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CULTURAL SENSITIVITY IN COOPERATIVE EXTENSION NUTRITION EDUCATION PROGRAMMING IN KENTUCKY

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CULTURAL SENSITIVITY IN COOPERATIVE EXTENSION NUTRITION EDUCATION PROGRAMMING IN KENTUCKY

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in Nutrition and Food Systems in the
College of Agriculture, Food and Environment at the University of Kentucky

By
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ABSTRACT OF THESIS

CULTURAL SENSITIVITY IN COOPERATIVE EXTENSION NUTRITION EDUCATION PROGRAMMING IN KENTUCKY

The purpose of this mixed methods study was to learn how cultural sensitivity was integrated and perceived in community nutrition education of an existing program offered by the University of Kentucky Cooperative Extension Service Nutrition Education Program. Data collection consisted of a quantitative cultural competence assessment survey tool used with nutrition education paraprofessionals (n=74), qualitative in-depth interviews of nutrition education paraprofessionals (n=8) and focus groups of Hispanic/Latino nutrition education program participants (n=39). Findings were focused in three areas; the cultural sensitivity needs of the program, the perception of nutrition education by participants and the training and professional development needs of nutrition education paraprofessionals. Among the cultural sensitivity needs of the program identified were curriculum resource needs, community referral needs, the importance of community partnerships and the importance of incorporation of children in nutrition education were identified. Among the training and professional development needs of nutrition education paraprofessionals, a need for Hispanic cultural education, language services education and chronic disease education were reported. The value of cross-cultural exchange and the need for chronic disease education in relation to dietary habits were identified by the participant focus group findings.

KEYWORDS: community nutrition education, Hispanic, Latino, cultural sensitivity, cultural competence

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CHAPTER ONE: INTRODUCTION

The Hispanic population in the United States (U.S.) has grown rapidly, increasing by 43% between 2000 and 2010 (United States Census Bureau, 2016). The 2015 U.S. Census determined the Hispanic population represented 17.6% of the U.S. population, making Hispanics/Latinos the largest minority in the country ("United States Census Bureau," 2016). Additionally, there was a 121.6% increase in the Hispanic population in the state of Kentucky from 2000-2010 (Price, 2011). The changing ethnic composition of the U.S. has led to changes in nutrition and health-related needs. Hispanic American adults were determined to have the highest prevalence of age adjusted obesity (47%) in a study brief from the Centers for Disease Control (Hales, Carroll, Fryar, & Ogden, 2017). Obesity serves as a precursor to the development of many diet-related chronic diseases, including diabetes and hypertension. Based on longitudinal data from the Hispanic Community Health Study/Study of Latinos, Schneiderman et al., found 16.9% of study participants had diabetes and 25.5% of participants had hypertension (2014). The risk of development of many chronic diseases can be reduced through lifestyle changes, such as consuming a healthy diet and being physically active ("NCCDPHP", 2018).

The Society for Nutrition Education and Behavior defines nutrition education to be "designed to facilitate voluntary adoption of food choices and other food and nutrition related behaviors conducive to health and well-being" ("Nutrition Education," 2018). In a report to Congress, the Food and Nutrition Service stated, "nutrition education can make a significant contribution to improved dietary practices" ("USDA", 2010).

Cultural education in this area begins with an awareness of one's own culture and the impact that has on their view of others and would also include information on the culture of participants an educator is working with. Culture includes the beliefs, values and concepts that contribute to behaviors and traditions (Setiloane, 2016). Setiloane attributed the success of cultural education to the training the educator receives regarding culturally sensitivity with diverse audiences (2016). Therefore, it is important to examine the cultural sensitivity training nutrition education paraprofessionals receive. Additionally, effectiveness of the paraprofessional's training also needs examination to ensure that it prepares them to provide education in a culturally sensitive manner to effectively addresses culturally specific dietary, physical activity and lifestyle choices. Castro, Barrera, & Martinez identify language as a "cognitive information processing and affective-motivational characteristics" (2004) when adapting a program to fit cultural needs. Therefore, it is of equal importance that 1) nutrition education materials be provided in the preferred language of program participants and 2) that consideration be given not only to the appropriateness of the translation and dialect, but also to the degree to which cultural considerations and adaptations are evident in the educational materials.

There is currently a lack of information regarding how nutrition education paraprofessionals integrate cultural sensitivity into nutrition education programming, and a lack of information regarding the cultural sensitivity training provided relative to their job skills. Additionally, there is a lack of information regarding Nutrition Education Program participants' perceptions of the cultural sensitivity of paraprofessional nutrition educators' program delivery and program materials. The purpose of this study is to learn

how cultural sensitivity is integrated and perceived in community nutrition education programming to build on evidence-based practices for future nutrition education programming.

Research Questions

1. How do nutrition education paraprofessionals integrate cultural sensitivity in their program delivery, including adaptation of curriculum and resources?
2. What are the perceptions related to training and professional development that nutrition education paraprofessionals perceive to be important related to their cultural sensitivity skills?
3. What are community nutrition education program participants' perceptions of cultural sensitivity in nutrition education programming, including the appropriateness of program materials and the sensitivity of nutrition education paraprofessionals?

Research Hypotheses

1. We expect nutrition education paraprofessionals to integrate cultural adaptations of food preparation methods, recipes, physical activity behaviors, lifestyle factors and health beliefs into their nutrition education programming with diverse clientele from materials available to them in their training. We also expect to identify resources previously approved by other agencies that individual program paraprofessionals find culturally appropriate for their program participants.
2. We expect nutrition education paraprofessionals to acknowledge the need for cultural sensitivity in program materials and delivery by nutrition education paraprofessionals.

3. We expect nutrition education program participants to identify specific cultural needs relative to food, nutrition and health.

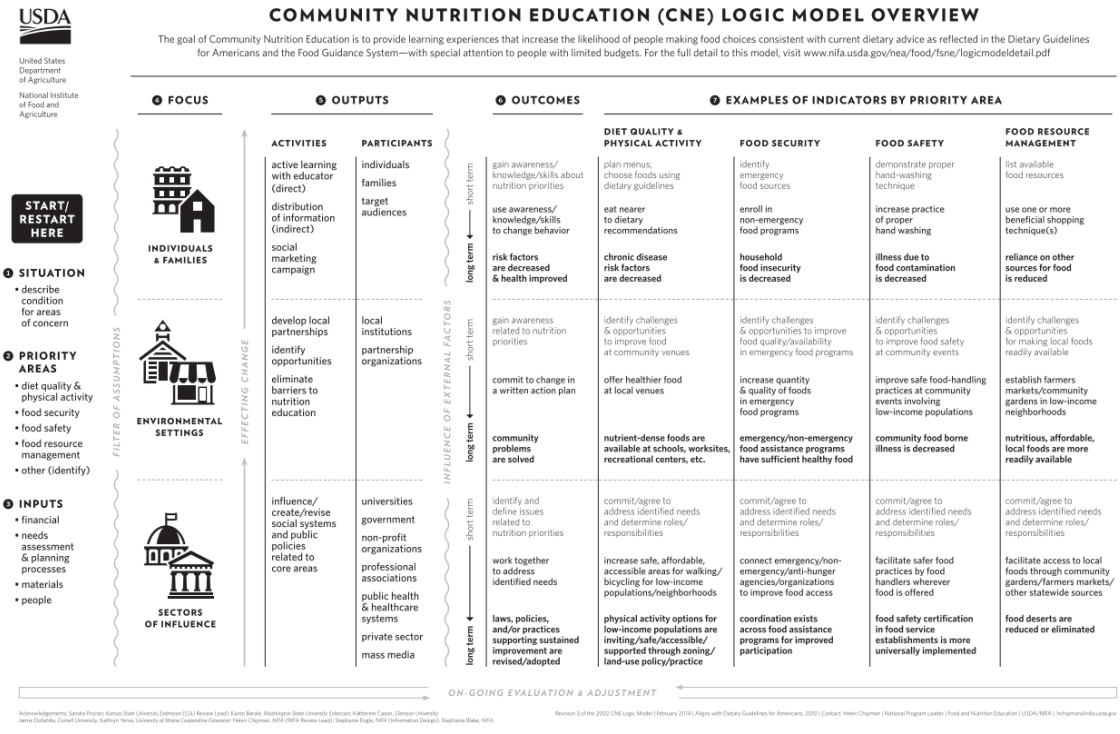
Justification

Providing culturally sensitive nutrition education and building skills of educators in cultural sensitivity contributes to an equitable learning environment for culturally diverse communities. Nutrition education programs, such as Supplemental Nutrition Assistance Program Education (SNAP-Ed) and Expanded Food and Nutrition Education Program (EFNEP), are federally funded programs that aim to demonstrate improvements in dietary quality and physical activity, food resource management, food safety and food security as a result of programming efforts ("Expanded Food and Nutrition Education Program", 2018). The first step to providing culturally sensitive nutrition education programming is to determine how current methods are meeting this need. An understanding of current methods will contribute to further development of cultural sensitivity training and culturally specific nutrition education materials and resources as needs are identified. Purposefully addressing culturally specific nutrition and health related issues can contribute to efforts to reduce the prevalence of obesity and diet-related diseases that lead to health disparities among the Hispanic/Latino population in the U.S.

CHAPTER TWO: REVIEW OF LITERATURE

Nutrition education is considered a strategy to improve the nutritional practices of individuals and improve health and well-being (“Nutrition Education”, 2018). Community nutrition education is focused on providing nutrition education at the individual and family level in an accessible, community setting. An overview of the logic model of community nutrition education is displayed in Figure 1 (“Community Nutrition Education”, 2015).

Figure 1. *Community Nutrition Education Logic Model*



One example of a state-level nutrition education intervention which serves as the subject of this thesis is a program provided through the University of Kentucky’s Cooperative Extension Service. The Nutrition Education Program is administered to limited resource audiences throughout the state, including ethnically diverse clientele. Bilingual nutrition

education paraprofessionals provide nutrition education in Spanish and they use a selection of program materials that are translated for the Hispanic/Latino communities in Kentucky. However, there is a lack of insight into the level of cultural sensitivity that is present in the materials and in program delivery. The degree of incorporation of the cultural traditions, habits, preferences and needs of program participants is not well studied.

There are many translated nutrition education materials, however they do not necessarily consider the cultural traditions, habits, preferences that are imperative for behavior change.

The cultural sensitivity of those delivering nutrition education is a key factor when considering how it will be received by participants (Setiloane, 2016). Nutrition education programs and curriculums have been adapted to best fit the needs of Hispanic communities, but there is a lack of insight into the cultural sensitivity training, information nutrition education paraprofessionals are provided, and how they incorporate culture into their program delivery with diverse communities.

Diet-Related Health Considerations of the Hispanic/Latino Population

The current study seeks to increase knowledge on how to improve nutrition education programming by examining current literature on nutrition education programming in addition to identifying needs of Hispanics/Latinos in Kentucky. A better understanding of health disparities specific to the Hispanic/Latinos population will allow for more effective educational strategies to address these issues.

