POINT LOMA NAZARENE UNIVERSITY

EXPLORING THE EFFECTS OF FOOD ASSISTANCE PARTICIPATION ON COPING STRATEGIES AMONGST FOOD INSECURE LOW-INCOME IMMIGRANT POPULATIONS IN MID-CITY

by

Valentina L. Montes

A research project submitted to the Department of Kinesiology at

Point Loma Nazarene University in partnership with

Mid-City Church of the Nazarene Health Promotion Clinic

for the fulfillment of the requirements of the Honors Scholars Project

March 2025

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ABSTRACT

This research examines the coping strategies employed by food-insecure low-income immigrant populations and the impact of increased autonomy over food selection through food market participation on these strategies. Despite federal nutrition assistance programs, many immigrant households face barriers, such as legal restrictions and fear, which hinder access to resources, exacerbating food insecurity and contributing to health disparities. To cope, individuals adopt emotion-focused and problem-focused strategies. Negative emotion-focused strategies, such as disengagement such as avoidance and substance use, may worsen physical and mental health outcomes, while positive emotion-focused strategies, such as community support, aim to regulate emotional distress. Problem-focused coping strategies, like borrowing food or money, purchasing inexpensive foods, or reducing meal portions, are also common. This mixed-methods quasi-experimental study explores how participation in a food marketplace program influences coping strategies among food-insecure low-income immigrants in the Mid-City neighborhood in San Diego County, California. Participants completed an initial survey to assess food security and coping strategies, followed by a three-month intervention period with bi-weekly access to the food marketplace. Attendance and engagement was tracked, and at the end of the intervention, participants completed a post-survey to compare changes in coping strategies and food security. Results for quantitative data showed statistical significance in the reduction of the coping strategy 'Begged for Food' ($p=0.010$) and the increase in the coping strategy 'Spent time with my friends and family to avoid thinking about a lack of food' ($p=0.005$). The most frequently used coping strategies were 'Relying on less preferred and less expensive foods,' 'Eaten more starchy foods', and the belief that 'I am hopeful and believe things will get better.' Qualitative follow-up interviews further explored participants' experiences and sentiments. Semi-structured interviews revealed insights into the challenges faced by undocumented immigrants, the role of community and mutual support, and the use of problem-focused coping strategies. By understanding the intersection of food insecurity, coping mechanisms, and food assistance participation, this study aims to inform culturally appropriate, community-driven interventions that address nutritional disparities, promote health outcomes.

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List of Abbreviations

AND	The Academy of Nutrition and Dietetics
BMI	Body Mass Index
DGA	Dietary Guidelines for Americans
HPC	The Health Promotion Center
NHANES	The National Health and Nutrition Examination Survey
SDG	Sustainable Development Goals
SNAP	Supplemental Nutrition Assistance Program
UN	United Nations
USDA	United States Department of Agriculture
U.S.	United States of America
WHO	World Health Organization
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

INTRODUCTION

Food insecurity, characterized by uncertain access to adequate, desirable and nutritious food, disproportionately affects immigrant households and racial and ethnic minorities (USDA, 2023; Rabbitt, 2023; Maynard 2019; Dou, 2022). Despite federal nutrition assistance programs like SNAP and WIC, many low-income immigrant populations within the United States face barriers in accessing these and other resources due to legal restrictions and fears (Rabbitt, 2023). These obstacles further exacerbate food insecurity, heightening the risk of nutritional deficiencies, obesity, type 2 diabetes mellitus, cardiovascular diseases, anxiety, and depression (Jones, 2017; Hilary, 2010; Adams, 2003; Thomas, 2021; Fitzgerald, 2014; Dlamini, 2023).

In response to these challenges, populations experiencing food insecurity often resort to coping strategies across social, economic, individual, and household levels. Problem-focused coping, uses strategies aiming to prolong the use of acquired food, enhance the quantity obtained, or secure an adequate supply. Whereas emotion-focused coping strategies seek to regulate emotional responses to a problem in a positive or negative manner (Leung, 2022; Skinner, 2003).

This research seeks to explore the effects of food market participation on the usage of coping strategies employed by food insecure low-income immigrant populations. The objectives of this project are to assess the types of coping strategies used among a low-income immigrant population in response to food insecurity prior to food assistance participation and examine the relationships between the usage of coping strategies and food assistance participation, specifically, in a food marketplace.

Through a quasi-experimental research design, this study is focused on exploring the lived experiences and coping strategies of food insecure low-income immigrant populations, and the effects of food assistance programs on those coping strategies. This knowledge is essential for addressing nutritional health disparities in underrepresented populations and aligns with global health initiatives promoted by organizations such as the United Nations (UN, 2023), World Health Organization (WHO, 2024), The United States Department of Agriculture (USDA, 2024), and The Academy of Nutrition and Dietetics (ACEND, 2024; Champagne, 2007). By shedding light into the lived experiences of individuals navigating food insecurity and their consequent coping strategies within diverse socio-cultural contexts, this study intends to inform interventions that promote nutritional health and overall well-being while contributing to the literature on this population.

SECTION I.

LITERATURE REVIEW

I. Background

Food insecurity represents a significant global challenge and remains a pressing public health issue. The United States Department of Agriculture defines food insecurity as a "household-level economic and social condition of limited or uncertain access to adequate food" (USDA, 2023). Food insecurity is a critical concern in the United States of America and around the world. Its scope is highlighted by the United Nation's Second Sustainable Development Goal (SDG 2), which aims to "end hunger, achieve food security and improve nutrition and promote sustainable agriculture." The Academy of Nutrition and Dietetics also highlighted the importance of addressing food insecurity through their position for systematic and sustained action to achieve food and nutrition security in the United States (Champagne, 2007). The World Health Organization, at the 1996 World Food Summit, defined the goal of food security to be "when all people at all times have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2024, p. 55). Thus, food insecurity represents a critical area of study and understanding for Public Health Professionals, Healthcare Providers, Nutritionists, Dietitians and Government Officials.

Food insecurity varies in severity, from marginal food insecurity, characterized by anxiety over food sufficiency or shortage of food, to very low food security, identified as a reduction in the quality, variability and desirability of one's diet (USDA, 2023). In 2022, The U.S. Department of Agriculture reported alarming statistics: 13.5 % of households, or 18 million households (6.5 million of those households with children) in the United States experienced food insecurity (USDA, 2023). And, sadly, food insecurity disproportionately affects racial and ethnic minorities and households with children (Rabbitt, 2023; Shanks, 2022). Specifically, Black, Hispanic/Latinx, and Native American households experience significantly higher rates of food insecurity—33%, 31%, and 21% respectively—compared to the national average in the U.S. (USDA, 2023). Socioeconomic status has also been shown to be a contributing factor to food insecurity, with identifying contributing factors being poverty, unemployment, education level, disability, immigration and refugee status, lack of transportation and access to grocery stores (Jiao, 2024). Headrick et.al identified 9 themes that impact nutrition equity. Meeting food needs with dignity, the supply and demand for fresh and healthy foods, and community empowerment and food sovereignty were all related to achieving nutrition equity (Headrick, 2024).

Many are surprised to learn that immigrants constitute a substantial portion of the U.S. population, making up 13.8% of the U.S. population (46.2 million total population). Thus, including immigrants in health assessments is critical to ensuring equitable health access and for informed and culturally sensitive interventions (MPI, 2024). Immigrant communities, particularly those who are undocumented, are often more vulnerable to marginal, low and very low food insecurity due to their limited access to nutrition or health assistance programs. Moreover, these communities do not qualify for federal programs which include the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (Rabbitt, 2023). Thus, immigrant families may rely on community based services like churches, and non-government food banks. The issue of food insecurity, especially as it pertains to immigrant populations, is not isolated to a lack of resources, but the accessibility to those resources and the acceptability of using those resources (Holben, 2017).

Also important to note is the disproportionate impact food insecurity has on mothers, and particularly single-parent homes (Liebe, 2024). Mothers tend to manage the household food environment, in which case, food insecurity adds additional stressors to their lives. Semi-structured interviews with mothers living in Virginia who were food insecure identified stressors related to food insecurity. These stressors included worrying about obtaining the “right foods” and internalizing or living out stigmas (Liebe, 2024). Other themes that emerged were the use of positive and negative coping strategies and their impact on mental health. Some of the strategies used involve the managing of the limited food resources, and shielding children from experiencing food insecurity through their own food intake limitation (Liebe, 2024).

II. Significance

In the United States, food insecurity has been shown to compromise dietary quality, and overall health, contributing to a higher risk of obesity, diabetes, and cardiovascular diseases (Gundersen & Ziliak, 2015; Loopstra & Tarasuk, 2013; Shanks, 2022; Seligman, 2010; Hamelin, 2002; Adams, 2003). In children, undernourishment can manifest itself in stunted growth, which may include the inhibition of full cognitive capacity.

The USDA points out that food security is not only access to food, but the ability of all members of a household to access adequate and safe foods for an active and healthy life, and doing so in a socially acceptable way (2025). Thus, food security is not only the amount of food acquired by a household, but the means by which the food was acquired.

