org/find-resources/library/california-unincorporated-mapping-disadvantaged-communities-in-the-san-joaquin-valley

Gregson, J., Foerster, S., Orr, R., Jones, L., Benedict, J., Clarke, B., Hersey, J., Lewis, J., & Zotz, K. (2001). System, Environmental, and Policy Changes: Using the Social-Ecological Model as a Framework for Evaluating Nutrition Education and Social Marketing Programs with Low- Income Audiences. *Journal of Nutrition Education, 33*(Supplement 1):S4- S15.

Handforth, B., Hennink, M., & Schwartz, M. B. (2013). A Qualitative Study of Nutrition-Based Initiatives at Selected Food Banks in the Feeding America Network. *Journal of the Academy of Nutrition and Dietetics*, *113*(3), 411–415.

Harrell, J.S., Gansky, S.A., McMurray, R.G., Bangdiwala, S.I., Frauman, A.C., & Bradley, C.B. (1998). School-based Interventions Improve Heart Health in Children With Multiple Cardiovascular Disease Risk Factors. *Pediatrics, 102*(2), 371.

Harrison, J. (2008). Abandoned Bodies and Spaces of Sacrifice: Pesticide Drift Activism and the Contestation of Neoliberal Environmental Politics in California. *Geoforum*, *39*(3), 1197–1214.

Haushoffer, J. (2016). *CV of Failures.* Retrieved from https://www.princeton.edu/~joha/Johannes_Haushofer_CV_of_Failures.pdf.

Hawe,P. Ghal, L. (2008). Use of Social Network Analysis to Map the Social Relationships of Staff and Teachers at School. *Health Education Research, 23* (1): 62-69.

Hayes-Conroy, A., & Hayes-Conroy, J. (Eds). (2013). *Doing Nutrition Differently: Critical Approaches to Diet and Dietary Intervention.* Surrey, UK: Ashgate.

Hayes-Conroy, J., Hite, A., Klein, K., Biltekoff, C., & Kimura, A. (2014). Doing Nutrition Differently. *Gastronomica: The Journal of Food and Culture*, *14*(3), 56–66.

Hung, H. C., Joshipura, K. J., Jiang, R., Hu, F. B., Hunter, D., Smith-Warner, S. A., & Willett, W. C. (2004). Fruit and Vegetable Intake and Risk of Major Chronic Disease. *Journal of the National Cancer Institute*, *96*(21), 1577-1584.

Johnson, D. B., Smith, L. T., & Bruemmer, B. (2007). Small-Grants Programs: Lessons from Community-Based Approaches to Changing Nutrition Environments. *Journal of the American Dietetic Association*, *107*(2), 301–305.

Joshipura, K. J., Hu, F. B., Manson, J. E., Stampfer, M. J., Rimm, E. B., Speizer, F. E., & Willett, W. C. (2001). The Effect of Fruit and Vegetable Intake on Risk for Coronary Heart Disease. *Annals of Internal Medicine*, *134*(12), 1106-1114.

Karner, A., London, J. (2014). "Rural Communities and Transportation Equity in California's San Joaquin Valley." *Transportation Research Record: Journal of the Transportation Research Board, 2452* (2014), 90–97.

Kaiser, L. L., Martin, A. C., Metz, D. L., Nicholson, Y., Fujii, M. L., Lamp, C. L., & Melgar-Quiñonez, H. (2004). Food Insecurity Prominent Among Low-Income California Latinos. *California Agriculture*, *58*(1), 18–23.

Kohls, R., & Wells, A. (2011, April). *An Evaluation of a Community Cooking Program*. Retrieved from http://trentcentre.ca/documents/public/4033FinalReport.pdf

Kieffer, E.C, Salabarria-Pena, Y., Odoms-Youg, A.M., Willis, S.K., Baber, K.E., & Gunzman, J.R. (2005). "The Application of Focus Group Methodologies to Community-Based Participatory Research."In B.A. Israel, E. Eng, A.J. Schulz, and E.A. Parker (eds) *Methods in Community-Based Participatory Research for Health*, pp. 146-166. San Francisco, CA: Jossey-Bass

López, E.D.S., Eng, E., Robinson, N., & Wang, C.C. (2005) "Photovoice as a Community-Based Participatory Research Method: A Case Study with African American Breast Cancer Survivors in Rural Eastern North Carolina." In B. Israel, E. Eng, A. Schultz & E. Parker (Eds.), *Methods in Community-Based Participatory Research for Health,* pp. 326-348. San Francisco, CA: Wiley.