As of 2017, it is estimated that Hispanic/Latinos account for 3.7% of Kentucky's population and 18.1% of the population of the U.S. (U.S. Census Bureau, 2017). In 2014, 28% of Hispanic/Latinos aged 18-64 living in Kentucky were living in poverty and 29% lacked health insurance (Demographic and Economic Profiles, 2014). Lack of access to healthcare and lack of monetary resources can have a negative impact on health outcomes. Nutrition and physical activity are considered to be lifestyle factors that have a close association with health outcomes and should also be examined in seeking to understand the health education needs of Hispanic/Latino individuals (Dietary Guidelines for Americans, 2016).

Dietary Behaviors

Qualitative work examining facilitators and barriers to type 2 diabetes self-management found that participants with more traditional acculturation levels were more likely meeting dietary, blood lipid guidelines and glycemic control (Plasencia et al., 2017). A study with Mexican-Americans found that participants with more traditional dietary behaviors consumed less saturated fat, carbohydrates and overall calories, as well as consuming more fiber and participating in more physical activity (Plasencia et al., 2017). However, a disconnect exists between traditional dietary practices and perceptions of traditional, cultural foods, which were considered by participants to be unhealthy choices, a consistent finding with other studies (Isasi et al., 2015).

Many studies involving Hispanic/Latinos do not differentiate between ethnic subgroups, a practice that can be problematic when identifying dietary risk factors for chronic disease (Siega-Riz et al., 2014). In a study comparing the food group and nutrient

intake of Hispanic subgroups living in the U.S. (Cuban, Dominican, Mexican, Puerto Rican, Central American and South American), diets of South Americans aligned the closest to a diet recommended by the American Heart Association, while diets of Cubans and Puerto Rican were the least aligned with this diet. Cubans were consuming the highest amounts of calories, proteins, fats and carbohydrates, with the highest source of protein coming from meat. Dominicans and Puerto Ricans were consuming the lowest amount of calories, proteins, fats and carbohydrates of the six subgroups compared. Interestingly, Cubans consumed the lowest amount of micronutrients (except for Vitamin C, the lowest intake was seen in Puerto Ricans) and Mexicans had the highest intake of Vitamin A, C, iron, calcium and folate among the subgroups (Siega-Riz et al., 2014). This study demonstrates evidence that dietary needs can vary widely amongst Hispanic/Latino subgroups, as over and under consumption of specific macronutrients and micronutrients can adversely affect health. Nutrition interventions should take into consideration the specific dietary patterns of the Hispanic/Latino ethnic subgroup in order to provide the most appropriate nutrition education.

Physical Activity

According to the 2015-2020 Dietary Guidelines for Americans, it is recommended that adults are physically active for at least 150 minutes per week (“Physical Activity Guidelines for Americans”, n.d.). Among Hispanics/Latinos, 37% are inactive compared to 22% of non-Hispanic Whites (“Health Disparities”, 2004). Using the EPIC Physical Activity Questionnaire (EPAQ2) (21) with Hispanics/Latinos, physical activity was comprised of 51% through occupation-related activity, 27% was household

activities and 22% was from leisure-time, recreational activity (Marquez & McAuley, 2006). In the same study, Hispanic/Latino men reported higher levels of MET (metabolic equivalent task), while females reported more household activity and there were no differences in level of recreation activity (Marquez & McAuley, 2006). The same study also compared physical activity and acculturation measured with the 12-item Short Acculturation Scale for Hispanics/Latinos assessed with a 5-point Likert type scale. Those with higher levels of acculturation reported less overall activity, including occupational activity (Marquez & McAuley, 2006). The authors attribute this finding to the possibility that acculturation is associated with less physically demanding job opportunities for Hispanics/Latinos living in the U.S. (Marquez & McAuley, 2006).

Similarly, a study examining physical activity among 30,525 Hispanics/Latinos found that standing or walking during the day also decreased by 17.2% accordingly in the most acculturated group compared to the least acculturated group (Berrigan et al., 2006). Notably, there was a 24.4% decrease in the reporting of leisure time physical activity in the most acculturated group compared to the least acculturated group (Berrigan et al., 2006). The authors attribute this finding to culture and socioeconomic status (Berrigan et al., 2006). A similar result was found in a study that examined the type of physical activity among three ethnic groups (He & Baker, 2005). Black and Hispanic/Latino individuals reported lower levels of leisure time physical activity and higher levels of work-related physical activity when compared to white individuals. Education level and health status were found to be the greatest determinants in the type of physical activity.,

Those with higher levels of education reported lower levels of occupation-related physical activity (He & Baker, 2005).

A study that examined physical activity through the implementation of walking groups with Mexican-Americans diagnosed with type 2 diabetes found that social support and self-efficacy to be motivating factors (Ingram, Ruiz, Mayorga & Rosales, 2009). These factors along with the importance of group identity/social cohesion contributed to the theoretical construct of collective efficacy, "the belief that the group can improve their lives through collective effort" (Ingram et al. 2009, p. 396). This concept of collective efficacy is another important consideration when designing and implementing physical activity and lifestyle interventions with Hispanic/Latino participants.

Obesity

The American Heart Association defines obesity as "the health condition of anyone significantly above his or her ideal healthy weight" which is measured by having a Body Mass Index (BMI) of 30 or higher ("Obesity Information", 2014). A study conducted by Flegal et al. (2012) examined data from the National Health and Nutrition Examination Survey (NHANES) and determined that obesity among the Hispanic population in the U.S. increased 7.6% from NHANES III 1988-1994 to NHANES 1999-2000. It was determined that 40% of Hispanic males and 44% of Hispanic/Latino females were obese (Flegal et al., 2012).

The CDC determined that Hispanics/Latinos experienced 23% more obesity than non-Hispanic Whites ("Hispanic Health", 2015). There are many factors contributing to this trend and researchers have examined the leading factors in order to coordinate

obesity prevention and intervention efforts. Isasi et al. (2015) utilized data from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) to analyze the relationship of obesity and acculturation among 16,266 Hispanic/Latino participants. Many Hispanic/Latino health studies largely consist of participants of Mexican heritage; however, this study also includes those who self-identified as Central American, Cuban, Dominica, Mexican, Puerto Rican and South American, providing a more accurate view of Hispanic/Latino health. Height and weight were measured, along with data collected regarding country of birthplace, socio-demographic information and degree of acculturation, as measured by Marin's Short Acculturation Scale for Hispanics. Prevalence of obesity was 42.4% among Hispanic/Latino females and 26.5% among Hispanic males. Additionally, 7.3% of female participants fell into the extreme obesity category (≥ 40 kg/m2) compared to 3.5% of males (Isasi et al., 2015). No significant association was found between acculturation and obesity among the subgroups. However, a past study conducted with Mexican-Americans, reported physical activity was significantly greater in those reporting speaking English as their main language when compared to those speaking Spanish as their main language (Crespo, Smit, Carter-Pokras, & Andersen, 2001). Study participants living in households earning less than $40,000/year were more likely to be obese than those earning more (Isasi et al., 2015). These findings suggest that low-income Hispanics/Latinos are at a higher risk for obesity and obesity related chronic diseases.

The HCHS/SOL found that participants who relocated to the U.S. before the age of 14 were more likely to be obese than those that had relocated at the age of 14 or later

(Isasi et al., 2015). In contrast to the findings of other studies associating higher acculturation with higher prevalence of overweight, this study did not find an association between acculturation and obesity (Isasi et al., 2015). It was noted in the study that those who ate mostly Hispanic/Latino foods were less likely to be extremely obese than those that ate both traditional, Hispanic/Latino foods and American foods (Isasi et al., 2015). The current city of residence appeared to have more effect on overweight and obesity rates than the country of origin. Puerto Ricans living in Chicago and the Bronx had similar rates of moderate obesity, but extreme obesity was more likely if living in the Bronx. Similarly, South American individuals living in the Bronx were more likely to be overweight or moderately obese when compared to South Americans living in San Diego. Mexican-Americans in the Bronx were more likely to be moderately obese, but less likely to be extremely obese than Mexican-Americans living in San Diego (Isasi et al., 2015). The data was collected in four major urban areas; Chicago, Miami, San Diego and the Bronx, therefore, the study did not compare Hispanics/Latinos residing in rural areas.

Chronic Disease

Lifestyles among different ethnicities can vary greatly in terms of dietary preferences and choices, engagement in physical activity, and risk for chronic disease ("Hispanic Health", 2015). Hispanics/Latinos face a higher risk of many chronic diseases that can lead to an increased risk for earlier death, including a 50% higher risk of dying from diabetes or liver disease ("Hispanic Health", 2015). Hispanics/Latinos experience 24% more poorly controlled high blood pressure, and about a 50% higher death rate from

diabetes than non-Hispanic whites, both of which can be related to diet and physical activity (“Hispanic Health”, 2015).

Using data from the longitudinal, cohort HCHS/SOL, Schneiderman et al. (2014) examined the rates of diabetes awareness and diabetes control, as well as the prevalence of diabetes among the Hispanic/Latino population. It was determined that 16.9% of adult Hispanics/Latinos in the study had type 2 diabetes. Participants in the study were tested for diabetes at the baseline visit and 34.3% received a new diagnosis of the disease, potentially signifying lack of access to medical care, resources and education (Schneiderman et al., 2014). Diabetes prevalence was higher among those with lower education and income (Schneiderman et al., 2014).

A similar study examined hypertension with the Hispanic/Latino community in the U.S. using data from the HCHS/SOL (Sorlie et al., 2014). Consistent with other findings, the highest proportion of among Hispanic/Latino ethnic subgroups was Mexican-Americans (Sorlie et al., 2014). In the study, 25.5% of the 16,415 participants were diagnosed with hypertension, and among these participants, 25.9% were unaware of having the condition (Sorlie et al., 2014). The study also examined NHANES data for a comparison of Hispanic/Latino and non-Hispanic white participants, who were not included in the HCHS/SOL. Hispanics/Latinos had lower prevalence rates of hypertension (25.5% vs. 26.1 %), however they also had lower rates of awareness (77.7% vs. 81.4%), treatment (69.6% vs. 76.6 %) and control (40.7% vs. 56.3%) (Sorlie, et al., 2014). Thus, lack of awareness and education relative to dietary methods for improving

hypertension control and reducing comorbidities of the disease may be addressed with community-based nutrition and health education.

Many nutrition education interventions are designed to improve dietary quality and increase physical activity behaviors to increase healthy lifestyle behaviors and reduce the risk for nutrition-related chronic diseases, such as diabetes and hypertension ("SNAP-Ed", 2018). For this reason, it is critical to examine the effectiveness of nutrition education regarding chronic disease prevention and treatment with the Hispanic/Latino community.