To cope with uncertain access to adequate, desirable and nutritious food,, several studies have shown the use of coping strategies and social infrastructures to meet these needs (Headrick, 2024). A recent study explored the determinants of food insecurity among Syrian refugee women and found that the most preferred coping strategies were purchasing less preferred or less expensive foods, with the addition of reduced portion sizes (Esin, 2024). This strategy, relying on less preferred or less expensive foods, was shown to be one of the most prevalent coping strategies in several studies and was shown to be less associated with the risk of anxiety and depression (Dlamini, 2023). Interestingly, Dlamini et al found that the strongest predictor of anxiety and depression risk was the use of the least common coping strategy of begging for food (2023).

Uncertain Access to Nutritious Food: The link between food insecurity and a higher body mass index (BMI) in the United State challenges conventional notions linking food insecurity solely to undernutrition, or a low BMI. This phenomenon may partially be due to the higher affordability and availability of processed and energy-dense foods compared to whole, nutrient dense foods (Adams, 2003). This highlights the complex interactions between economic hardship and dietary health. These challenges are compounded for low-income immigrant households as they not only lack a sufficient amount and access to food, but are at a greater risk for no or low access to healthy and affordable foods, poor diets, nutritional deficiencies and worse health outcomes than households with higher incomes (Adams, 2003; Thomas, 2021). The National Health and Nutrition Examination Survey (NHANES) demonstrates that individuals from households with a low-income are also less likely to meet the Dietary Guidelines for Americans (DGA) than households with higher incomes (2012). Therefore, evaluating the effects of food insecurity on physical health cannot rely solely on BMI. Rather, the data shows that the Dietary Guidelines for Americans should be assessed in order to determine adequate food intake.
It is important to note that diet *quality* may be exacerbated by food banks who may often offer a limited quantity and variety of food options (Olderoyd, 2022). Studies have shown that charitable food aid may fail to meet individual needs such as health preferences, health needs (pregnant, lactating) and cultural preferences.

Uncertain Access to Desirable Food: Another issue that presents itself is that of cultural food insecurity, defined as the diminished ability to prepare, share, and consume traditional foods, and/or having unreliable access to traditional food through traditional harvesting practices (Wright, 2021). Thus, cultural food insecurity not only poses an increased risk of food insecurity, but hinders immigrant populations from maintaining their cultural identity, and experiencing feelings of comfort, belonging and well being.

Wright et.al. noted how second-generation students were more likely to be negatively affected by diminished access to food that meets their [cultural] food needs due to structural barriers (2021).

Uncertain Access to Adequate Food: Even with the temporary alleviation of food insecurity through food banks or governmental assistance, lack of access to food induces profound stress and anxiety among affected individuals. The uncertainty and chronic worry over food availability contributes to "heightened levels of psychological distress" (Gundersen & Ziliak, 2015). This is attributed to the chronic balancing act needed to feed loved ones, along with feelings of frustration and helplessness. Studies document emotional responses such as shame, guilt, and powerlessness among those unable to adequately provide for their families (Bruening et al., 2017). These responses may be heightened or influenced by the circumstances and fears surrounding current immigration status. A study conducted by Quandt et al highlighted the negative psychological effects of food insecurity among Hispanic populations and showed barriers on nutrition assistance due to fear from a lack of immigration documents, embarrassment, and guilt (Holben, 2017). Even with the assistance of food banks and federal programs, however, food insecure households often resort to coping strategies to avoid facing, or lighten the severity of food insecurity. Even with the unique experiences of each household facing food insecurity, participants in qualitative studies often characterized food insecurity as a stressful balancing act, highlighting food insecurities' chronic and persistent nature (Leung, 2022).

III. Coping Strategies

To cope with the lack of volume or nutritional value of food, many food insecure households adopt emotion-focused strategies or problem-focused coping strategies (Leung, 2022). Leung et al explored the ways in which individuals adopted positive and negative emotion-focused coping strategies within these two categories.

Disengagement-oriented strategies, also known as negative emotion-focused strategies aim to improve the distress response and mitigate emotional distress to food insecurity through sleeping, avoiding others, smoking and drinking alcohol, all in the hopes of avoiding thinking about their food situation (Ciciurkaite, 2018; Bergmans, 2019). This, however, can further exacerbate food-related hardships and increase the risk of long-term physical and mental health effects. This is because disengagement-oriented coping presents food insecurity as a threatening stressor beyond one's control (Skinner, 2003). Positive emotion-focused coping responses seek to include community or relying on friends and family for support, staying hopeful, and spending time with their children (Leung, 2022). Thus, positive emotion-focused strategies also known as constructive non-explosive strategies seek to regulate emotional responses to a problem (Skinner, 2003).

On the other hand, problem-focused coping strategies seek to address the issue of food insecurity itself (Leung, 2022). Positive strategies can be seen in the community or household level. At the community and systems level, people may resort to borrowing food or money for food, obtaining food from food pantries or relying on social networks for support (Loopstra & Tarasuk, 2013). On the household and individual level, people may resort to purchasing inexpensive foods and using coupons. Murimi, et.al, performed a qualitative study in west Texas in which rural Hispanic participants were interviewed in a focus group (2018). One of the themes among food insecure individuals was the use of coping strategies in which the main sub themes that emerged were buying food in bulk and purchasing less expensive foods. Moreover, people also indicated that they consumed a lot of starchy food and mentioned regularly diluting soups or stews by adding water to be able to feed more family members. Dlamini et al, explored food insecurity and coping strategies in South Africa and identified the use of less preferred and less expensive foods as some of the most used strategies (2023).

Negative problem-focused strategies may include stealing food, limiting portion sizes or reducing the number of meals in a day, purchasing less nutritious food, and skipping meals (Loopstra & Tarasuk, 2013).

IV. The Health Promotion Center

Global strategies to combat food insecurity are now emphasizing community-driven solutions and policy frameworks that enhance food access and promote nutritional equity among vulnerable populations (Frongillo & Chowdhury, 2019). International interventions underscore the necessity of tailored approaches that consider the socio-economic and cultural contexts of affected communities. This is the approach which The Health Promotion Center (HPC) at Mid-City Church of the Nazarene in San Diego, California, takes when providing food through their food marketplace. The HPC is a university and donor funded free and charitable clinic in the Mid-City area in San Diego, CA. They serve primarily low income individuals, many of which are immigrants or refugees. The HPC's newly opened food marketplace gives participants autonomy over their selection of food and provides a larger array of options including fresh produce, dairy and meat products. Due to the limited resources and size of the HPC, time slots are granted to individuals between the hours of 2:00 pm and 6:00 pm. People are put on a waiting list if they wish to participate in the food marketplace. However, if people are unable to participate in the marketplace due to the limited availability, they are able to attend the food distribution on Tuesdays or Saturdays held at the HPC parking lot. While there is less autonomy, participants are still able to reject or accept the meat, non-perishable goods, and fresh produce, widely starchy or staple vegetables (onions, potatoes), being distributed.

Considering the participants of HPC are vastly immigrants and refugees that may not have access to federal programs, and instead rely on non-governmental organizations like the HPC for food assistance, it is important to determine how they cope with their food security status.

V. Project Purpose

Murimi et.al (2018) underscores the importance of studying the cultural aspect of food to inform interventions addressing food insecurity. Thus, this research project seeks to explore coping strategies used among food insecure low-income immigrant populations in Mid-City and the extent to which participating in a food marketplace affects the types and frequency of coping strategies used. This study will make sure it takes immigration status and the cultural aspect of food into consideration.

Exploring the coping strategies used by these individuals through a mixed-methods quasi-experimental research design has the potential to aid in the development of targeted interventions that contribute to the United Nation's Second Sustainable Development Goals. This research can do this while promoting better health outcomes among underrepresented immigrant populations in the United States that are culturally appropriate, community driven and equitable. This study gives participants the ability to voice their concerns and ideas on the issue. Moreover, this research can help design an improved system of food aid for individuals in Mid-City, provided with the data and inputs of community members.

VI. Search Strategies

This literature review examined the connections between food insecurity and coping strategies with psychological & nutritional health outcomes. Following, a separate literature review was conducted exploring the coping strategies used among immigrants, minority groups, and the reasonings behind it. A literature search was conducted using Google Scholar, PubMed, NIH, PLNU Ryan Library and WorldCat.

SECTION II. METHODOLOGY

I. Project Aims

The primary objective of this quasi-experimental research design was to assess the coping strategies employed by participants in response to food insecurity and to evaluate the impact of a food marketplace on these strategies. Specifically, the study aimed to determine how increased autonomy in food selection affected the types and frequency of coping strategies among low-income, immigrant populations. The study utilized a mixed-methods approach, integrating both quantitative and qualitative data collection to achieve a comprehensive understanding of participants' experiences and behaviors. The research took place over a three-month intervention period, during which participants had the opportunity to visit the marketplace biweekly.

II. Ethical Considerations

This project was reviewed and approved by the Institutional Review Board (IRB). Informed consent was obtained prior to study participation and included the purpose and description of the study, foreseeable risks and benefits and the voluntary nature of the study (Appendix A). That is, participants were informed that participation in the study was voluntary and would not affect the quality of care in the clinic or their access to other food assistance programs. Participants were also reminded of their ability to withdraw from the study at any time or skip questions without penalty or questioning. Moreover, all study participants agreed to not disclose any information outside of the study. Names and phone numbers were collected for the purpose of tracking participants. First and last names were recorded in Google Sheets on a private document only visible to select HPC personnel involved in the food marketplace and the researcher. Phone numbers or emails, names and allotted ID numbers were recorded in a password protected Excel file on a password protected computer. All survey responses were kept confidential and held in a folder only accessible to the researcher within a locked folder. Names were not used on top of the surveys, instead, study ID numbers were recorded on the top of the sheet. Only the researcher knew what name corresponded to a certain ID. All collected survey data was kept on a password protected computer only accessible to the researcher on a password protected program and file.