Minkoff-Zern, L.A. (2014) Hunger Amidst Plenty: Farmworker Food Insecurity and Coping Strategies in California. *Local Environment*, *19*(2), 204-219.

Mudry, Jessica J. (2009). *Measured Meals: Nutrition in America*. Albany: SUNY Press.

Mudry, J., Hayes-Conroy, J., Chen, N., & Kimura, A.H. (2014). Other Ways of Knowing Food. *Gastronomica: The Journal of Critical Food Studies, 14*(3), 27–33.

Nestle M. (2002) *Food Politics: How the Food Industry Influences Nutrition and Health*. University of California Press. Paperback 2002**.**

McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). Ecological Perspective on Promotion Programs. *Health Education Quarterly*, *15*(4), 351–377.

Medeiros, L. C., Butkus, S. N., Chipman, H., Cox, R. H., Jones, L., & Little, D. (2005). A Logic Model Framework for Community Nutrition Education. *Journal of Nutrition Education and Behavior*, *37*(4), 197–202.

Michaud P, Condrasky M, & Griffin S. (2007). Review and Application of Current Literature Related to Culinary Programs for Nutrition Educators. *Topics in Clinical Nutrition*: *22*(4).

Minkoff-Zern, L.A. (2014) Hunger Amidst Plenty: Farmworker Food Insecurity and Coping Strategies in California*, Local Environment*, *19*(2), 204-219.

Minkler, M., & Cox, K. (1980). Creating Critical Consciousness in Health: Applications of Freire's Philosophy and Methods to the Health Care Setting. *International Journal of Health Services*, *10*(2), 331-322.

Moore, S. N., Murphy, S., & Moore, L. (2011). Health Improvement, Nutrition-Related Behavior and the Role of School Meals: the Usefulness of a Socio-ecological Perspective to Inform Policy Design, Implementation and Evaluation. *Critical Public Health*, *21*(4), 441–454.

Oregon Food Bank. (2016). Community Food Systems: FEAST. Retrieved from: https://www.oregonfoodbank.org/our-work/partnerships/community-food-systems/feast/.

Pascual, T., & Powers, J. (2012). *Cooking Up Community: Nutrition Education Food Programs.* Retrieved from http://www.whyhunger.org/uploads/fileAssets/CUCFINAL1.pdf

Poppendieck, J. E. (1999) *Sweet Charity?: Emergency Food and the End of Entitlement.* Penguin Books, Penguin Books.

Ramirez, S.M., Stafford, R. S. (2013). Equal and Universal Access? Water at Mealtimes, Inequalities, and the Challenge for Schools in Poor and Rural Communities. *Journal of Health Care for the Poor and Underserved*, *24*(2), 885–891.

Remley, D. T., Kaiser, M. L., & Osso, T. (2013). A Case Study of Promoting Nutrition and Long-Term Food Security Through Choice Pantry Development. *Journal of Hunger & Environmental Nutrition*, *8*(3), 324–336.

Ross, M., Campbell, E. C., & Webb, K. L. (2013). Recent Trends in the Nutritional Quality of Food Banks' Food and Beverage Inventory: Case Studies of Six California Food Banks. *Journal of Hunger & Environmental Nutrition*, *8*(3), 294–309.

Seligman, H., Lyles, C., Marshall, M., Prendergast, K., Smitth, M., Headings, A., Bradshaw, G., Rosenmoss, S., & Waxman, E. (2015). A Pilot Food Bank Intervention Featuring Diabetes-Appropriate Improved Glycemic Control Among Clients in Three States. *Health Affairs*, *34*(11), 1956-1963.

Seligman, H., Laraia, B., & Kushel, M. (2009). Food Insecurity is Associated with Chronic Disease Among Low-Income NHANES Participants. *Journal of Nutrition*, *140*(2), 304 – 310.

Sprigett, J. & Wallerstein, N. (2008). Issues in Participatory Evaluation. In Minkler, M and Wallerstein, N. *Community Based Participatory Research for Health. From Process to Outcomes,* San Francisco, CA: Jossey-Bass. 199-215.

Swindle, S., Baker, S.S., & Auld, G.W. (2007). Operation Frontline: assessment of longer-term curriculum effectiveness, evaluation strategies, and follow-up methods. *Journal of Nutrition Education and Behavior*, *39*(4):205–213.

The GFN Food Sourcing Toolkit (2017). A Resource for Increased Donations, Smoother Operations and Growth. The Global Food Banking Network, 2015. Retrieved from https://www.foodbanking.org/wp-content/uploads/2015/08/GFN_Tool_Kit_-_Food_Sourcing.pdf

Thomas, H. M. C., Irwin, J. D. (2011). Cook It Up ! A Community-Based Cooking Program for at-Risk Youth : Overview of a Food Literacy Intervention. *BMC Research Notes*, *4* (1): 495.