Cultural Sensitivity of Nutrition Professionals and Paraprofessionals

The Hispanic/Latino population grew by 43% in the U.S. between 2000 and 2010 ("United States Census Bureau," 2016). As a result of the increasing cultural diversity in the U.S., there is a need for nutrition education that takes into consideration dietary and health related cultural needs. There are three key areas for consideration when developing cultural sensitivity among nutrition educators (Setiloane, 2016). First, nutrition educators should have an increased awareness of their own cultural heritage and the effect that it has on their views and ideas. Second, they should acknowledge that cultural traditions are not neatly found among individuals in one culture, even if they have similar characteristics and preferences. Cultural nuances and degrees of traditions vary within ethnic groups and can change throughout the lifetime. Third, they should understand that power dynamics caused by sociopolitical and historical factors influence cultural beliefs and values, and in turn, these may impact health. Experts propose that advancements in

these areas can lead to the development and delivery of more culturally sensitive nutrition education (Setiloane, 2016; Resnicow, 1999; Campinha-Bacote, 1999).

There is limited data regarding cultural sensitivity specifically in regard to nutrition professionals, and is a topic of concern to many other health professions including paraprofessional models. Schim et al. (2006) conducted a cross-sectional, descriptive study to determine the relationship of specific variables with cultural competency among 107 hospice nurses using the Cultural Competence Assessment questionnaire measured by a 5-point Likert- like scale. This tool was developed from the Three-Dimensional Puzzle Model of Culturally Congruent Care, which consists of the components of cultural diversity, cultural awareness, cultural sensitivity and cultural competence. Over half of nurses responding to the survey reported working with Hispanic/Latino patients in the past year (Schim, 2006). The culturally sensitive behaviors most frequently reported by respondents were as follows: “acting to remove obstacles that were pointed out to them by clients, welcoming feedback from clients, and avoiding generalizations” (p. 305). The least frequently reported behaviors were as follows: “cultural assessments, using a variety of resources to learn about cultures, and having resource materials at hand” (p. 305). The lack of resources cited to learn about other cultures and to use in education and patient care is of particular note. Because of the association found in the study between diversity training and higher levels of cultural competence, it is suggested that diversity trainings may increase the incidence of cultural competence in practice (Schim et al., 2006).A higher correlation of cultural awareness and sensitivity was demonstrated amongst those with higher levels of education (Schim,

et al., 2006). It is unclear from this study if a lower degree of education is associated with lower cultural competency or if socio-economic factors could play a role in the cultural sensitivity and understanding of those with lower education levels as well. This is an important consideration for the peer-education model used by many community-based nutrition education programs and the cultural sensitivity among paraprofessionals.

There is a paucity of studies regarding the cultural sensitivity of nutrition education professionals and paraprofessionals. Among dietitians, Wittwer and Herbold (2009) assessed cultural competence implementation using the Cultural Competence Health Practitioner Assessment (CCHPA) online survey. The survey assessed both training and use of cultural competence in practice. Only 55% of respondents reporting that they had training in this area in the last three years, and 37% reported never receiving training on how to work with a medical interpreter. Only 27% of participants felt they knew cultural foods and dietary habits *very well*, which could impact their clients' abilities to follow dietary behavior changes that do not incorporate cultural foods or cultural beliefs. Nearly half of participants reported making linguistic changes to materials for patients. Because 49% of participants in the study reported speaking another language, it is plausible that they were more knowledgeable about cultural needs and behaviors of their clients (Wittwer and Herbold, 2009).

Wakou, Keim and Williams (2003) conducted a qualitative, multi-state study that sought to identify the necessary competencies for EFNEP paraprofessionals. EFNEP professionals completed three rounds of Delphi method surveys based upon their hiring and supervising experience of EFNEP paraprofessionals. Of the characteristics identified,

being bilingual was identified as *slightly important* to *important* and being indigenous to the population was found to be *moderately important*. Indigenousness refers to having a similar culture and social class as those being served. These indigenous paraprofessionals were considered to be the link between the agency, the professionals, and the community participants (Wakou et al., 2003, p.21). While input from professionals overseeing the program is valuable, the insight of bilingual EFNEP paraprofessionals about what they consider the most important qualities required to perform their jobs well provides essential information and a more comprehensive view of what competencies contribute to acceptance from the community participants.

A randomized control study was conducted with 357 Hispanic/Latino women to examine the long-term impact of interventions to reduce fat intake and increase fiber intake over one year (Elder et al., 2006). One group received mailed, non-tailored nutrition materials (control), another received mailed, tailored nutritional materials, and a third group received nutritional counseling from a *promotora,* a lay health advisor, as along with the printed, tailored materials. Using a 24-hour dietary recall as a measurement, those in the *promotora* group showed the most dietary improvements immediately following the intervention, however the improvements were not sustained when measured at the one-year follow-up.

Cultural Adaptations in Health Interventions for Adult Hispanics/Latinos

Due to the increase in the Hispanic/Latino population from 35.3 million in 2000 to 50.5 million in 2010 in the U.S. (“United States Census Bureau,” 2016), many nutrition education interventions and programs have been culturally adapted with the aim

of being delivered specifically to Hispanic/Latino participants. Kumpfer, Alvarado, Smith and Bellamy (2002) define cultural adaptations as the tailoring or sensitivity to a culture's traditions, religion, rituals or values. Cultural adaptations to programs can increase participation of the target audience (Kumpfer et al., 2002). Many of these culturally adapted programs incorporate cultural foods, traditions and educators of similar ethnicity, considered integral parts of the program.

One initiative of a National Cancer Institute-funded nutrition education intervention, Your Healthy Life/*Su Vida Saludable*, researchers sought to develop and test "culturally and linguistically appropriate, tailored, written nutrition education materials" (Strolla, Gans, & Risica, 2006, p.466). A mixed method study was designed to identify what to culturally tailor in the intervention materials. Qualitative focus groups and interviews were conducted, as well as quantitative telephone surveys with both EFNEP paraprofessionals and participants from the target audience. Spanish speaking participants indicated a preference for nutrition materials in Spanish, specifically suggesting that a nutrition label in Spanish would aid in better understanding of what is on the label. The focus group? themes identified were related to nutrition education on how "to eat healthier, eat to control diabetes, eat to control high blood pressure and eat to control cholesterol" (Strolla, Gans, & Risica, 2006, p. 472). The most frequently reported responses participants gave when asked about what would serve as a motivating factor to eat healthier were 1) to feel better, 2) to lose weight, 3) to live longer and 4) to prevent disease (Strolla, Gans, & Risica, 2006).

¡*Cocinar Para Su Salud*! (Cook for Your Life) was a nutrition education program designed for Hispanic/Latino breast cancer survivors utilizing Isabel Contento's (2015) six-step Nutrition Education DESIGN Procedure. Modifications to the design and evaluation of the program were made based on feedback from two focus groups (Aycinena et al., 2017). The program was then piloted in a randomized control trial with 70 female, Hispanic/Latino breast cancer survivors, which included a control group (n=30) that received only written nutrition recommendations. The components of the program included cooking classes, which were adapted to include familiar foods and the use of traditional herbs and spices with less traditional foods, to increase acceptance. Participants who completed the program demonstrated higher increases in fruits and vegetables consumed, less fat consumed and more weight lost compared to those in the control group, who only received written nutrition recommendations that did not include cultural adaptions (Aycinena et al., 2017). The formative process of the program, based on focus group feedback, as well as the incorporation of traditional foods, should be the first step in adapting nutrition education programs for Hispanics/Latinos.

Rising Interest in Health and Nutrition for Families

Data from 2012, showed that 22.5% of Hispanic/Latino youth in the U.S. were considered obese (Ogden et al., 2014). This alarming statistic is of particular interest when considering its implication for nutrition education provided to parents of obese children, who are typically responsible for food provision and preparation in the home. Parents demonstrate a large influence over a child's food environment, both through genetics, but especially in the home (Savage, Fisher & Birch, 2007). Evans et al. (2011)

assessed the home food environment in 34 low income, Spanish speaking parents of young children in a qualitative study in Texas, with the aim of establishing guiding nutrition intervention principles for future implementation with similar audiences. The Structural Model of Health Behavior was used to develop the focus groups questions, focusing on four factors of the home food environment: "availability of specific foods, physical characteristics of the food, social structures (rules surrounding eating), and media and cultural messages surrounding food" (Evans et al., 2011, p. 1033). An interesting finding of the focus groups was that many parents believed that their children came home hungry after school. They also perceived that they were not being fed enough at school and that the foods served there were not culturally appropriate (Evans et al., 2011). In regard to nutrition education, participants preferred community-based nutrition education and the opportunity to share their experiences and learn from the experiences of others (Evans, et al., 2011). This supports the appropriateness of using the peer education model in community-based nutrition education with Hispanics/Latinos.

In a qualitative study, Vollmer and Mobley (2013) examined low-income white (n=10), black (n=10) and Hispanic/Latino (n=10) mothers with the goal of differentiating feeding styles among the groups and understanding the perception of childhood obesity prevention messages among these ethnic groups. This was done through the use of the Caregiver Feeding Styles questionnaire, interviews and self-reported weight analysis of mothers and their children. Hispanic/Latino mothers were found to have the least understanding of the connection of obesity prevention messages to weight. Hispanic/Latino mothers were also found to have the least restrictive food intake

practices in regard to feeding their children, compared to white and black mothers (Vollmer & Mobley, 2013).

A nutrition education intervention in Colorado based on the Stages of Change model and a needs assessment completed using focus groups with Hispanic/Latino preschool mothers found that *Abuelas* which means grandmother were authority figures in the Hispanic/Latino community. *Abuelas* were trained as peer educators to deliver a five-part nutrition education intervention, "*La Cocina Saludable.*" Because *Abuelas* are treated with a high amount of respect in this community (Taylor et al., 2000), the researchers sought to examine if they would have an impact on intervention outcomes. The intervention was evaluated using EFNEP and WIC (Women, Infants and Children) evaluation tools, in addition to a behavior change tool developed for the intervention. The study showed that the *abuela* educators' healthy eating and Food Guide pyramid knowledge increased as a result of the facilitator training. Program participants also demonstrated an improvement in their nutrition knowledge, skills and behaviors. A unique aspect of the *La Cocina Saludable* program is the use of a respected individual from within the community as the educator. The rapport and influence of the nutrition educator in the community may be worth examining in relation to the success and retention of nutrition interventions.

Broyles, Brennan, Herzog, Kozo and Taras (2011) conducted an evaluation of the curriculum, Nutrition Education Aimed at Toddlers and Animal Trackers (NEAT A2). The curriculum adaptations were reviewed and revised by community partners familiar with the Latino audience. The recommended revisions included the increase of traditional

foods (legumes and specific fruits?), promotion of simple and affordable food preparation modifications and to reinforce the cultural practice of having meals as a family (Broyles et al., 2011).

Broyles et al. (2011) reported that the program was piloted with Hispanic, mainly Mexican-American parents of toddlers in San Diego County. The program was delivered by bilingual, bicultural females, contributed to the acceptance of the curriculum by the audience. Approximately 68% of the 974 participants completed seven of the ten-week classes. Participants reported high measures of enjoyment of the program and likelihood to recommend the program to others (Broyles, et al., 2011). It is hypothesized that enjoyment of the program may lead to retention of participants, which is an important factor in evaluating outcomes of nutrition interventions.