Furthermore, participants were compensated for their involvement with a grocery bag of food items, acknowledging their contribution to the research while providing additional support in alignment with the study's goals.

III. Study Design

The study began with a screening phase, where potential participants were identified through the food distribution service held on Saturdays. Those who have never used the food marketplace before, were invited to participate in the marketplace and survey. Individuals interested in the study were screened for food insecurity using the Hunger Vital Sign, a screening tool designed to identify food insecurity, at the time of their appointment in the marketplace. Those who were screened as food insecure were invited to officially participate in the survey. The initial recruitment aimed for a sample size of ten participants, with an initial target of fifteen to account for anticipated dropouts. This sample size was chosen to ensure sufficient data collection while maintaining manageable group sizes for qualitative analysis.

Once participants consented to take part in the study, they completed an initial survey that documented their existing coping strategies, demographic information, and baseline food security status. This survey served as a foundation for understanding their behaviors before engaging with the food marketplace.

Throughout the three-month intervention, participants visited the food marketplace every other week, providing them with the autonomy to select their food items according to their preferences and needs. The design withheld the fact that participants' coping strategies were being assessed, allowing them to modify their behaviors naturally without the pressure of being studied. This approach aimed to reflect genuine changes in coping strategies rather than responses influenced by observation.

At the conclusion of the intervention period, participants completed a follow-up survey nearly identical to the initial one, allowing for a direct comparison of coping strategies before and after the intervention. Additionally, participants were invited to participate in semi-structured interviews designed to collect qualitative data. This was done to provide a deeper insight into participant’s experiences with the food marketplace. These interviews explored how access to the marketplace impacts food choices, coping mechanisms, and well-being, providing contextual data that can complement the quantitative findings.

By employing this quasi-experimental design, the study aimed to contribute valuable insights into the relationship between food autonomy and coping strategies, particularly within the context of low-income immigrant populations experiencing food insecurity. The findings hope to not only enhance understanding of individual coping mechanisms but also inform potential improvements to food distribution programs and policies that support vulnerable communities.

IV. Project Setting

This study took place within The Church of the Nazarene in Mid-City's Health Promotion Center, a clinic providing free primary care services to primarily low income foreign born individuals. Participants were recruited at the food distribution center by the main research and HPC staff. The project intervention took place at the HPC Food Marketplace, open Thursdays 2:00 pm to 6:00 pm within the Mid-City Church of the Nazarene campus. This study spanned a total of four months between October 17, 2024 and February 27, 2025.

V. Recruitment,

Participants were recruited at the food distribution held at Mid-City Church of the Nazarene through the Health Promotion Center. The main researcher set up a table at the end of the food distribution line with HPC appointment cards and recipe books. Participants who approached the table were first invited to participate in the marketplace and were asked if they would be interested in participating in the survey afterwards. Participants who wanted to participate in the marketplace were given an allotted time to use the Food Marketplace. Times were allotted on a Google Sheets paper and participants were given an HPC appointment card. Participants who wished to participate in the survey, were identified on the attendance sheet by putting an asterisk beside their name. New participants to the HPC Food Marketplace who had made an appointment prior to the study start date and walk-ins were also invited to participate in the study by HPC staff.

VI. Measurements

A pre and post survey was conducted as a way to quantify the effects of the food marketplace on coping behaviors for individuals dealing with food insecurity.

The optional follow-up interview offered qualitative data on survey participants' experiences with the food marketplace program and their coping strategies. These interviews aimed to explore participants' personal reflections on how the programs influenced their food choices and coping behaviors.

Overall, the combination of quantitative pre and post surveys, and qualitative interviews allowed for a comprehensive assessment of how a food marketplace program affected coping strategies and the implications on program participants and program improvements.

VII. Data Collection Procedures

Once participants expressed interest in participating in the study, they were handed The Hunger Vital Sign™ Questionnaire (Appendix A). If participants answered that either or both of the statements in The

Hunger Vital Sign™ were ‘often true’ or ‘sometimes true’ (versus ‘never true’) then they were identified as being at risk for food insecurity.

Once a participant was identified as being at risk for food insecurity, they received a paper copy of the informed consent form detailing the study’s purpose, procedures, potential risks, and benefits. After providing consent, participants completed the initial survey, which was administered on-site in a private setting to ensure confidentiality. If they were not deemed as being at risk for food insecurity then they were invited to continue using the marketplace. Participants were assigned an ID number which was recorded on their survey. Only the primary investigator knew what names correspond to which ID. This information, along with all survey data that was on paper was recorded on a password protected Excel sheet. Once survey data was recorded on an Excel sheet, paper forms were eliminated.

During the intervention phase, participants had access to the food marketplace every other week for three months. Data related to their participation, specifically their attendance was tracked to monitor engagement.

At the end of the three-month intervention period, participants filled out the post survey which was nearly identical to the initial survey. This enabled a direct comparison of coping strategies before and after their participation in the food marketplace program.

Participants that expressed their interest in the follow-up interviews were interviewed during food assistance program hours at the Mid-City Church of the Nazarene Campus to ensure a familiar and comfortable environment. During the interviews, participants were asked for their consent to record the conversation. If consent was granted, interviews were recorded using a recording device. Transcriptions of the recorded interviews were prepared by the primary investigator in a private space to maintain confidentiality. These transcripts were stored in a password-protected computer. For interviews conducted in Spanish, the primary investigator translated the transcripts to English, documenting the original language alongside the English version to preserve the authenticity of participants' responses. All recordings were deleted after transcription to protect participant privacy.

VIII. Intervention Process

The intervention period was 16-weeks long and took place between October 17, 2024 and February 28, 2025. Participants began attending the HPC’s food marketplace either on October 17, 24, or 31, 2024. When participants signed in they were asked by the main researcher or HPC staff if they wanted to

participate in the study. If they said yes, they were handed a consent form (Refer to Appendix A) and The Hunger Vital Sign (Refer to Appendix B). In accordance with The Hunger Vital Sign, participants who answered that either or both of the two statements were ‘often true’ or ‘sometimes true’ (vs. ‘never true’), then they were identified as being at risk for food insecurity. The main researcher or HPC staff then handed each participant the preliminary questionnaire (Refer to Appendix C). Upon completion, participants were handed a copy of the consent form to take home.

During the 16-week-intervention period, participants were welcome to attend the food marketplace every other week, making an appointment with HPC staff at the end of every visit with the earliest appointment time being two weeks following. Attendance was tracked using the HPC’s Google Form which was transferred to a password protected excel spreadsheet. During visits, participants signed in with an HPC staff member at the welcome area with a valid San Diego Food Bank Identification Card. Participants then waited while sitting until their scheduled time. All participants of the HPC’s Food Marketplace have access to a variety of canned goods (beans, fruits, vegetables, etc.), shelf-stable goods (rice, dried beans and legumes, pasta, pasta sauce, coffee, etc.), refrigerated items (eggs, milk), and a variety of fresh produce (tomatoes, apples, plums, corn, potatoes, onions). All participants could choose all items with a few restrictions (ie. only one gallon of milk, per household). To “check-out” items, participants approached the appointment desk to make another appointment.

The conclusion of the study commenced on February 13, 2025 and officially ended on February 28, 2025. The main researcher distributed and collected the secondary data on February 13 to eligible participants, while HPC staff distributed and collected data on the 20th and 27th. The main researcher determined eligibility based on attendance and determined that 12 participants were eligible (refer to Section III.I). The researcher and HPC staff attempted to contact participants who had provided contact information in the initial survey by phone or email on February 6, 2025. They were reminded of their appointment, and, or the second survey and invited to participate, as well as to collect their thank-you grocery bags, as indicated in the consent form (see Appendix I.A and II.A). Participants then came and took the post-intervention survey (Refer to Appendix C). If participants agreed to an interview, they were immediately interviewed in a private office space at the HPC. Interviewees who underwent the semi-structured interviews were recorded if permission was granted, but was not mandatory (refer to Appendix E for the Interview Outline). All participants who took the second survey, regardless of participation in an interview, were given compensation and a thank you for their participation. In accordance with the Benefits portion of the Informed Consent Form, participants were given an additional grocery bag (refer to Appendix A). Grocery bags were made possible with the donation of 14 grocery

bags with shelf stable goods from Point Loma Nazarene's Food Pantry "Loma Shares," along with HPC's donations for fresh produce, ground beef, cheese, and milk.

IX. Data Analysis

All data analysis was conducted on IBM SPSS Statistics version 25. The IBM SPSS file was on a password-protected computer, a password-protected program, and was on a password protected file. Data was always analyzed in a private enclosed area. Paired Samples T-tests, and frequency analysis were performed. All data was inputted into IBM SPSS in accordance with the ID numbers given to participants.

SECTION III.