Townsend M.S. (2006). Evaluating Food Stamp Nutrition Education: Process for development and validation of evaluation measures. *Journal Nutrition Education and Behavior*, *38*(1):18-24.

United States Census Bureau. (2017). *American Fact Finder: Pixley, CA.* Accessed 15 April, 2017.

USDA-ERS. (2017). Food Insecurity in the United States. Retrieved from https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/

Webb, K. L. (2013). Introduction–Food Banks of the Future: Organizations Dedicated to Improving Food Security and Protecting the Health of the People They Serve. *Journal of Hunger & Environmental Nutrition*, *8*(3), 257–260.

Wieland, M.L., Weis, J.A., Hanza, M.M., Meiers, S.J., Patten, C.A., Clark, M.M., Sloan, J.A., Novotny, P.J., Njeru, J.W., Abbenyi, A., Levine, J.A., Goodson, M., Porraz Capetillo, M.G., Osman, A., Hared, A., Nigon, J.A., & Sia, I.G. (2016). Healthy Immigrant Families: Participatory Development and Baseline Characteristics of a Community-Based Physical Activity and Nutrition Intervention. *Contemporary Clinical Trials, 47*, 22–31.

Williams, P. & Colyer, C. (2009). Nutrition Profiling and Labelling of Healthy or Functional Meals. *Journal of Foodservice*, 20: 230–240.

APPENDIX A – SURVEY

Some questions and pictures taken from Banna et al.(2008).

Nombre: _____
Survey - Community Name: _____ Fecha_____

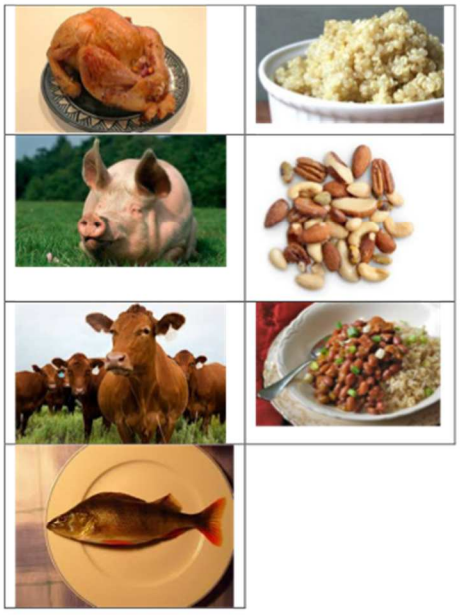
1. Que se significa vivir con "buena salud"?

2. Que significa "Seguridad de alimentos" en la cocina?

3. ¿Cuáles sus metas de asistir las clases?

4. Escoja la principal fuente de proteínas que comió ayer

   a. Pollo o pavo
   b. Cerdo
   c. Carne de vaca
   d. Pescado
   e. Frijoles
   f. Quinoa
   g. Nueces
   h. Otro
   i. Ninguna



1

Nombre: _____
Survey - Community Name: _____ Fecha_____

5. ¿Enfrenta usted alguna de las siguientes barreras para cocinar comidas saludables en casa ?

- Los miembros de mi familia comen diferentes comidas
- No tengo tiempo suficiente
- No estoy segura cómo planear las comidas
- La falta de agua limpia o potable
- Aparatos de cocina defectuosas
- Falta de aparatos de cocina para cocinar
- Limitada Transportación a tiendas de comestibles
- Es limitado el numero de lugares para comprar comida
- Otros _____

6. ¿Cómo cree que son sus hábitos de alimentación?

1 2 3 4 5 6 7 8 9 10

Malos = 1
Regulares = 4
Buenos = 7
Excelentes = 10

Elija una respuesta para cada pregunta.

1. ¿Come frutas o verduras entre comidas?
   a. No
   b. A veces
   c. Con frecuencia
   d. Todos los días

2. ¿Cuántas porciones de fruta come cada día?

Cada uno de estos representa una porción

3. ¿Cuántas porciones de verduras come cada día?