As of 2000, it was estimated that four million migrant farm workers were in the U.S. (Larson, 2000). Cason et al. (2006) conducted a qualitative study in Pennsylvania with twelve focus groups of 117 Hispanic/Latino migrant workers, 80% of whom were of Mexican nationality. The purpose of the study was to determine "health and well-being, including nutrition, food choices, food sufficiency practices, and nutrition education needs" (Cason, 2006, p. 146) of the population. The focus group topics reported as areas of interest relative to nutrition were cooking healthy for children, weight loss and information about diet for diabetes. A few participants shared that of their children preferred "unhealthy" American foods while the majority of adult participants preferred traditional foods stating (Cason, 2006). In regard to nutrition education, participants shared that they felt a nutrition education class should be in Spanish. (Lason et al., 2006).

This study demonstrated the importance of language in nutrition education, as well as preferences regarding inclusion of cultural and traditional foods.

As illustrated in the review of the literature, obesity and obesity related chronic diseases, such as diabetes and heart disease are major health concerns of the Hispanic/Latino population in the U.S. Because of the direct impact of dietary habits on the development of obesity and related chronic diseases, nutrition education is considered a critical tool to address these issues. It is evident from the literature that the cultural sensitivity of professionals delivering nutrition education can have a large impact on its comprehension and reception by Hispanic/Latino audiences. Additionally, the availability of culturally sensitive and relevant materials can be influential on the effect of nutrition education in participants' lives. In Kentucky, there is a growing population of Hispanics, with a 121.6% increase in the Hispanic/Latino population in the state of Kentucky from 2000-2010 (Price, 2011), and little information exists regarding the cultural sensitivity needs of existing nutrition education programs and those who deliver them.

CHAPTER THREE: METHODS

Research Design

This was a mixed methods study consisting of the collection of qualitative and quantitative data. The combination of the quantitative survey data and the qualitative interview and focus group data created a comprehensive mixed methods approach to ensure comprehensive data collection. Research questions were addressed by the use of three research tools, illustrated in Table 1. Data was collected from both employees and participants in the program so that both internal and external program perspectives were included. All research tools were reviewed and approved by the University of Kentucky's Internal Review Board (IRB), Appendix A.

Table 1. *Research Instruments*

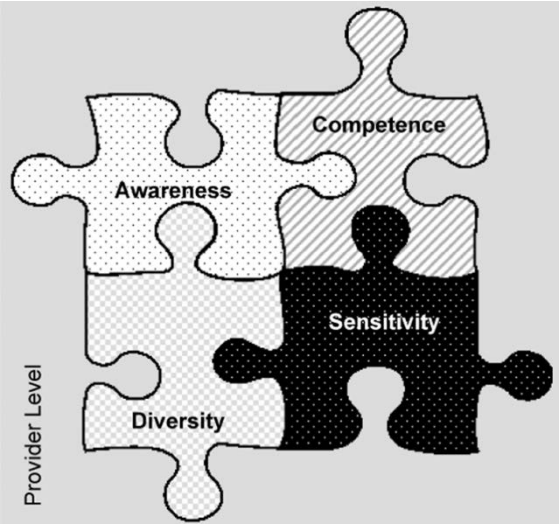
Research Question	**Research Tool**
How do nutrition education paraprofessionals integrate cultural sensitivity in their program delivery, including adaptation of curriculum and resources?	Nutrition Education Program Assistant Interviews
What are nutrition education program participants' perceptions of cultural sensitivity in nutrition education programming, including the appropriateness of program materials and the sensitivity of nutrition education program paraprofessionals?	Nutrition Education Program Participant Focus Groups
What training and professional development do nutrition education paraprofessionals need to receive in order to ensure cultural sensitivity in program delivery?	Cultural Competence Assessment & Nutrition Education Program Assistant Interviews

Quantitative Survey Data

Instruments

An online survey was developed that included a cultural competence assessment survey tool developed by Doorenbos, Schim, Benkert and Borse for use with healthcare providers and staff (Doorenbos, Schim, Benkert, & Borse, 2005). The Cultural Competence Assessment was validated with a sample of hospice staff, resulting in a test-retest reliability of 0.85, a good score. The assessment was also tested in healthcare settings with an internal reliability of 0.89 (Doorenbos et al., 2005). An adapted version of the Cultural Competence Assessment (Appendix A) was used as the survey instrument. The assessment was developed using the Cultural Competence Model illustrated in Figure 2, based on the principles of cultural diversity, cultural awareness, cultural sensitivity, and cultural competence (Doorenbos &Schim, 2004).

Figure 2. *Schim and Miller Cultural Competence Model*



Minor adaptations were made to survey questions related to healthcare to make them specific to nutrition education. These changes were sent to the survey author, Dr. Doorenbos, and she agreed that the changes, " would not affect the reliability or validity of the assessment." The instrument consisted of a total of 46 questions including 39

previously validated items. There were 25 questions relating to cultural sensitivity. The instrument also included 13 questions from the Marlow-Crowne Social Desirability Scale that provided information related to the social desirability of a participant and the effect of that on the validity of the data, as well as eight demographic questions. The instrument was reviewed by an expert reviewer and tested for face validity with two paraprofessional nutrition educators for final review before dissemination.

Survey Sample

The cultural competence assessment surveys were sent via email to 109 UK Cooperative Extension Service nutrition education paraprofessionals. Surveys were sent and completed via Qualtrics software (Qualtrics, 2009, Provo, UT, USA). Participation in the survey was optional and anonymous. Inclusion criteria was that participants currently be nutrition education paraprofessionals with UK Cooperative Extension Service.

Analysis

The Cultural Competence Assessment surveys (Appendix B) were scored according to the Cultural Competence Assessment Scale developed by Dr. Schim (Appendix C). The assessments had three subscales; cultural awareness and sensitivity, cultural competence behavior and social desirability. Responses were coded and scored to find the mean cultural awareness and sensitivity (total score range of 1-7, with the greater number meaning greater awareness and sensitivity) and cultural competence behavior scores (total score range of 1-7, with the greater number meaning greater self-reported cultural competence behaviors demonstrated). The scores for subcategories were then combined to determine the overall cultural competence score (total score range of 1-14, with the greater number meaning greater reported cultural competence). Responses to the social

desirability questions were totaled to find the overall social desirability score (total score range of 0-13, with a greater number representing a greater need for approval). The scored surveys and demographic data were analyzed in Statistical Package for the Social Sciences (SPSS). The cultural competence scores of participants who had participated in prior diversity training and those who had not were compared by performing a t test analysis in SPSS.

Qualitative Data

Braun and Clarke's "Using Thematic Analysis in Psychology" (2006) was used as a guide to approaching analysis of qualitative data from focus groups and in-depth interviews. In-depth interviews were conducted with nutrition education paraprofessionals who reported working with Hispanic/Latino clients and focus groups were conducted with nutrition education program participants throughout the state of Kentucky.

In-depth Interview Instrument

Interview questions were written by the author, who possessed an understanding of the program and were reviewed by an expert qualitative researcher. The interviews consisted of 18 questions. The interview questions were specifically related to the cultural adaptations that nutrition education paraprofessional make in programming and the culturally specific needs that are observed in programming with Hispanic/Latino participants. Questions also emphasized nutrition education paraprofessionals' level of cultural sensitivity training and their perception of its adequacy to prepare them to work with different cultural groups (Appendix D). Inclusion criteria was that individuals have

been employed as nutrition education paraprofessionals with the University of Kentucky's Cooperative Extension Service for at least one year and that they had conducted programming with Hispanic/Latino participants within the last year.

In-depth Interview Sample

Interview recruitment information was included in the cultural competence assessment survey emailed to nutrition education paraprofessionals. Inclusion criteria for participation included those nutrition education paraprofessionals employed for 12 months or longer and reporting working with Hispanic/Latino clientele at least once a month. Interviews were conducted with eight nutrition education paraprofessional, both with bilingual assistants who delivered programming in Spanish and those that delivered education with the assistance of a translator. Interviews took place in the location of their choosing such as a County Cooperative Extension Offices or a quiet space in a hotel meeting area. The interviews were conducted by an expert qualitative researcher rather than the study author to avoid any potential conflicts of interest and biased responses due to the author's involvement in their employment. Interviews ranged from 35 to 79 minutes in length and were audio recorded.

Analysis

Interviews were transcribed and checked for accuracy by a second coder. Detailed notes were taken throughout transcription of observed themes as they emerged in discussion, allowing for familiarization with the data. Interviews were conducted until data saturation was reached. Upon transcription, initial codes were generated, based upon the ideas and concepts noted in the data. Codes were then grouped into overarching

themes depicted throughout the data. Themes were then reviewed, defined and named (Braun & Clark, 2006). The transcripts were initially coded by the first qualitative coder using open coding and previously established themes from social theories and were tested by the second data analyst for consistency and consensus. Codes were then entered into QSR NVivo 12 software for themes to be synthesized.

Focus Group Instruments

Focus group recruitment was conducted through an email sent to nutrition education paraprofessionals who reported conducting programming with Hispanic/Latino participants. Those that responded that they would like to participate assisted in coordinating focus groups with their program participants. Participants for additional focus groups were recruited by contacting paraprofessional nutrition educators known to conduct programming with Hispanic/Latino clientele. The bilingual expert qualitative researcher facilitated the focus groups and was assisted by study personnel, who took detailed notes. The focus groups consisted of 25 questions, ranged from 46-94 minutes in length and were audio recorded.

Focus Group Sample

Focus groups were conducted with groups of Hispanic/Latino Nutrition Education Program participants to determine their perception of the level of cultural sensitivity present in the program. Focus groups were conducted until data saturation was reached. Focus groups were first translated and transcribed by bilingual study personnel and reviewed by a bilingual researcher for accuracy.

Focus groups were conducted in Spanish and questions were focused on participants' perception of the cultural sensitivity of the program (Appendix E and F). Focus group responses were audio recorded. The recordings were translated and transcribed by bilingual study personnel.

Focus Group Analysis

Focus groups were conducted until data saturation was reached. Focus groups were translated and reviewed by bilingual study personnel. Upon transcription, initial codes were generated, based upon the ideas and concepts noted in the data. Codes were then grouped into overarching themes depicted throughout the data. Themes were then reviewed, defined and named (Braun & Clark, 2006). The transcripts were initially coded by the first qualitative coder using open coding and previously established themes from social theories and were tested by the second data analyst for reliability. Codes were then entered into QSR NVivo 12 software and themes were synthesized.

CHAPTER FOUR: RESULTS

Results of Quantitative Surveys with Nutrition Education Paraprofessionals

The cultural competence assessment surveys were sent to 109 nutrition education paraprofessionals in Kentucky via email with 95 responses for an 87.1% response rate. Nineteen responses were not included due to incomplete responses. The majority (88.2%) of participants identified as White/Caucasian and over half (56.6%) reported a high school diploma or associate's degree to be their highest level of education. A large majority, 86.8%, of participants reported participating in some type of prior diversity training and 13.2% reported having not participated in prior diversity training.