RESULTS

I. Participant Retention

A total of 22 participants were initially recruited and completed the preliminary survey, with a retention rate of 45.45% (n=10) who qualified for and completed the second survey. The finishing participants had the following attendances: 100 (50%), 120 (100%), 130 (77.8%), 180 (66.7%), 190 (77.8%), 200 (50.0%), 210 (112.5%), 220 (55.5%), 230 (88.8%) and 240 (88.8%). Mean attendance was 76.8%. Attendance was monitored during the 14-week intervention period from October 17, 2024, to February 27, 2025. Table 1 shows the attendance of participants by their ID numbers. Participants recruited on October 17, 24, and 31st could attend up to 9, 8 and 7 times respectively. To ensure meaningful data, participants with less than 25% attendance (n=5; 108, 111, 112, 114, and 115) were disqualified from completing the second survey. Participants with more than 25% attendance but who were unable to complete the second survey (n=5; 116, 160, 140, 150, and 170) were also disqualified. These participants were unable to reschedule due to the study's appointment structure, personal preferences, or an inability to contact them in any way.

Table 1
Participant Attendance

ID	17-Oct	24-Oct	31-Oct	7-Nov	14-Nov	21-Nov	5-Dec	12-Dec	19-Dec	9-Jan	16-Jan	23-Jan	30-Jan	6-Feb	13-Feb	20-Feb	27-Feb
100.0	☐	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☑	☐	☑	☐	☐	☐
107.0	☐	☐	☑	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐
108.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
111.0	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
112.0	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
114.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
115.0	☑	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
116.0	☐	☐	☑	☐	☑	☐	☑	☐	☑	☑	☐	☑	☐	☑	☐	☐	☐
120.0	☑	☐	☑	☐	☑	☐	☑	☐	☑	☑	☐	☑	☐	☑	☐	☑	☐
130.0	☑	☐	☑	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	☑	☐	☑
140.0	☑	☐	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
150.0	☐	☐	☐	☑	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
160.0	☑	☐	☑	☐	☐	☐	☐	☐	☐	☑	☐	☑	☐	☐	☐	☐	☐
170.0	☑	☐	☑	☐	☑	☐	☑	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐
180.0	☑	☐	☑	☐	☐	☐	☐	☑	☐	☑	☐	☑	☐	☑	☐	☐	☐
190.0	☑	☐	☑	☐	☑	☐	☑	☐	☐	☐	☑	☐	☑	☑	☑	☐	☑
200.0	☐	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☑	☐
210.0	☐	☑	☐	☑	☐	☑	☑	☐	☑	☑	☐	☑	☐	☑	☐	☑	☐
220.0	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐	☑	☐	☐	☑	☐	☑	☐
230.0	☑	☐	☑	☐	☐	☑	☑	☐	☑	☑	☐	☐	☐	☐	☑	☐	☑
240.0	☑	☐	☐	☐	☑	☐	☑	☐	☑	☑	☐	☑	☐	☑	☐	☑	☐

II. Participant Demographics

Descriptive statistics showed demographic information on race, age and gender are described on Table 2. Hispanic or Latino (n=6) participants made up 60% of all participants. Most participants were 51 or older (n=6), and female (n=8).

Table 2
Demographic Information: Age, Race, and Gender

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Age 29-34 years	2	18.2	22.2	22.2
	Age 46-50 years	1	9.1	11.1	33.3
	Age 51+	6	54.5	66.7	100.0
	Total	9	81.8	100.0	
Missing	System	2	18.2		
Total		11	100.0		

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hispanic/Latinx	6	54.5	60.0	60.0
	Black/African American	2	18.2	20.0	80.0
	Asian	2	18.2	20.0	100.0
	Total	10	90.9	100.0	
Missing	System	1	9.1		
Total		11	100.0		

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	8	72.7	80.0	80.0
	Male	2	18.2	20.0	100.0
	Total	10	90.9	100.0	
Missing	System	1	9.1		
Total		11	100.0		

Five participants were immigrants (n=5), and one declined to state (n=1). Of those that were immigrants, the average time in the United States was 24.8 years with a range between 14 and 40 years (Table 3).

Table 3
Immigration Status

Immigrantion Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Immigrant	5	45.5	50.0	50.0
	Non-Immigrant	4	36.4	40.0	90.0
	Decline	1	9.1	10.0	100.0
	Total	10	90.9	100.0	
Missing	System	1	9.1		
Total		11	100.0		

Years in the USA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20.00	2	18.2	40.0	40.0
	25.00	1	9.1	20.0	60.0
	37.00	1	9.1	20.0	80.0
	40.00	1	9.1	20.0	100.0
	Total	5	45.5	100.0	
Missing	System	6	54.5		
Total		11	100.0		

Participants who had heard of SNAP or WIC were eight in total, but of those, only two were currently enrolled in SNAP or WIC (Table 4).

Table 4
SNAP and WIC Status

SNAP/WIC help status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Participant: 3+ months	1	9.1	10.0	10.0
	Participant: -3 months	1	9.1	10.0	20.0
	Do not want to participate	3	27.3	30.0	50.0
	Do not have the documents	2	18.2	20.0	70.0
	Not approved	1	9.1	10.0	80.0
	Have not heard of	2	18.2	20.0	100.0
	Total	10	90.9	100.0	
Missing	System	1	9.1		
Total		11	100.0		

The preliminary household size was a mean size of 4.4, with the post-intervention household size was 3.3 (Table 5). The average household size ranged between 1 and 6 members in a household (Table 6). There was an average household member loss of 0.9 after the second survey, no household showed a gain.

Table 5
Household Size Sample t-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	H.Size	4.2000	10	1.39841	.44222
	H.Size2	3.3000	10	1.33749	.42295

Table 6
Household Size

ID#	Initial Household Size	Post Household Size	Change
100	4	3	-1
120	4	3	-1
130	4	4	0
180	6	5	-1
190	5	5	0
200	4	4	0
210	4	4	0
220	1	1	0
230	6	2	- 4
240	4	2	- 2

Those with previous mental health diagnoses were four in total, all four having anxiety and depression (n=3). The remaining ten participants had no mental health diagnoses (n=7).

Table 7
Mental Health Diagnosis

Mental_Health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Both	3	27.3	30.0	30.0
	none	7	63.6	70.0	100.0
	Total	10	90.9	100.0	
Missing	System	1	9.1		
Total		11	100.0		

**both=anxiety and depression*

The average income size pre-intervention was $914.80 while the average post-intervention income was $1,004.80 (Table 8). This showed a slight increase in participant income but was not a significant change.

Table 8
Income

ID#	Pre-Intervention Income	Post Intervention Income	Change
100	$1,000	$1,000	$0
120	$0	$0	$0
130	$1,200	$1,500	$300
180	$0	$0	$0
190	$1,200	$1,800	$600
200	$1,000	$1,000	$0
210	$583	$583	$0
220	$1,000	$1,000	$0
230	$1,600	$1,600	$0
240	$1,565	$1,565	$0

III. The Hunger Vital Sign

The Hunger Vital Sign identifies households as being at risk for food insecurity if they answer that either or both of the questions, found in Appendix B, are ‘sometimes true’ or ‘often true.’ One participant (220) was the only participant that was not identified as being at risk for food insecurity, indicating ‘never’ at both questions on the preliminary survey. During the second survey participant 220 did answer ‘sometimes true’ in the questions. Table 9 shows the changes between the first question (HVS1.1 and HVS2.1) and the second question (HVS1.2 and HVS2.2) in the pre-intervention (HVS1) and post-intervention survey (HVS2). The frequency table shows that in survey 1, question 1 was most frequently answered ‘often true,’while ‘sometimes true’ was most often answered in survey 2. The question “Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.” was most frequently answered as ‘sometimes true’ in both the first and second survey. These findings indicate that 90% (n=9) of initial participants were at risk for food insecurity, while all participants (n=10) were deemed at risk for food insecurity after the intervention. No significant changes were seen between the first and second survey.

Table 9
The Hunger Vital Sign Frequency

HVS1.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	often true	5	23.8	50.0	50.0
	Sometimes True	4	19.0	40.0	90.0
	Never True	1	4.8	10.0	100.0
	Total	10	47.6	100.0	
Missing	System	11	52.4		
Total		21	100.0		

HVS2.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often True	4	19.0	40.0	40.0
	Sometimes True	6	28.6	60.0	100.0
	Total	10	47.6	100.0	
Missing	System	11	52.4		
Total		21	100.0		

HVS1.2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	often true	3	14.3	30.0	30.0
	Sometimes True	6	28.6	60.0	90.0
	Never True	1	4.8	10.0	100.0
	Total	10	47.6	100.0	
Missing	System	11	52.4		
Total		21	100.0		

HVS2.2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often True	4	19.0	40.0	40.0
	Sometimes True	6	28.6	60.0	100.0
	Total	10	47.6	100.0	
Missing	System	11	52.4		
Total		21	100.0		

Table 10
The Hunger Vital Sign Paired Sample t-test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	HVS1.1	1.6000	10	.69921	.22111
	HVS1.2	1.8000	10	.63246	.20000
Pair 2	HVS2.1	1.6000	10	.51640	.16330
	HVS2.2	1.6000	10	.51640	.16330

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	HVS1.1 & HVS1.2	10	.804	.005
Pair 2	HVS2.1 & HVS2.2	10	.167	.645

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	HVS1.1 - HVS1.2	-.20000	.42164	.13333	-.50162	.10162	-1.500	9	.168
Pair 2	HVS2.1 - HVS2.2	.00000	.66667	.21082	-.47690	.47690	.000	9	1.000

IV. Food Strategies Survey

The Food Strategies Survey was analysed by using Paired Sample t-test on IBM SPSS. Pair 1 to 20 represents questions 1 to 20 on coping strategies shown on Appendix C. Possible responses were recorded as numbers on the value table, with 1=always, 2=often, 3=sometimes, and 4=never. Results were deemed as statistically significant if a probability value (p-value) of ≤ 0.05 was shown under Sig. (2-tailed). The results are shown on Table 11.