Cada uno de estos representa una porción

2

Nombre: _____
Survey - Community Name: _____ Fecha_____

4. Durante el día, ¿come diferentes frutas?
   a. No
   b. A veces
   c. Con frecuencia
   d. Casi siempre

5. ¿Come diferentes verduras cada día?
   a. No
   b. A veces
   c. Con frecuencia
   d. Casi siempre

6. ¿Quita la piel del pollo?
   a. No
   b. A veces
   c. Con frecuencia
   d. Casi siempre

Comentario_____
_____

7. ¿Considera la información nutritiva de la etiqueta al momento de seleccionar los alimentos que comprará?
   a. No
   b. A veces
   c. Con frecuencia
   d. Casi siempre

Nombre: _____
Survey - Community Name: _____ Fecha_____

8. Puedo usar _____ envés de usar mantequilla o manteca para cocinar más saludable.

9. Puedo usar _____envés de usar mayonesa.

10. ¿Qué tanto sus hijos ayudan a cocinar?
    a. Todo el tiempo
    b. Frecuentemente
    c. A Veces
    d. Nunca

    Otro_____

11. ¿Cuantas veces va al Mercado?
    a. Cada semana
    b. Todos los días
    c. Cada 3 días
    d. Cada 15 días

    Otro_____

12. ¿Qué tanto come comida rápida?
    a. Todos los días
    b. Frecuentemente
    c. A veces
    d. Nunca

    Otro_____

13. ¿Qué tanto hace ejercicio?
    a. Todos los días
    b. Frecuentemente
    c. 1-2 veces la semana
    d. Nunca

    Otro_____

15. Se me acaba la comida antes del fin de mes.

Nombre: _____
Survey - Community Name: _____ Fecha_____

a. No
b. A veces
c. Con frecuencia
d. Casi siempre

Comunidad:_____ Su género:_____

¿Qué edad tiene?

a. 0-18
b. 18-30
c. 31-40
d. 41-50
e. 51-60
f. 61-70
g. 71-100

Raza/Origen étnico

- American Indian/Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Hispanic or Latino
- Other _____

APPENDIX B – FOCUS GROUP QUESTIONS

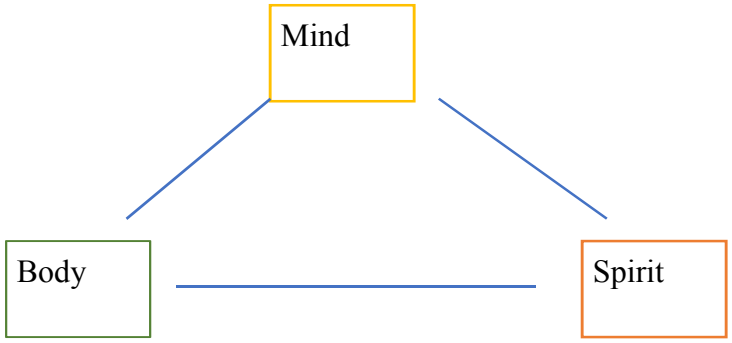
First Focus Group
May 2016

(the women bring food –they introduce the dish they brought and how they made it)

1. What are the main things you do to keep your family/household healthy?
2. Please describe or provide examples of programs, people, or activities in your community that help to keep your family healthy?
3. How did you hear about the nutrition class?
4. Why did you choose to attend the cooking/nutrition class?
    a. What were your learning goals?
    b. In your own words, what did you learn from the class?
5. I learned the most about (*Dot voting! And have them explain answers)*
    a. Food Safety
    b. Healthy Eating
    c. Ingredient Substitution
    d. Interesting Recipes
    e. Other _____
6. Does your household eat at least one meal together?
7. In general, please provide feedback for how the class can improve?
    a. What would you like to learn more about?
    b. What activities can be done in class to improve the experience?
    c. What activities can be done at home to improve the experience?
8. Moving forward, how would you like to be involved in improving the class experience?
    a. Should anyone else in the community be involved?

8-month Follow-Up Focus Group
January 2017

1. Mapping (Exercise)
    a. Draw the best parts of your community.
        (Be sure to include the grocery stores)
    b. Which of these are the most important to your community's health
    c. Which aspects of your community may prevent your community from being healthy?
    d. What do you think could make your community healthier?
2. Are you more or less healthy than a year ago(scale of 0-5, five being much healthier, and zero meaning less healthy)



    a. What changed between a year ago and now?
3. Could you summarize in your own words what you learned in Karina's class?
4. Of these lessons, are there any you have incorporated into your daily life?
    a. In what ways?
5. Are there any you want to incorporate into your daily life, but cannot?
    a. Why not?
6. Do you have any suggestions or comments on how to revise the class?
7. Do you have any suggestions or comments for Karina on how to improve the class?
8. Have you taken any more classes on nutrition/healthy eating?
    a. Have you taken any more classes anywhere? On what?
    b. What would you like to learn more about?