Table 2. *Online Assessment Participant Demographics*

	n	%
Race		
Hispanic/Latino	3	3.9
White/Caucasian	67	88.2
Black/African American	3	3.9
American Indian/ Alaskan Native	1	1.3
Non-Hispanic White & American Indian/Alaskan Native	1	1.3
Other	1	1.3
Age range		
18-24	3	3.9
25-34	15	19.7
35-44	12	15.8
45-54	21	27.6
55-64	23	30.3
65-74	2	2.6
Education Level		
High School or GED	32	42.1
Associates Degree	11	14.5
Bachelor's degree	29	38.2
Graduate or Professional Degree	4	5.3
Prior Diversity Training		
Yes	66	86.8
No	10	13.2

Self-Reported Cultural Competency

The mean cultural competence score for all participants was 10.4 on a 14-point Likert scale and ranged from 6.1 to 13.3. The average mean of the subscale of cultural awareness/sensitivity was 5.8 on a seven-point Likert scale with a range of 4.6 to 6.8, with a higher score indicating greater awareness and sensitivity. The average mean score of the subscale of cultural competence behavior was 4.6 on a seven-point Likert scale with a range of 0.79-6.9, with a higher score indicating more cultural competence behaviors demonstrated. The mean score for social desirability was 9.9 with a range of 4

to 12 on a 13-point Likert scale, with a higher score indicating a greater need for approval. A significant difference was found for the total cultural competence scores, as well as the cultural competence behaviors and social desirability scores amongst paraprofessionals who had and had not participated in prior diversity training. Paraprofessionals who had participated in prior diversity training reported a mean total cultural competence score of 10.5, cultural competence behavior score of 4.7 and a social desirability score of 10.1. Paraprofessionals who had not participated in prior diversity training reported a mean total cultural competence score of 9.3, cultural competence behavior score of 3.6 and a social desirability score of 8.4.

Table 3. *Comparison of Cultural Competence Assessment Scores Between Participants With Prior Diversity Training and Those Without (n=76)*

	All Participants n= 76		**Participants with prior diversity training** n=66		**Participants with no prior diversity training** n=10		**p-value**
	M	**SD**	**M**	**SD**	**M**	**SD**	
a) Total Cultural Competence *(25 items)*	10.4	1.72	10.5	1.6	9.3	2.13	.03*
b) Cultural Awareness and Sensitivity *(9 items)*	5.8	0.5	5.8	0.5	5.6	0.49	0.27
c) Cultural Competence Behavior *(14 items)*	4.6	1.42	4.7	1.33	3.6	1.73	0.02*
d) Social Desirability *(13 items)*	9.9	2	10.1	1.83	8.4	2.5	0.01*

*Indicates p-value <0.05

a. total score range of 1-14 with the greater number meaning greater reported cultural competency

b. total score range of 1-7 with the greater number meaning greater awareness and sensitivity
c. total score range of 1-7 with greater number meaning greater self-reported cultural competence behaviors demonstrated
d. total score range of 0-13 with greater number meaning more need for approval

Results of In-depth Interviews with Nutrition Education Paraprofessionals

Interviews with eight nutrition education paraprofessionals throughout the state of Kentucky, were completed in the location of their choosing. Interviews ranged from 35 to 79 minutes. Participant demographics are presented in Table 4. Half of the participants were between 25 and 54, had at least a bachelor's degree and were employed in their current position between 1-5 years.

Table 4. *Demographics of Paraprofessionals Interviewed*

	n	%
Gender		
Female	6	75
Male	0	0
No response	2	25
Age range		
25-34	1	12.5
35-44	0	0
45-54	2	25
55-64	3	37.5
No response	2	25
Education Level		
High School or GED	2	25
Associates Degree	1	12.5
Bachelor's degree	3	37.5
No response	2	25
Length of Time in Position		
1-5 years	4	50
6-10 years	1	12.5
11-15 years	0	0
16-20 years	0	0
21-25 years	1	12.5
No Response	2	25

From the interviews with nutrition education paraprofessionals, 14 themes were identified. The themes included essential considerations, resources and components for successful programming with Hispanic/Latino participants, the effect of the program on participants and training needs related to working with this group.

Theme 1: There are logistical considerations for participation in the program for Hispanic/Latino participants.

Many logistical considerations for Hispanics/Latinos to participate in programming were mentioned throughout interviews with nutrition education

paraprofessionals. Most prominently mentioned were accommodating for irregular work schedules, the location where the program is delivered, access to transportation to the program location and access to childcare. One paraprofessional mentioned that Hispanic/Latino clientele do not want to get out in the winter weather. Several paraprofessionals mentioned concerns their Hispanic/Latino participants shared with them regarding their immigration status. The completion of program paperwork was seen as an issue with participants that may be concerned with legal considerations. This issue was explained by a paraprofessional when she shared, "one thing that I am concerned about, I know we are to serve anybody that comes through the door, but their situation, the legality, concerns me and I'm not sure how far can I take them within the program."

Theme 2: Communication is an important factor in programming with Hispanic/Latino participants.

When asked, "What is the first thing that comes to mind when thinking of working with Hispanic/Latino audiences?" Six nutrition education paraprofessionals interviewed stated that language, a language barrier or participants only speaking Spanish came to mind. Several expressed concern that they would not be understood by participants. One paraprofessional shared, "I'm always nervous that I'm not going to be able to relay what I'm speaking to them or they're not going to be able to understand me, basically. Having the barrier, the language barrier is always a big concern." There was mention of the use of interpretative services, while three nutrition education paraprofessionals reported speaking Spanish and not using interpretative services. Those that used interpretative services elaborated on the changes working with an interpreter led

to in program delivery. One paraprofessional shared that she needed to speak slower to allow the interpreter to translate. Many informal methods of translation were also described such as translation by children for their parents, translation by more proficient English speakers in the group, a phone translation program and the use of a Spanish dictionary. The difference in dialects of the Spanish language was also mentioned and the difficulty associated with accommodating all dialects spoken within a group present at a program.

Theme 3: Spanish resources are utilized in programing, but there is a need for more resources.

The translated program curriculum, “Healthy Choices for Every Body”, was widely reported as being used in programming with Hispanic/Latino participants. The most common resource used to supplement the curriculum were Spanish materials from other University Extension websites. The health department was another supplemental resource used and one paraprofessional shared that she utilized her knowledge from her previous employment experience to aid in this area. This quote exemplifies the overall need for Spanish language materials, “The University provide us with a lot of material and in Spanish, but it's not enough…”

Theme 4: Nutrition education curriculums should include resources for cultural recipes and simple nutrition messages.

There were several questions related to food and diet in the interview guide. These questions sought to elucidate what kind of nutrition and diet information the

paraprofessionals sought to be beneficial and what they would like to know more about in relation to food.

Subtheme 4.1: There is a need for cultural recipe resources.

The translated program curriculum recipes were the most commonly used resource in programming. One paraprofessional commented on the positive reception of the recipes by Hispanic/Latino participants. When prompted to share the most commonly used recipes with this ethnic group, “Hispanic” recipes from the program curriculum were mentioned, such as fajitas, enchiladas, quesadillas, burritos and salsa. However, many paraprofessionals described the need for more culturally appropriate recipes that were familiar to Hispanic/Latino participants and that the current recipes were not useful for all audiences. There was interest in adding other cultural recipes with one paraprofessional explaining, “that’s the way I feel that the curriculum should be set up that different, you know, have a section for American, Chinese, Latino…”

Subtheme 4.2: There is a need for simplified nutrition messaging in programming with Hispanic/Latino participants.

The need for simplified information and vocabulary to communicate nutrition messages to these participants was shared by many paraprofessionals. Several mentioned using simple language to explain curriculum concepts. One paraprofessional shared that she made and used picture cards to explain nutrition concepts and provide a connection to what participants have in the home. A bilingual paraprofessional shared that she felt she needed to explain things in a more detailed manner stating, “they don’t have the education, they, some of them just went to school to third or sixth grade and they are

limited in English and even in Spanish so I have to be very detailed and explain to them the lesson in a way that they understand. I give examples so they know what I'm talking about. And I know it takes me longer, you know my lessons are longer…"

Theme 5: It is important to consider both parents and children in programming with Hispanic/Latino participants.

Many emphasized the importance of including children in nutrition education programming with their parents. Because child care can be a barrier to participating in programming for Hispanic/Latino mothers and fathers, allowing children to attend with parents was reported to encourage participation. The benefit of including the children in the program was mentioned, as well as the children's proficiency in English aiding in interpretation needs with parents. A paraprofessional shared, "And one thing that I like about Hispanic/Latino families, at the beginning I didn't because, they come with their children, they don't leave them, they don't have the means to have, you know, a babysitter or somebody that takes care of them and I start giving the lesson to the kids too when they come. When they come, I sit them and I say this is important for you." Several shared that they were able to involve the children in the food preparation and cooking aspect of the program. One nutrition education paraprofessional shared that she included parenting education in her nutrition education programming with families as well.

Theme 6: Knowledge about the dietary habits of Hispanic/Latino participants should be a component in the paraprofessional training and program curriculum.

The importance of understanding Hispanic/Latino culture in terms of their dietary habits and common foods was shared by many nutrition education paraprofessionals.

Frying was considered by many to be a popular cooking method among with this ethnic group and a focus was placed on introducing healthier cooking methods, such as baking, grilling and boiling and consuming lean meats. It was expressed that Hispanics/Latinos were viewed as consuming fresh produce more than Americans, but that they lacked access to this type of food. Paraprofessionals also reported an awareness of the consumption of traditional Hispanic/Latino foods such as beans, hot peppers and stews. Nutrition education paraprofessionals expressed interest in learning more about traditional Hispanic/Latino foods. Conversely, several paraprofessionals shared that they learned something new from their Hispanic/Latino participants, such as how to cut a bell pepper, utilizing a certain spice or make a traditional dish such as a tamales.

Theme 7:Food costs are a concern for nutrition education program participants.

Three paraprofessionals reported that their program participants were facing challenges related to the cost of food. For example, when explaining concerns Hispanic/Latinos report, a paraprofessional shared, “Um, the cost of food, that’s across the board.” The use of food assistance programs was perceived to have increased with one paraprofessional noting that she recruited participants to the program at a food pantry. She shared, “The Spanish population is increasing at this food distribution (site).”

Theme 8: It is important to engage with Hispanic/Latino community partners to build relationships and meet participants’ needs.

School systems, including migrant education programs within the school, and churches were the most frequently mentioned community partners for reaching Hispanic/Latino participants. Building trust with the Hispanic/Latino community was

considered important to establishing a relationship, as well as conducting programming with this group. One paraprofessional shared that Hispanic/Latino individuals were "scared" to come to the local Extension Office before participating in the nutrition education program. Many paraprofessionals described their relationship with these participants as progressing from teacher to friend which aids in retaining and increasing participation of this community and especially relative to engaging in activities offered through Cooperative Extension Services. One paraprofessional explained that involvement in the nutrition education program led to involvement in other Cooperative Extension Service programs. She shared, "The first thing I tell them is, this is confidential, you don't have to worry, so this is just for you to learn and have a happy life. Then they start trusting and they feel, I see the difference in them and the kids, they feel a part of the community and I say, you are."