Table 11
Food Strategies Survey Paired Sample t-test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Relied on less preferred and less expensive foods. - P2.Q1	.10000	1.19722	.37859	-.75644	.95644	.264	9	.798
Pair 2	Borrowed food, or relied on help from a friend or relative. - P2.Q2	.30000	1.49443	.47258	-.76905	1.36905	.635	9	.541
Pair 3	Purchased food on credit. - P2.Q3	-.20000	1.81353	.57349	-1.49732	1.09732	-.349	9	.735
Pair 4	Sent household members to eat elsewhere. - P2.Q4	.00000	1.49071	.47140	-1.06639	1.06639	.000	9	1.000
Pair 5	Begged for food - P2.Q5	-.70000	.67495	.21344	-1.18283	-.21717	-3.280	9	.010
Pair 6	Limited portion size at mealtimes. - P2.Q6	-.30000	1.56702	.49554	-1.42098	.82098	-.605	9	.560
Pair 7	Reduced the number of meals eaten in a day. - P2.Q7	.0000	1.3333	.4216	-.9538	.9538	.000	9	1.000
Pair 8	Skipped entire days without eating. - P2.Q8	-.10000	1.59513	.50442	-1.24109	1.04109	-.198	9	.847
Pair 9	Restricted consumption by adults in order for small children to eat. - P2.Q9	.20000	1.75119	.55377	-1.05273	1.45273	.361	9	.726

Pair 10	Fed household members who work first. - P2.Q10	.60000	.98809	.30551	-.09110	1.29110	1.964	9	.081
Pair 11	Rationed money to buy prepared food (frozen meals,fast food, etc.). - P2.Q11	-.50000	1.69031	.59761	-1.91313	.91313	-.837	7	.430
Pair 12	Bought things in bulk when there is money for food. - P2.Q12	.55556	1.13039	.37680	-.31334	1.42445	1.474	8	.179
Pair 13	Eaten more starchy foods (rice, beans, corn, pasta) to get full on that. - P2.Q13	.22222	.66667	.22222	-.29022	.73467	1.000	8	.347
Pair 14	Added water to my soup (stews, beans) to feed more people. - P2.Q14	.33333	1.22474	.40825	-.60809	1.27476	.816	8	.438
Pair 15	Avoided others out of shame from having a lack of food. - P2.Q15	.44444	1.81046	.60349	-.94720	1.83609	.736	8	.482
Pair 16	Smoked or drunk alcohol to avoid thinking about food. - P2.Q16	.44444	1.01379	.33793	-.33483	1.22372	1.315	8	.225
Pair 17	Slept to avoid thinking of food. - P2.Q17	.66667	1.00000	.33333	-.10200	1.43533	2.000	8	.081
Pair 18	Spent time with my friends and family to cope with a lack of food. - P2.Q18	1.44444	1.13039	.37680	.57555	2.31334	3.833	8	.005
Pair 19	Worried about where my next meal is coming from. - P2.Q19	.77778	1.30171	.43390	-.22280	1.77836	1.793	8	.111
Pair 20	I am hopeful and believe things will get better. - P2.Q20	-.11111	1.05409	.35136	-.92136	.69914	-.316	8	.760

Pair 5 (Begged for Food) and Pair 18 (Spent time with my friends and family to avoid thinking about a lack of food) were the two coping strategies that were shown to have a significant change after the intervention (Table 11). Question 5 went from a 2.6 to a 3.3, which indicates that participants went from answering often to sometimes. Question 18 went from 3.8 to 2.4, which shows a change from never to

often. Pair 4 (sent household members to eat elsewhere) and Pair 7 (reduced the number of meals eaten in a day) showed no change.

Table 12
Food Strategies Survey Means

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Relied on less preferred and less expensive foods.	1.9000	10	.56765	.17951
	P2.Q1	1.8000	10	1.03280	.32660
Pair 2	Borrowed food, or relied on help from a friend or relative.	2.8000	10	1.03280	.32660
	P2.Q2	2.5000	10	1.17851	.37268
Pair 3	Purchased food on credit.	3.0000	10	1.24722	.39441
	P2.Q3	3.2000	10	.91894	.29059
Pair 4	Sent household members to eat elsewhere.	3.3000	10	1.05935	.33500
	P2.Q4	3.3000	10	1.05935	.33500
Pair 5	Begged for food	2.6000	10	.84327	.26667
	P2.Q5	3.3000	10	.94868	.30000
Pair 6	Limited portion size at mealtimes.	2.5000	10	.97183	.30732
	P2.Q6	2.8000	10	1.03280	.32660
Pair 7	Reduced the number of meals eaten in a day.	2.800	10	.9189	.2906
	P2.Q7	2.800	10	1.0328	.3266
Pair 8	Skipped entire days without eating.	3.4000	10	.96609	.30551
	P2.Q8	3.5000	10	.97183	.30732
Pair 9	Restricted consumption by adults in order for small children to eat.	3.3000	10	1.05935	.33500
	P2.Q9	3.1000	10	1.19722	.37859
Pair 10	Fed household members who work first.	3.4000	10	1.07497	.33993
	P2.Q10	2.8000	10	1.31656	.41633
Pair 11	Rationed money to buy prepared food (frozen meals,fast food, etc.).	2.7500	8	1.03510	.36598
	P2.Q11	3.2500	8	.70711	.25000
Pair 12	Bought things in bulk when there is money for food.	3.0000	9	.70711	.23570
	P2.Q12	2.4444	9	1.01379	.33793

Pair 13	Eaten more starchy foods (rice, beans, corn, pasta) to get full on that.	1.6667	9	.70711	.23570
	P2.Q13	1.4444	9	.52705	.17568
Pair 14	Added water to my soup (stews, beans) to feed more people.	2.3333	9	1.11803	.37268
	P2.Q14	2.0000	9	1.11803	.37268
Pair 15	Avoided others out of shame from having a lack of food.	3.3333	9	1.00000	.33333
	P2.Q15	2.8889	9	1.26930	.42310
Pair 16	Smoked or drunk alcohol to avoid thinking about food.	4.0000	9	.00000	.00000
	P2.Q16	3.5556	9	1.01379	.33793
Pair 17	Slept to avoid thinking of food.	3.7778	9	.44096	.14699
	P2.Q17	3.1111	9	1.16667	.38889
Pair 18	Spent time with my friends and family to cope with a lack of food.	3.8889	9	.33333	.11111
	P2.Q18	2.4444	9	1.01379	.33793
Pair 19	Worried about where my next meal is coming from.	3.1111	9	.60093	.20031
	P2.Q19	2.3333	9	1.11803	.37268
Pair 20	I am hopeful and believe things will get better.	1.5556	9	.72648	.24216
	P2.Q20	1.6667	9	1.11803	.37268

V. Interviews

Semi-structured interviews were conducted with all willing participants. All recorded interviews were conducted and transcribed in Spanish (Appendix F). An english translation was conducted on Google Translate and refined by the researcher (Appendix G). Major themes that emerged were the challenges of undocumented immigrants, the role of community and mutual support, and the use of coping strategies, in which the main sub themes that emerged were rationing food and diluting dishes by adding water.

Participants emphasized the rising cost of living and food, saying, “Everything is expensive! And everything is going to go up more.” This particular participant showed her struggle to make ends meet with six people in her household, three of which are not her family, but rather, an elderly man and his children whom they ‘adopted’ into their family. This participant also expressed how she had to collect food from various sources to support her household, “Ando picando de aquí y allá” (“I gather a little from here and there”. She expressed how while the marketplace helped, she still had to be alert with offers and other food distribution sites to provide for her six household members. She even explained how in other food distribution sites, she and her sister were not well received due to her sister's bipolar disorder and a suspicion that their discrimination is due to their skin color. Even with the struggle, she expressed how

she would send food and money to Mexico, “I help them since I send things over to Mexico. With food, and if there is a need, we save to give them money.” One might ask, why?
“Because we all help each other. Yes, to give is a beautiful thing, and He (God) gives us blessings.”
This principle of giving, from this and other participants, appeared to stem from lessons learned from a young age and faith in God.

Another huge portion of the interview was the importance of providing meals for a household. One participant shared how her grandchildren were aware of their food situation. Her grandchildren help with the shopping by accompanying her to the grocery store and looking for deals and coupons: “They (grandchildren) go and look at the deals in the ads.” She also shared the importance of family and faith in God, “they do worry a lot about that. And they always say, when they see me carrying a bag of groceries to see what I'm looking for, they say: “My grandma! My hero. She's bringing us our food!” Very understanding, and the oldest child, he's eleven years old and he's very understanding, says: “Oh grandma, it's good that you're helping us, right?” “Yes, my love. Thank God. God doesn't abandon us.”