Theme 9: Nutrition education programming can empower Hispanic/Latino participants and their families.

New skills were learned by both adults and their children through involvement in Extension programming. Nutrition education programming was also viewed as an opportunity for participants to learn English, which was seen as an avenue for more opportunities for them and their families. One paraprofessional shared, "You know, this program is great. It's changing everybody's life. They think they come just to learn nutrition and maybe they qualify for the Christmas help, but they don't know how much they are going to learn and change with their kids and with their life, in their life."

Subtheme 9.1: Nutrition education paraprofessionals have many roles in relationships with Hispanic/Latino participants.

Several paraprofessionals reported their relationship with their Hispanic/Latino participants to be that of a teacher and student but progressing to friends as they got to know one another. One described her role as being a mentor, with another explaining that she acted as an intermediary for participants and assisted them with locating community resources.

Theme 10: Daily activities and manual labor are a form of physical activity for Hispanic/Latino participants.

Physical activity was seen as a component of the nutrition education program but was considered to be a topic with limited resources for paraprofessionals. Walking was the most commonly reported activity that paraprofessionals were aware of among their Hispanic/Latino participants. Occupations of these participants were reported by paraprofessionals to be manual labor on farms, factory work and housekeeping, all of which require considerable physical activity. Daily activities such as gardening were also mentioned by paraprofessionals as a form of activity their Hispanic/Latino participants took part in. Physical activity was considered to be a time for families to bond and for parents to set examples as healthy role models. One paraprofessional shared, “I just feel like the more you can do as a family, the healthier in general you’ll be.”

Theme 11: Specific health information and community resource referrals should be included in programming with the Hispanic/Latino audience.

Many paraprofessionals expressed that their Hispanic/Latino participants were interested in specific health topics. Overweight status of both adults and children was a concern paraprofessionals reported amongst their Hispanic/Latino participants, with participants expressing interest in learning how to lose weight. Among their reported concerns were diet-related diseases, including diabetes and hypertension. Several paraprofessionals detailed the need for diabetes educational materials because of the prevalence of the disease among Hispanic/Latinos, as well as the concern program participants expressed regarding the development and maintenance of diabetes. Paraprofessionals shared that sodium reduction was a focus in programming with Hispanic/Latino participants and was incorporated into food demonstrations and program recipes to address the concern of hypertension among their participants. A lack of access to healthcare services and a lack of health insurance was also reported to be an issue of concern among this community. One paraprofessional shared that her Hispanic/Latino participants most frequently reported needs were, “To have more services, more health services for them.”

Subtheme 11.1 There is a need for referrals to community resources for Hispanic/Latino participants.

A recurrent theme that was identified from the paraprofessional interviews was the need for referrals to other community resources that met the needs of their Hispanic/Latino program participants. Commonly mentioned were referrals for healthcare, diabetes education, housing services, utility/electric services, financial assistance, legal services and school systems. Additionally, a need was expressed for

these community services to be available in Spanish or the need for an interpreter with one paraprofessional noting, “so they don't get all the benefits and they don't have all the access to the clinics and the language is a barrier and there's nobody that understands them.” One described her role as being a mentor, with another explaining that she acted as an intermediary for participants and assisting them with locating community resources. “They call me every day, any time, can you call the teacher and tell them I'm not going to be able to pick up my child? I'm their, what is it, the in between...their intermediate.”

Theme 12: There is a need for food preparation education with the Hispanic/Latino audience.

Many paraprofessionals described a focus on food safety education with Hispanic/Latino participants. Many participants came from countries with different food safety and sanitation procedures than what is practiced in the U.S. Paraprofessionals demonstrated an emphasis on safe food preparation, proper storage and sanitation. Other skill sets that were a reported area of focus in programming included the teaching of knife skills and measuring skills.

Theme 13: There is a need for nutrition education training related to working with Hispanic/Latino participants.

Many paraprofessionals expressed the desire for training to better understand the Hispanic/Latino culture, as well as other unfamiliar cultures of their participants. Common among paraprofessionals interviewed was concern over offending participants a desire to educate themselves to avoid this situation. One paraprofessional shared, “I mean it’s just that worst fear that I would hate most to do would be to disrespect them. Just

simply because you don't understand their culture." There was a need expressed for training related to cultural and religious foods, for both Hispanic/Latino and other cultures. It was also considered important to understand the adjustment that Hispanic/Latinos encountered in moving to the U.S. An interest in learning the Spanish language was also common, in addition to learning simple, welcoming phrases to contribute to a friendly learning environment for Hispanic/Latino participants. One participant expressed a desire for a Hispanic/Latino individual to conduct the training, as they were perceived to be more knowledgeable of the culture. Paraprofessionals were interested in learning how to build relationships with Hispanic/Latino individuals, how to encourage participation in the nutrition education program and where to offer convenient programming geographically for these individuals.

Theme 14: Nutrition education paraprofessionals expressed a desire to conduct programming with Hispanic/Latino participants.

The desire to conduct programming with Hispanic/Latino participants was common among all paraprofessionals interviewed. One paraprofessional described a conference she attended that focused on reaching diverse audiences. She shared, "…it was like how can you get a more of the Spanish and the black community involved in this, because it's like, they're out there and they're being left out but what can we do? That's been my question…so you have to make it something where they feel a part of, as well as they're understanding what you're saying."

Results of Focus group with Nutrition Education Program Participants

Five focus groups were conducted with a total of 39 Hispanic/Latino Nutrition Education Program participants in Jefferson, Owen, Caroll, Gallatin and Clark Counties in Kentucky. Demographics from 39 focus group participants were collected and are summarized in Table 4. Focus groups ranged from 46 to 94 minutes and were conducted at County Extension Offices or a community partner programming site. From the focus groups conducted with Hispanic/Latino participants who had taken part in nutrition education programming, eight themes and nine subthemes were identified.

Table 5. *Demographics of Five Focus Group Participants*

	n	%
Gender		
Female	30	76.9
Male	9	23.1
Age range		
18-24	5	12.8
25-34	5	12.8
35-44	16	41
45-54	6	15.4
55-64	2	5.1
65-74	5	12.9
Years Living in U.S.		
Less than 1 year	1	2.6
1-5 years	5	12.8
6-10 years	1	2.6
11-15 years	12	30.8
16-20 years	16	41
21 years or longer	3	7.7
No response	1	2.6
Education Level		
Some Elementary School	4	10.3
Completed Elementary School	4	10.3
Less than High School	14	35.9
High School or GED	9	23.1
Some College	2	5.1
Bachelor's degree	6	15.4
Ethnicity		
Hispanic	4	10.3
Mexican	26	66.7
Otomi	2	5.1
Peruvian	3	7.7
Guatemalan	1	2.6
Colombian	1	2.6
Ecuadorian	1	2.6
Honduran	1	2.6

Theme 1: Hispanic/Latino participants prefer Spanish language programming.

Spanish was predominantly the language preference for programming, for both verbal instruction and written materials, reported in all five focus groups. An example one participant shared was that she felt she could "express myself completely" in Spanish as opposed to English. Three participants shared that they preferred the use of both English and Spanish in programming.

Theme 2: Nutrition education programming has led to healthier choices for participants.

There were several focus group questions related to the changes and implementation of concepts participants made as a result of the program in their own homes. These questions were designed to examine if the program had effectively led to healthy behavior changes for participants to inform future nutrition education intervention strategies. Many participants shared improvements in their dietary habits and how the program had resulted in heathier diets for themselves and their families. The following two subthemes were identified as specific ways in which participants reported nutrition education programming had led to healthier choices.

Subtheme 2.1 Dietary improvements were made as a result of nutrition education programming.

Several improvements in dietary choices were reported by the program participants. One participant shared, "I think what, for me, what I like is, um, learning how to eat better because sometimes you think to eat well is to eat rich and not healthy..." Table 6 provides a summary of the reported dietary improvements reported by study participants.

Table 6. *Common Dietary Improvements Reported by Focus Groups*

Dietary Improvements	
Drinking more water	Cooking with less fat and oil
Eating more vegetables	Cooking with less oil
Baking instead of frying	Consuming less soda
Consuming less sugar	Consuming less salt

Subtheme 2.2: Nutrition knowledge and skills were developed as a result of nutrition education programming.

Focus group participants shared many of the new skills they developed as a result of their participation in the nutrition education program. One participant shared how she and her son had learned to read nutrition facts labels as a result of the program; "I also brought my kids to a class, and from all of my kids, the oldest, he understands a lot more, and when we go grocery shopping, he reads the labels over all of the meats, how much fat it has." Table 7 shows a list of the skills participants reported learning.

Table 7. *Focus Group Participants' Reported Skill Development*

Skill Development	
Food safety improvements	Measuring skills
Food label reading	Portion sizes
Cooking skills	Calorie counting
Food budgeting	

Subtheme 2.3: Health improvements were seen as a result of nutrition education programming.

Focus group participants shared many positive health outcomes that were achieved as a result of their participation in the nutrition education program. Participants shared health improvements seen in their personal lives, such as weight loss. One participant shared, "we have been fighting prediabetes for four years, and we learned to read the labels to know what we're really eating." The goal of the Nutrition Education Program is stated as "to educate limited resource families with young children and SNAP

eligible individuals to plan nutritious meals on a limited budget, acquire safe food handling practices, improve food preparation skills and change behavior necessary to have a healthy lifestyle" (Nutrition Education Program, n.d.). One participant detailed an understanding of the relationship between dietary habits and the development of chronic diseases that she had developed as a result of the program; "…what I also like is, um, you start realizing the different diseases that you can cause if you don't have suitable eating habits."

Theme 3: Children are an essential component of nutrition education programming with Hispanic/Latino participants.

A strong theme emerged from the focus groups regarding the benefit of including children in nutrition education programming. Many participants shared difficulties related to childcare during the program and their preference for a program that allowed their children to attend also. In terms of what participants requested to learn more about, responses were often related to their children, including learning about children's nutritional needs, kid-friendly recipes and cooking for their children. Additionally, many participants noted the benefits of their children participating in the program and shared that their children had gained nutritional knowledge and skills from attending the program. Participants share that their children were reading food labels, assisting in grocery shopping and making healthier choices. Selected quotations from focus group participants associated with the inclusion of children in nutrition education program are displayed in Table 8.