Furthermore, some participants acknowledged that some people are afraid to get food because of their immigration status, one participant saying, “There are some people who, yeah, they get nervous and don't come.” However, she states that many still come despite the fear: “(But) most of us come and stay until we get food.” Another participant expressed her fear of being caught by immigration authorities, leading her to avoid public spaces like the food distribution line and the supermarket where she might be seen: “We are afraid, sometimes of being caught”. This fear has led her to stop going to the food distribution and the supermarket.

When asked about the food marketplace and if and why they liked it, one participant stated a preference for the food market, as it doesn’t require waiting in long lines, and it offers more food options. In her own words, “The food marketplace is better...I like the options better”. The appointment times and security of knowing good food would be acquired were preferred over long lines at the food distribution, one participant expressed that waiting for hours in line is too much: “The line takes too long...it was better for me not to come, honestly, I didn't come”. Another one stated, “If you just go there and grab it and leave, then yes, I would come. But I have to line up from seven in the morning to ten a.m.. It's a long time. It's a long time, because we don't know (if we’ll get good food)”. Another participant commented on the advantages of the food marketplace and said, “I love it because it's by appointment, and when you come to your appointment, you're sure to get what you need.”

One of the major themes that emerged were strategies to stretch food, or problem-focused coping strategies. One participant shared how she stretches food, especially canned goods and other food she gathers from distributions. For instance, she turns one can of beans into a larger meal by adding water and making it into a type of bean sauce: “I make a mess with the blender, I add water to make even more beans”. Multiple interviewees–including one’s who did not want to be recorded– said, “We add more water to the beans. And as they say, at least it will have the flavor of beans.” Another participant said she also makes the most of pasta by adding potatoes to ensure her household feels full: “I make spaghetti, but I also boil two or three potatoes to thin them out and mix them in”. This participant also shared how even seemingly small amounts of food from the food marketplace (like canned goods, eggs, and oil) are a great help in providing for her family: “It helps in providing what we can't afford in this economy”. She illustrates this by stating how by saving on a can of food, she can buy fresh produce like tomatoes and carrots instead, which she considers more affordable: “How much does a little can cost? Better to spend money on tomatoes or carrots...that’s plenty of help for us”. Another participant expressed the same thing, the ability to purchase food she would otherwise struggle to afford: “I save that for other things I need, it’s a great help.”Another coping strategy that emerged was meal planning to save on gas, water, electricity, and time: “When I cook, I always try to cook for two days... I save gas and water”.

The issue of health and food security also came up, with one participant stating how she was told that she was pre-diabetic, “Yeah, you know, now I do get worried and concerned, and at the same time, I’m not worried and concerned because you know it depends on what there is. Because they got my results back and it says I am pre-diabetic. Then they told me to start eating healthier. But...with this situation, how am I going to eat healthy? It’s what they have... you have to eat what there is”. Another thing that emerged was perceptions of health and nutrition education knowledge: “ (My parents) got sick with diabetes, and so many illnesses, due to so much worrying, and rage with that man (brother)”. This comment may point to a lack of nutrition education, along with this comment: “...there are certain things we have to avoid. Like sweets, like apples, for example. I can't eat three or four apples a day. Because even if it's natural sugar, it all ends up turning into starch”. In essence, she states: “We have to eat what there is. And avoid what we know will do us much more harm, but what there is, we have to eat it.”

SECTION IV.

DISCUSSION

I. Implications

This study was conducted over a 16-week-period with a pre and post intervention survey and optional interview. The intervention included first-time participation in the HPC's Food Marketplace. Participants (n=22) were allotted appointment times and were able to select their own food over the intervention period. Participants who qualified for the post-survey (n=10) were contacted to remind them of their appointment or invite them to come to take their survey and collect their thank you grocery bag. The retention rate equated to 45.45%. Participants who chose to undergo the semi-structured interview and agreed to be recorded had their interview transcribed (n=3).

Participant demographics showed a majority Hispanic or Latino (60%) population, 51 or older (60%), and primarily female participants (80%). Nearly half of participants were immigrants, with an average time in the U.S. being 24.8 years. Around 80% of participants had heard of SNAP or WIC but only two (20%) were enrolled. The preliminary household size, a mean size of 4.4, decreased, with the post-intervention household size being 3.3. The average income size, on the other hand, showed a slight increase but was not a significant change, with the average pre-intervention income being $914.80, while the average post-intervention income was $1,004.80. All participants who reported having a Mental Health Diagnosis were 3 in total (30%) and all had both anxiety and depression.

The Hunger Vital Sign identified 90% of participants as being at risk for food insecurity (n=9) during the initial period and 100% of participants as being at risk for food insecurity at the post period. This may be due to a higher confidence level by that participant at answering truthfully. Quantitative data was assessed using surveys and analyzed using IBM SPSS. Paired t-tests were conducted and identified Pair 5 (Begged for Food) and Pair 18 (Spent time with my friends and family to avoid thinking about a lack of food) as the two coping strategies that were shown to have a significant change after the intervention (Table 11). Question 5 went from a 2.6 to a 3.3, which indicates that participants went from answering often to sometimes, indicating a positive change toward begging for food 'less'. This strategy in particular, although the least common in other studies, has been shown to be the strongest predictor of anxiety and depression risk (Dlamini, 2023). Thus, this shows a significant benefit of the Food Marketplace as a potential reducer of anxiety and depression amongst food insecure individuals. Another question that showed a significant change was Question 18, going from a 3.8 to a 2.4, which shows a change from never to often. This indicated people post-intervention spent more time with their families and friends, to

avoid thinking about a lack of food, increasing a positive emotion-focused coping strategy. This constructive non-explosive strategy has been shown to help regulate emotional responses to a problem. Pair 1 (Relying on less preferred and less expensive foods), Pair 13 (Eaten more starchy foods), and Pair 20 (I am hopeful and believe things will get better) were reported as “always” for both the pre and post survey and were the only three with that ranking. The rankings of Pair 1 and 13 are in agreement with previous studies, showing the importance of positive problem-focused coping strategies. Pair 20 shows hope and perseverance in the face of hardship. Pair 4 (Sent household members to eat elsewhere) and Pair 7 (Reduced the number of meals eaten in a day) showed no change.

The qualitative data was collected from the interview transcripts which were transcribed from spanish to english. A few themes that emerged were the difficulties faced by immigrants with no documents, social and mutual support, nutrition security, and the use of problem-focused coping strategies.

Immigrants who lack documents, must not only navigate a lack of food security, but are likely to live under constant fear of deportation. This highlights the need for inclusive, accessible and safe food assistance programs. The food marketplace was praised for its by-appointment visits, and the short waiting times and for being a safe, indoor facility which provides the security and assurance that they will get sufficient and quality food.

Helping others, whether it be household, family or community members, appeared to be an important part of the lives of participants. The role of values, faith and “giving back” were key themes. This goes in par with Question 18 and its impact on the coping strategies used by participants. This suggests that strengthening community connections and support, along with the ability to help others, created an emotional relief to those under economic strain.

Moreover, the need for nutrition equity was another huge theme. The idea of eating healthy seemed to be an idea that was out of reach for many participants, with many stating that with limited food options they simply had to eat what was available. In essence, eating something was held at a higher regard than eating “healthy”. But the lack of “appropriate” foods may not be a lack of “healthy” foods, but a lack of perceived “healthy” food options for participants. One participant in particular stated that she did not want apples because they were not healthy and good for her pre-diabetes since the apple sugars become starch in your stomach anyway. Nutrition education and help navigating the marketplace may therefore help “increase” the amount of “healthy” food options at the HPC.

To increase or stretch the amount of food acquired, participants often resorted to problem-focused coping strategies. The interviewees indicated relying on multiple food distribution sources and using the money saved from items provided by the marketplace on more specialty items from the store. Participants would also resort to using coupons, finding deals, buying food in bulk and stretching food. Most commonly, water was added to beans to make soup or blended to make a sort of bean sauce. Additionally, starchy foods like potatoes were added to other foods to allow household members to feel fuller sooner and satisfied.

Interviews revealed information that might help explain why a lot of the quantitative data was not significantly affected. With the recent Presidential election, a rise in the cost of living, new disabilities, and some participants loss of jobs (supporting income) and homes, one can deduct that the increasing hardships over the past months influenced the qualitative data. In essence, if the quantitative data shows that they experienced the same level of food security and showed little to no changes in some coping strategies even with the exacerbating life circumstances, one can hypothesize that without the marketplace, their coping strategies and level of food security would have suffered all the more.

II. Strengths and Limitations

Strengths of this study included the researchers' English to Spanish and Spanish to English translations of documents and interviews. Interviews in Spanish might have helped increase a sense of familiarity, the use of storytelling and truthful tellings of coping strategies and familial relationships. This also allowed the researcher to accurately convey a participant's message and not translate word for word. Another strength was the integration of all new participants into the study to more accurately gauge the impact of the food marketplace on the participants' use of coping strategies.

This quasi-experimental research design, had no control group due to ethical and practical considerations, poses the risk for lower internal validity due to a lack of comparison between a control and intervention group. Another limitation exists in the risk of inaccurate data due to participants not showing up and completing the survey, not necessarily because they did not like it, but due to a missed appointment and not knowing how to reschedule it. Further, there is a risk for bias since only english, spanish and vietnamese forms were available, excluding those speaking creole, french, and mandarin among other languages.

In this study, 10 out of an original 22 participants qualified and took the surveys from a total population of 161 individuals currently using the HPC Food Marketplace. The population size for new participants is

unknown but might show a lower margin of error. The confidence level for the analysis was set at 95%, and the margin of error was calculated to be approximately 28.5% for this study. This relatively large margin of error indicates that the results of the study could vary by up to 28.5% from the true population values. This limits the precision of the findings. As a result, while the study provides insight into the population, the high margin of error means that caution should be taken when generalizing the results to fit all participants. This shows that one of the biggest limitations of the study was the small sample size, as it cannot fully capture the diversity of the population. To achieve more accurate results, a larger sample size would be necessary to reduce the margin of error and improve the reliability of the findings. Furthermore, the primarily 51+, female and Hispanic or Latino participant demographic may not accurately represent all participants of the HPC's Food Marketplace.

Moreover, not having a budget for this study made it difficult for the researcher to incentivize more participation of individuals, increase retention and easily acquire compensation for individuals participation. Further, a lack of transportation also made it difficult for the researcher to actively and more frequently recruit participants to increase the participant-population size.

III. Recommendations for Future Research

To ensure a more representative sample of the entire HPC Food Marketplace population, the recruitment of a larger and diverse number of people through a longer recruitment period and the use of more language-diverse documents (English, Spanish, Vietnamese, Mandarin, French, French Creole, etc.) is recommended. Expanding the participant population size is also recommended to reduce the large margin of error and improve the reliability of findings. Moreover, the incorporation of a control group would strengthen the validity of the findings, enabling a direct comparison between participants exposed to the food marketplace and those who are not. It is recommended that the control group be promised access to the marketplace amid completion of the study. Further, longer group-interviews amongst participants are recommended as similar themes emerged in the individual interviews which might be expanded on in group interviews. Further exploration into the psychological effects of coping strategies is a topic worth exploring. Research that aims to specifically assess the benefits or downsides of the use of the most commonly used coping strategies is also recommended. Additionally, funding and reliable transportation are recommended to increase the scope of the study, alongside participant retention and ease of participation through the provision of incentives and improved follow-up procedures. This is necessary to ensure more complete and accurate data collection that will allow for more comprehensive and accurate evaluation of the effects of the food marketplace on coping strategies.

IV. Conclusion

This study provides insights into the impact the HPC Food Marketplace has on coping strategies among primarily Hispanic and female participants. The 16-week intervention led to significant changes in coping strategies, including a reduction in begging for food–a behavior linked to anxiety and depression–and an increase in familial interactions. These findings suggest that the food marketplace plays a critical role in the psychological well-being of participants. However, this study's scope was not able to show a change in the level of food security. Qualitative data revealed the complex challenges faced by individuals who use the Food Marketplace. These challenges included the fear of deportation, economic hardship, limited access to nutritious foods, limited nutrition education, and the need to provide for others with dignity. Despite these challenges, the participants appreciated the Food Marketplace for its accessibility, appointment-based system, and the sense of safety it provided.

While the study showed some positive outcomes, the political climate, economic hardships faced by participants, alongside the small sample size may have influenced the results. Although the study showed how the HPC alleviated some immediate impacts of food insecurity, further research with a larger and more diverse population is needed to understand the long-term effects of the HPC Food Marketplace. Further studies should explore how the integration of nutrition education programs, enhanced community support, and economic and immigration assistance can help address the socio-economic disparities faced by individuals.

Addressing low food security requires a comprehensive approach that explores the impact of food-based aid that is safe, dignified and autonomous. In addition, it is essential to consider the impact of nutrition education, enhanced community support and immigration status in strengthening the effectiveness of interventions to improve both food security and mental health outcomes for marginalized populations.

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Appendix I: ENGLISH FORMS

Appendix A: Informed Consent Form

Informed Consent to Participate in Research

I understand that I am being invited to participate in a research study. The Honors Scholars Project I (HON4098) is sponsoring this study at Point Loma Nazarene University. The purpose of this research is to understand how coping behaviors are affected when participating in a marketplace compared to a food distribution.

Procedures I understand that the proposed length of my participation in this study consists of a 10-15 minute interview. During this time I will be interviewed by the primary researcher who will ask me a series of questions pertaining to my experience around food and how the Church of the Nazarene at Mid-City food program (either the food market or food distribution) I have participated in has impacted my behavior and experience. The interview will be audio recorded . Recordings will be stored on a password protected computer and will be kept under a password protected file only accessible to the primary researcher and research committee. The recordings will be transcribed and translated as needed. Once transcribed, the recordings will be immediately deleted and the transcribed interview will be kept in a password protected computer under a password protected file and kept until deemed appropriate by the researcher. Deltion will occur around May 1, 2025.

Risks There are no more than minimal risks (what one would encounter in daily life) associated with this study. There are very slight risks of psychological distress and potential feelings of anxiety or worry when sharing your experience. Contact the San Diego Access and Crisis Line (1-888-724-7240) for free, confidential counseling and community resources to support your mental health. This resource is available 24 hours a day, 7 days a week and in multiple languages.

Benefits Benefits of participation in this study are eligibility and continuation of participation in the food marketplace, if so chosen, beyond the span of the research (After May 2025). Moreover, at the end of the second study, the food marketplace will give free grocery bags and groceries for participants. Participation in this study has the potential to increase awareness of self (introspection), increase food availability for the span of the study and optional availability beyond the study. Moreover, participating in this research can help design an improved system of food aid for individuals in Mid-City and has the potential to increase funding at this location.

Voluntary Participation I understand that my participation is voluntary and that I may refuse or withdraw from the study at any time without penalty.

Confidentiality I understand that the data collected for this study and/or any identifying records will remain confidential and kept in a password-protected computer file in the researcher's

office. I understand that all recorded data will be collected and coded with a number or fake name, that my name will not be used. I further understand that the results of this research project may be made public and information quoted in professional journals and meetings, but information from this study will only be reported as a group, and not individually.

Debriefing I understand that I have the right to have all questions about the study answered in sufficient detail for me to clearly understand the level of my participation as well as the significance of the research. I understand that at the completion of this study, I will have an opportunity to ask and have answered all questions pertaining to my involvement in this study by contacting Valentina Montes at vmontes0021@pointloma.edu after the study is complete around May 1, 2025.

Receipt of informed consent: I acknowledge having received a copy of the consent form. I acknowledge that I may contact the investigator involved in the study, Valentina Montes, or supervising professor Dr. Robert Gailey, in order to confidentially discuss any questions about participation in the study. Also, should I have any concerns about the nature of this study I can also contact the Chair of PLNU's IRB (IRB@pointloma.edu).

Name: _____

Signature: _____ Date: _____
(I am 18 years old or older.)

Contact Information

Investigator(s):
Valentina Montes, vmontes0021@pointloma.edu

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Appendix B: The Hunger Vital Sign

The Hunger Vital Sign™

For each of the following statements, please tell me which one is "often true," "sometimes true"

or

"never true" for the past 12 months, that is since last *October*.

1. We (I) worried whether our food would run out before we (I) got money to buy more

   [ ] Often True

   [ ] Sometimes True

   [ ] Never True

   [ ] DK or Refused

2. The food that we (I) bought just didn't last and we (I) didn't have money to get more

   [ ] Often True

   [ ] Sometimes True

   [ ] Never True

   [ ] DK or Refused

Appendix C: PreliminaryFood Marketplace Participants Survey

_____
ID #

FOOD STRATEGIES SURVEY

The purpose of this research is to understand how coping behaviors are affected when participating in a food marketplace.

SECTION 1: Food Strategies

On a scale of 1-4, answer the following to the best of your ability.

(1) Always…… almost every day
(2) Often…… 3-6 times per week
(3) Rarely……. once or twice per week
(4) Never…… zero times per week

In the past 30 days, I have…

	always			never
	1	2	3	4
1. Relied on less preferred and less expensive foods.	☐	☐	☐	☐
2. Borrowed food, or relied on help from a friend or relative.	☐	☐	☐	☐
3. Purchased food on credit.	☐	☐	☐	☐
4. Sent household members to eat elsewhere.	☐	☐	☐	☐
5. Begged for food.	☐	☐	☐	☐
6. Limited portion size at mealtimes.	☐	☐	☐	☐
7. Reduced the number of meals eaten in a day.	☐	☐	☐	☐
8. Skipped entire days without eating.	☐	☐	☐	☐
9. Restricted consumption by adults in order for small children to eat.	☐	☐	☐	☐

10. Fed household members who work first.	☐	☐	☐	☐
11. Rationed money to buy prepared food (frozen meals,fast food, etc.).	☐	☐	☐	☐
12. Bought things in bulk when there is money for food.	☐	☐	☐	☐
13. Eat more starchy foods (rice, beans, corn, pasta) to get full on that.	☐	☐	☐	☐
14. Added water to my soup (stews, beans) to feed more people.	☐	☐	☐	☐
15. Avoided others out of shame from having a lack of food.	☐	☐	☐	☐
16. Smoked or drunk alcohol to avoid thinking about food.	☐	☐	☐	☐
17. Slept to avoid thinking of food.	☐	☐	☐	☐
18. Spent time with my friends and family to cope with a lack of food.	☐	☐	☐	☐
19. Worried about where my next meal is coming from.	☐	☐	☐	☐
20. I am hopeful and believe things will get better.	☐	☐	☐	☐

SECTION 2: All About You

This section can help us get more information about your background. This should take around 3 minutes to complete.