Table 8. *Focus Group Participant Quotes Associated with Including Children in Programing*

They need [attention], and that's what has helped me out most in this, me and my kid being there together. Because other teachers, well, they had never told us no, but look where I ended up.
Nutrition is very important for everyone, I think that now, recently, kids are eating more vegetables and, um, more salads, my daughter, she likes them a lot. She always, she never missed a class,…
I also brought my kids to a class, and from all of my kids, the oldest, he understands a lot more, and when we go grocery shopping, he reads the labels over all of the meats, how much fat it has.
…it's important for the kids to be in the classes because they listen first hand in what they're learning.
Yes, because we are very close to our kids because, sometimes we are the ones that help with this program, but they don't and, well, once they come to see and listen then they will do their part.
And so our kids can participate too. When they don't go to school they can come here so they can explain it to them too, so they know and they can eat healthier.
Now when we buy stuff we always look at the calories, and now my children know because it's something very important.

Theme 4: Cooking demonstrations and food preparation are an essential educational component of nutrition education programming with Hispanic/Latino participants.

When questioned regarding their favorite aspect of the nutrition education program, many focus group participants reported acquiring knowledge of how to eat healthily. Additionally, many shared their enjoyment and interest in the cooking and food preparation aspect of the program. When discussing what participants were doing at home related to the concepts learned from the program, the preparation of program curriculum recipes was commonly shared. Regarding cooking in the program, one participant shared, "And we also need to *do* the things that they teach us in the classes because sometimes, well, sure they teach us but..." Participants also mentioned their desire to learn about American cultural foods and traditions in the program, a sentiment

that was also seen and expressed by paraprofessionals who conducted programming with Hispanic/Latino participants.

Theme 5: Hispanic/Latino participants have specific nutrition education needs.

There were focus group questions that asked Hispanic/Latino participants about their further interest in nutrition topics not necessarily covered in the current program. The two subthemes detail the interests that emerged in the categories of disease education and specific dietary topics.

Subtheme 5.1: There is a need for health and diet-related disease education with Hispanic/Latino participants.

Focus group participants expressed interest in learning more about many subjects related to health and disease prevention and management. One topic of interest was weight loss, with a participant stating, “We are all obese” while expressing the need to learn how to lose weight. Participants also demonstrated a strong interest in diabetes and hypertension education. Selected quotations regarding focus group participants’ specific nutritional interests are displayed in Table 9.

Table 9. *Focus Group Participants Reported Interests*

…information on the foods we should eat to control diabetes, that isn’t reversible, lower cholesterol, the interpretation, that is, the people that suffer with high blood pressure or low blood pressure, what foods can help balance.
Well, I would like to know about diabetes, cholesterol…
… I don’t have diabetes, but I would like to know more about the subject about the diet you have to do to prevent it, not exactly if you have it, but to prevent it. To know what types of food to eat.
… we have been fighting prediabetes for four years, and we learned to read the labels to know what we’re really eating. And although it goes up and down, we’re learning little by little. At least we haven’t crossed the line, and so they say that’s good.

there could be prevention of illnesses like diabetes, because … one can get diabetes because we eat too much, we eat just things that are full of fat and we don't eat vegetables…

Subtheme 5.2: Hispanic/Latino participants are interested in learning about specific dietary topics.

Participants were interested in learning more about a balanced diet, portion control, calorie management and healthy substitutions. There was also interest in learning more about specific nutrients, such as sugar, salt, fat and carbohydrates. One participant stated she was interested in learning "what can replace oil, sugar and salt (mhm, mm, yes) and fat, as well."

Theme 6: Dietary habits and factors related to adjustment to living in Kentucky should be considered in programming with Hispanic/Latino participants.

Several focus group questions were focused on the changes participants had made to their diet since moving to the United States and Kentucky. Participants shared both positive and negative changes that their families had made to their diets.

Subtheme 6.1: Hispanic/Latino participants have made dietary changes since living in Kentucky.

Many positive changes were reported by participants regarding their dietary habits since moving to Kentucky. It was common among focus groups for participants to report frying foods less and having increased the practice of baking foods. Focus group participants reported that they used olive oil in place of butter, that they were limiting sugar consumption and that white rice was replaced by brown rice. Participants also

reported that they learned how to utilize new kitchen equipment and noted that food preparation was accomplished more quickly.

Contrarily, participants also shared negative dietary changes they had noticed in their families since relocating to Kentucky. Participants reported consuming more fast food and that their children enjoyed fast food as well. When questioned about what food they had consumed when they first came to Kentucky, participants said, “Pizza, hamburgers. Fast food, basically.” Red meat was consumed more often and participants reported drinking more soda and less water.

Subtheme 6.2: Hispanic/Latino participants consume more meat in Kentucky.

Focus group participants noted the accessibility of meat in Kentucky compared to the scarcity of meat in their native county. Participants shared that they had increased their consumption of different types of meat, including red meat and beef, pork, chicken, seafood and venison. One participant noted that it was difficult to find “fresh “chicken in Kentucky, likely referring to purchasing chicken from a butcher rather than purchasing chicken after it had already been processed at a grocery store. Another shared that it was difficult to find certain parts of the meat, that would likely be commonly found at a butcher shop. One focus group participant explained, “In Mexico, it’s not the same, the red meat in Mexico is fresh. For example, if you eat chicken or something it’s from what you have there and what you kill it and you cook it.”

Subtheme 6.3: Hispanic/Latino participants have limited access to traditional foods.

Participants felt that they had less access to fresh food and expressed an interest in learning where to purchase fresh foods. It was difficult for many to locate native fruits

and vegetables, such as jicama, mamey, loquat and passionfruit. One participant mentioned being unable to access “fresh” milk, likely referencing milk that had not been processed and pasteurized, which is the milk commonly found in grocery stores.

Subtheme 6.4: Hispanic/Latino participants are interested in learning about American culture.

The challenge of adjusting to the culture and lifestyle of the U.S. was a common topic that emerged in the focus groups. Participants expressed their interest in learning about American culture and foods. One participant said, “But I want to eat what they eat on the holidays, so they can go to my house, but I don’t know what they eat during the holidays. If the program can help us introduce what they eat during the holidays, Thanksgiving, the Fourth of July.”

Theme 7: Physical activity should be incorporated into nutrition education programming.

Forms of physical activity mentioned by focus groups participants included, walking, biking, playing with their children as well as more organized activities such as Zumba, weight lifting and swimming. One participant shared that she had become more physically active as a result of using a step counter. Not all participants shared that they had made physical activity changes as a result of the program and the desire was expressed for physical activity to be incorporated into programming. A focus group participant shared, “We could use a bit of exercise in the classes.”

Theme 8: Nutrition education resources and materials should be useful in the home.

The use of nutrition education handouts and recipes in the home were commonly mentioned. Participants mentioned that their children became familiar with the recipes at

home as well and assisted in food preparation. A focus group participant shared, "sometimes my kids say to me, we're going to make that (recipe), and then they just go looking for it (on the fridge)." A few participants shared that they had not made any changes as a result of the program, indicating a need to ensure that materials are useful in all participant's home lives.

Theme 9: Nutrition education paraprofessionals should possess specific skill sets to work effectively with Hispanic/Latino participants.

Focus group participants shared both logistical and interpersonal qualities they deemed important for nutrition education paraprofessionals. Logistically, they preferred that the paraprofessional be bilingual and allow children to attend the program. Interpersonally, that they felt the paraprofessional should be friendly, patient, a dynamic speaker that provided engaging programming for participants to take part in. A focus group participant shared, "Yes, I like her, that is, how (paraprofessional's name) teaches the classes and she lets us help. She's let me cut the onions."

Discussion

Cultural Sensitivity in Programming

Cultural sensitivity in programming was assessed through the results of the cultural competence assessment surveys and the results of the in-depth interviews with nutrition education paraprofessionals. These results provide valuable information regarding the strengths of the program and areas for improvement which can be used when considering the next steps for increasing cultural diversity and sensitivity in nutrition education programming.

Self-Reported Cultural Competency

The Cultural Competence Assessments evaluated participants' self-reported cultural competence. The assessment focused on three areas; cultural sensitivity and awareness, culturally competent behaviors and social desirability. White/Caucasian was the most commonly reported race of participants (88.2%). The most commonly reported age range of participants (58.1%) was between the ages of 45-64 years old. Over half of participants, 57.9%, reported a high school diploma/GED or Associate's Degree to be their highest level of education. The majority of participants, 86.8%, reported participating in prior diversity training.

The mean cultural competence score for all participants was 10.4 on a 14-point Likert scale. The average mean of the subscale of cultural awareness/sensitivity was 5.8 on a seven-point Likert scale. The average mean of the subscale of cultural competence behavior was 4.6 on a seven-point Likert scale. Based upon these scores, it can be inferred that cultural competence is demonstrated in programming to the best of the ability of nutrition education paraprofessionals, but there is room for improvement in these areas as well. The mean score for social desirability was 9.9 on a 13-point Likert scale, indicating that participants may have a high need for approval which may have influenced their responses.

A significant difference was found for the total cultural competence scores, as well as the cultural competence behaviors and social desirability scores amongst paraprofessionals who had and had not participated in prior diversity training. Paraprofessionals who had participated in prior diversity training reported a greater total

cultural competence score than those who had not participated in prior diversity training (10.5 vs. 9.3), greater cultural competence behavior score (4.7 vs. 3.6) and a greater social desirability score (10.1 vs. 8.4). The specific details of the type of diversity training attended was not collected and likely varied amongst participants. Based upon these results, diversity and cultural sensitivity trainings may be an effective strategy for increasing the cultural competence behaviors of paraprofessionals.

The Cultural Competence Assessment has been utilized to assess cultural competence in many other studies in a variety of settings. The scores of nutrition education paraprofessionals (current study), public health nurses (Starr & Wallace, 2009), oncology surgeons (Doorenbos, Morris, Haozous, Harris & Flum, 2016), and athletic training students (Nynas, 2015) are compared in Table 10.

Table 10. *Comparison of Cultural Competence Assessment Scores Among Three Groups of Health Professionals and One Group of Students*

	Nutrition Education Paraprofessionals n= 76		**Public Health Nurses** n=31		**Oncology Surgeons** n=253		**Athletic Training Students** n=10	
	M	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
a) Total Cultural Competence *(25 items)*	10.4	1.72	n/a	n/a	10.3	1.3	n/a	n/a
b) Cultural Awareness and Sensitivity (*9 items)*	5.8	0.5	5.9	n/a	5.9	.5	5.66	n/a
c) Cultural Competence Behavior (*14 items)*	4.6	1.42	4.4	n/a	4.3	1.02	3.76	n/a
d) Social Desirability *(13 items)*	9.9	2	4.4	1.9	n/a	n/a	n/a	n/a

When considering the educational level of these individuals, nutrition education paraprofessionals are required to have the lowest level of education compared to public health nurses and oncology surgeons. It is interesting to note that paraprofessionals and surgeons demonstrated very similar scores in cultural awareness and sensitivity, cultural competence behavior and total cultural competence. Public health nurses also demonstrated very similar cultural awareness and sensitivity and cultural competence behaviors to paraprofessionals, however their social desirability was much lower than paraprofessionals (9.9 vs. 4.4). Athletic training students also demonstrated similar

cultural awareness and sensitivity scores to the other groups, however their cultural competence behavior scores were the lowest, which is likely due to the fact that they are students and have not had a large amount of experience in the work field with patients. These findings indicate that the level of education is not the most significant factor affecting an individual's cultural competence and that other factors have a larger influence in this area. In the groups above, the studies reported that (nurses? Surgeons? Students?) had prior diversity training. This provides justification for continuing to provide and evaluate skills relative to such trainings.