Please choose the best answer.

What ethnicity do you identify yourself with the most? (Please choose one)

- ☐ White
- ☐ Latinx/Hispanic
- ☐ Black/African American
- ☐ Native American/ American Indian
- ☐ Asian/Pacific Islander
- ☐ Mixed Race
- ☐ Decline to Answer
- ☐ Other

What is your age?

- ☐ Under 18
- ☐ 18-22
- ☐ 23-28
- ☐ 29-34
- ☐ 35-40
- ☐ 41-45
- ☐ 46-50
- ☐ 51+

What is your birth sex? Select the best answer.

- ☐ Male
- ☐ Female
- ☐ Intersex
- ☐ Prefer not to specify

Are you an immigrant or refugee in the United States?

- ☐ yes
- ☐ no

If so, for how long?

_____

- ☐ Decline to answer

Do you have access to programs like SNAP or WIC?

- yes
  - ☐ I have participated for over 3 months
  - ☐ I have participated less than 3 months
- no
  - ☐ I do not want to
  - ☐ I do not have the necessary documents (immigration papers, proof of residence, etc.)
  - ☐ I was not approved

- ☐ I have never heard of them

Check the box if you would like to receive more information on SNAP and WIC

- ☐ I would like more information

Do you have a pre-existing mental health diagnosis? (ie. anxiety, depression, bipolar)

- ☐ yes
- ☐ no

How many people live in your home? _____

What has your average monthly income been the last three months? (ie. less than $2,000 or $1,860)
Be as specific or vague as you would like.

_____

SECTION 3: Food Aid Opportunity

Congratulations! You have been approved to use the Food Marketplace at Mid-City Church of the Nazarene every other week. Make sure to sign in!

- Thursdays 2:00 pm - 6:00 pm

In three months, around January 18, 2025, you will be asked to complete this same survey again. After you take the survey, you will be able to continue to use the Food Marketplace or continue to use the Food Distribution.

SECTION 4: Research Interview Opportunity

To deepen our understanding of the relationship between food availability and strategies used to cope with a lack of food, the researchers are offering the opportunity to participate in a sit down interview at the Church of the Nazarene at Mid-City clinic This should take around 10 minutes. This interview is completely voluntary. Compensation includes a gift basket with groceries.

Are you interested in participating in our interview?

- ☐ yes
- ☐ No

If yes,
Please provide the best way to contact you (Email or Phone)

_____

Thank you for participating in this survey!
If you have any questions or concerns, contact us via email at vmontes0021@pointloma.edu

Appendix D: Secondary Food Marketplace Participants Survey

_____
ID #

FOOD STRATEGIES SURVEY

The purpose of this research is to understand how coping behaviors are affected when participating in a food marketplace.

SECTION 1: Food Strategies

On a scale of 1-4, answer the following to the best of your ability.

(1) Always…… almost every day
(2) Often…… 3-6 times per week
(3) Rarely……. once or twice per week
(4) Never…… zero times per week

In the past 30 days, I have…

	always			never
	1	2	3	4
21. Relied on less preferred and less expensive foods.	☐	☐	☐	☐
22. Borrowed food, or relied on help from a friend or relative.	☐	☐	☐	☐
23. Purchased food on credit.	☐	☐	☐	☐
24. Sent household members to eat elsewhere.	☐	☐	☐	☐
25. Begged for food.	☐	☐	☐	☐
26. Limited portion size at mealtimes.	☐	☐	☐	☐
27. Reduced the number of meals eaten in a day.	☐	☐	☐	☐
28. Skipped entire days without eating.	☐	☐	☐	☐
29. Restricted consumption by adults in order for small children to eat.	☐	☐	☐	☐

30. Fed household members who work first. ☐ ☐ ☐ ☐

31. Rationed money to buy prepared food (frozen meals,fast food, etc.). ☐ ☐ ☐ ☐

32. Bought things in bulk when there is money for food. ☐ ☐ ☐ ☐

33. Eat more starchy foods (rice, beans, corn, pasta) to get full on that. ☐ ☐ ☐ ☐

34. Added water to my soup (stews, beans) to feed more people. ☐ ☐ ☐ ☐

35. Avoided others out of shame from having a lack of food. ☐ ☐ ☐ ☐

36. Smoked or drunk alcohol to avoid thinking about food. ☐ ☐ ☐ ☐

37. Slept to avoid thinking of food. ☐ ☐ ☐ ☐

38. Spent time with my friends and family to cope with a lack of food. ☐ ☐ ☐ ☐

39. Worried about where my next meal is coming from. ☐ ☐ ☐ ☐

40. I am hopeful and believe things will get better. ☐ ☐ ☐ ☐

How many people live in your home? _____

What has your average monthly income been the last three months? (ie. less than $2,000 or $1,860)
Be as specific or vague as you would like. _____

SECTION 2: Research Interview Opportunity

To deepen our understanding of the relationship between food availability and strategies used to cope with a lack of food, the researchers are offering the opportunity to participate in a sit down interview at the Church of the Nazarene at Mid-City clinic This should take around 10 minutes. This interview is completely voluntary. Compensation includes a gift basket with groceries.

Are you interested in participating in our interview?

☐ yes
☐ No

If yes,
Please provide the best way to contact you (Email or Phone) _____

Thank you for participating in this survey!
If you have any questions or concerns, contact us via email at vmontes0021@pointloma.edu

Appendix E: Interview Outline

Interview Outline

- Review Name of participant, refer to ID# for record keeping
- Review participants assignment (Food Distribution or Marketplace)

	ID #:
Question	**Follow-up questions**
Greetings: Hello, [name] I am [Interviewers Name], how has your day been going today?	
Introduction: • I am going to be asking you a couple questions about how the [food marketplace or food distribution] has impacted you. • Is it ok if I record this conversation?	
Could you tell me how many people you are currently living with?	Are these family members? Any children at home?
What was your experience with the [food distribution/food marketplace] like?	
Could you tell me about your family's food situation in the past year?	How did you feel about this? How do you think [your child/household members] feel about this?
What do you do to help your family stretch your food budget to last throughout the month?	Is there anything you do specifically to stretch a meal How do you feel about this? How do you think [your child] feels about this? How do you know?
Besides Mid-City Church of the Nazarene resources, what other resources does your family use to get food for your family?	How do you feel about this? How do you think [your child] feels about this? How do you know?
When your family didn't have enough money for food, how did you feel?	What did you do in that situation? How did this experience change your food shopping habits? How did this experience change your eating behaviors?
Children in Household: When your family didn't have enough money for food, how do you think [your child] felt?	Do you think he/she was aware of the situation? What makes you say that? When this occurred, did you notice any differences in his/her behavior? How did [your child's] eating habits change?

People in families who have gone through similar situations have reported feeling like they have no control or choice over the situation when there wasn't enough money for food. Did you ever feel this way?	How did you deal with the situation when you felt you had no control or choice over the situation?
Other people in similar situations have reported feeling embarrassment or stigmatized when there wasn't enough money for food. Did you ever feel this way?	How did you deal with feeling embarrassed?
Another common experience for people in similar situations is isolation or loneliness when there isn't enough money for food. Did you ever feel this way?	How did you deal with feeling lonely or isolated?
Sometimes, people report feeling sad or depressed when there isn't enough money for food. Did you ever feel this way?	How did you deal with feeling sad or depressed?
Could you walk me through what your family typically eats in a day?	Does this change with food assistance like that from the HPC?
Are there any other emotions that you would like to share with me about your food situation?	How did you deal with this when you felt this way?
Closing Remarks: Is there anything more you would like to add?	I'll be analyzing the information you and others gave me. I'll be happy to send you a copy to review at that time, if you are interested. Thank you for your time!

Appendix G: Translated English Transcript

Interview Transcript

200.00

- How many people live in your house right now?

- Well, there's my sister and my nephews and a man we adopted and his children, and we help him, poor thing. He's already grown up and we give him food. But yes.

- And you are the only one who comes here to (the market)?

- Yes, because my sister is very quarrelsome (laughs). Small but feisty.

- Yeah

- Say now I'm going to give you a good old prank (laughs)

- I brought her once and she was almost (inaudible) shut up you crazy old lady she told me. She comes in quarrelsome, she's like bipolar and then it gets out of hand.

- Ah ok ok, I understand now.

- So how has your experience been? Because you have come to distribution but also here (market).

- Yeah

- And how do you see them both?

- No, well, it's not a long wait. Because the line moves quickly. And you can see that it turns here.

- So you prefer one or the other or are they both equal?

- Well yes (they are equal) because it helps a little bit. But well yes here. (distribution) sometimes for the boss. That she has. That's why I'm aware and I go here and there. Because everything is expensive! And everything is going to go up a little bit.

- And that's for six people.

- Yeah

- And so you rely on what they give here?