Curriculum Resource Needs

Findings from the in-depth interviews provide guidance for improving the current nutrition education provided to Hispanic/Latino communities in Kentucky. Paraprofessionals indicated a great interest in learning more about the Hispanic/Latino community to allow them to work together most effectively and seemed very willing to make any needed adaptations. Based upon interviews with nutrition education paraprofessionals, adaptations to programming with Hispanic/Latino participants are made for logistics such as using interpretive services, time, location, including children, and using Hispanic/Latino recipes. Materials that related to dietary habits and health concerns specific to Hispanic/Latino participants would be beneficial in making the program more applicable to this ethnic group.

The most commonly utilized resource in programming for Kentucky Hispanics/Latinos was the Spanish Healthy Choices for Every Body curriculum. Other resources utilized included Spanish cooking magazines, Spanish calendars, Spanish

newsletters and Spanish recipe cards. The most commonly used supplemental resource in programming were Spanish nutrition education materials from other University Extension Services. It may be beneficial for these resources to be reviewed and determined if they are appropriate for use with Kentucky's Hispanic/Latino population as well. The need for the nutrition messaging in curriculum materials to be simplified and easy to understand for participants was also shared.

There was a need for more resources and program materials in Spanish and this sentiment was shared by many paraprofessionals. However, there were materials that were not in use, but program paraprofessionals would like to have. Among the requested nutrition education materials were Spanish curriculum handouts, Spanish newsletters and videos in Spanish that were sensitive and pertinent to Hispanic/Latino culture. The provision of the requested cultural materials may allow paraprofessionals to feel more equipped and prepared to work with Hispanic/Latino participants and encourage their work with a variety of cultural groups. What this study adds to the body of literature is that we found that the paraprofessionals who had experience working with Hispanics/Latinos in Kentucky were able to identify ways to adapt the curriculum that were also reported by the program participants. The findings from this study support collecting data from paraprofessionals as an appropriate and feasible method. The University of Kentucky's Nutrition Education Program, as well as many other federally funded community nutrition education programs, are required to report on specific dietary related outcomes. The addition of evaluation questions related to the dietary changes participants had made since their relocation to the U.S./Kentucky, as well as the

changes made as a result of participation in the program, would be beneficial when determining the effectiveness of the cultural adaptations and modifications made in programming.

Incorporation of Food Preparation in Paraprofessional Programming

The most prominently requested resource by paraprofessionals were cultural recipes. In studies, traditional foods have sometimes been viewed as "unhealthy" by participants (Isasi et al., 2015, Plasencia et. al., 2017). The Cocinar Para Su Salud! (Cook for Your Life), a nutrition education program for Hispanic/Latino Latina breast cancer survivors included the adaptation of familiar foods and the use of traditional herbs and spices with unfamiliar foods, to increase acceptance. Participants who completed the program demonstrated increases in fruits and vegetables consumed, and a decrease in fat consumed and better weight loss (Aycinena et al., 2017). Making healthful changes to traditional recipes already familiar to Hispanic/Latino participants and preparing these dishes in nutrition education programming may increase the likelihood of participants preparing the recipes at home and allow them to preserve their cultural traditions while improving their diets. Therefore, making cultural adaptations to the existing intervention curriculum is key to improving dietary behavior changes and may also lead to desirable health outcomes such as weight loss and an increase in fruit and vegetable consumption for Kentucky's Hispanic/Latino communities.

Findings from the paraprofessional interviews were also aligned with many ideas shared in the focus group. For example, participants wanted to learn more about

American cultural foods and traditions, which was reported by both paraprofessionals and focus group participants.

Evidence suggests that Hispanics/Latinos living in the U.S. are impacted by factors such as lack of access to healthy and fresh foods, a feeling also shared by participants in focus groups, food insecurity and lack on monetary resources, which was also shared by paraprofessionals (Ayala, Baquero & Klinger, 2008; (Cason, Nieto-Montenegro, & Chavez-Martinez, 2006). The food environment of the U.S. is very different than that of countries where immigrants come from, which makes adjusting to food and food systems challenging. Focus group participants noted they had increased their intake of convenience foods, such as fast food and soda and were unable to locate "fresh" foods, as well as traditional fruits and vegetables. They also shared an increase in meat consumption, likely due to its affordability in the U.S. when compared to their country of origin. The inclusion of adjusting to the food environment in the U.S., as it relates to things such as grocery shopping, where to purchase fresh foods and food preparation methods would be beneficial topics to include in nutrition education programming for those participants adjusting to life in a new country.

Need for Community Referrals

An unexpected theme was present in both paraprofessional interviews related to the need for referrals to a variety of health- and non-health related services within the community. The programming paraprofessionals conduct is related to nutrition education, however the high level of requests for referrals to other community resources indicate that paraprofessionals may be seen as community agencies, or simply put, a "go to"

person for these participants. Upon describing the many community resources she has assisted her participants with procuring, one paraprofessional stated, “I'm their, what is it, the in between...their intermediate.” Healthcare services, disease education, housing and utility resources and financial assistance were among the referrals shared. Providing training information and encouraging paraprofessionals to obtain training on resources and agencies within their communities would be beneficial in their programming with these individuals.

Community Partnerships

Many opportunities were identified for nutrition education paraprofessionals to develop stronger programming with the Hispanic/Latino community. Forming partnerships and relationships with community organizations that are connected to the Hispanic/Latino audience would provide a base for connecting with these individuals in an environment that is safe and culturally sensitive.

Allowing for social interaction and socialization time in programming can contribute to a sense of community for these participants and lead to further community involvement and empowerment of Hispanic/Latino participants. In Hispanic/Latino culture, the term *personalismo* refers to a friendly rapport and relationship (“Committee for Hispanic/Latino Children and Families”, 2004). This may often be thought of in a medical sense, in relation to a doctor and patient relationship, however, the same principle can apply to nutrition education paraprofessionals. Providing opportunities through the program for participants to gain new skills such as cooking and improving their English speaking and reading skills can be empowering for Hispanic/Latino

participants. When paraprofessionals create a learning environment that allows for this type of relationship to form, they will likely see success in reaching dietary and behavior change outcomes among this community.

Incorporation of Children in Nutrition Education

A prominent theme in both paraprofessional interviews and participant focus groups was the importance of engaging children in nutrition education. The National Center on Research for Hispanic/Latino Children and Families determined that "U.S.-born Hispanic/Latino mothers spend as much time in play, caregiving, and reading activities with their child as their white and black peers, and more time than their foreign-born Hispanic/Latino peers" (Karlberg et al., 2017, p. 7). This is indicative of a close-knit familial relationship among Hispanic/Latino parents and children. *Familiso* in Hispanic/Latino culture is a value that encompasses the importance of family, rather than the individual (Guilamo-Ramos et al., 2007). The inclusion of children and family in programming is likely to encourage participation of the Hispanic/Latino community. Focus group participants voiced their desire to include their children in programming, which was also shared by paraprofessionals in interviews. In order for the program to be sensitive to the culture of Hispanic/Latinos, *familiso,* a value that is central to their culture should be respected and considered in programming efforts. A focus group participant shared that the most helpful aspect of the program had been the fact that she and her child were attending the program together.

Perception of Nutrition Education by Participants

Many focus group participants shared their enjoyment of the program and positive health behavior changes they had made. They reported learning new skills, making dietary changes and seeing improvements in their health. A participant shared, “Well I, what I learned in the nutrition classes is the truth, yes. It’s helped us a lot in our family, well eat, how to eat healthily.” Another shared, “Just that you help us with, with all this, with the program because this is the only way we can um…learn about what is good for us and about what is good for us to give to our kids and how to cook for our kids.” The findings suggest that the program is reaching its goal of providing education to individuals in order for them to make positive dietary changes to live a healthy lifestyle.

The majority of focus group participants shared their desire to have programming conducted in Spanish and the importance of a nutrition education paraprofessional being bilingual. Over 50% of focus group participants reported less than a high school education. Providing the program in the language most familiar and comfortable to participants contributes to a less intimidating learning environment. Castro, Barrera, & Martinez identified language as a “cognitive information processing and affective-motivational characteristics” (2004) when adapting a program to fit cultural needs, indicating that a program may benefit by adapting to language needs in order for participants to comprehend and put into practice the dietary behaviors emphasized in the program. Bilingual educators are and would continue to be important in working with Hispanic/Latino participants. Studies also indicate that educators who are indigenous to

the population may be well received and be more effective in leading to desired intervention outcomes (Taylor et al., 2000; Broyles, et al., 2011).

Focus group participants shared that the cooking and food preparation aspect of the program was their favorite aspect of the program. Participants reported preparing recipes at home that were demonstrated as part of the nutrition education and participants also reported being introduced to new ingredients and food preparation methods. Knowledge increase alone does not lead to behavior change (Lang, Caraher, Dixon, & Carr-Hill, 1999; Horodynski, Hoerr, & Coleman, 2004). The nutrition education that participants from this study were provided included hands-on, application-based activities in cooking and preparing food. The success of nutrition education is due to both the inclusion of fundamental knowledge of nutrition and science-based principles, and the opportunity to apply the knowledge during as part of the nutrition education received (Condrasky & Hegler, 2010). Because of this, participants were able to share what changes in their dietary habits and lifestyle behaviors they made since relocating to the U.S.

Focus group participants demonstrated an interest in learning about American culture, traditions and foods. Nutrition education paraprofessionals shared their interest in learning about Hispanic/Latino culture, including their traditions and cultural, traditional foods. A paraprofessional shared how a Hispanic/Latino participant had taught a class at the Extension Office on how to prepare tamales and there was interest in the non-Hispanic community to learn about the preparation of different cultural foods. Many paraprofessionals also shared that they had learned new skills from their participants,

such as how to cut a bell pepper and how to utilize certain spices in cooking. One focus group participant referred to such interactions as a "cultural exchange." This sharing of traditions of one's culture can build confidence in individuals, provide leadership opportunities within the community and strengthen the relationship between the educator and participant (add ref). Including opportunities for Hispanic/Latino participants to learn about American culture and tradition as it relates to food, as well as sharing their own culture and traditions would not only strengthen the cultural sensitivity of the nutrition education program/intervention but may also serve as a conduit to building trust in the organization/agency.

In one focus group, participants discussed their interest in learning about where to find local produce in their area. Because of the interest in this area, as well as focus group discussions regarding participants being unable to locate fresh meat and dairy products, resources of how to shop at local farmers' markets, gardening and other local, fresh food materials would be useful when working with Hispanic/Latino participants.

There were several areas of opportunity mentioned for nutrition education programming to meet the needs of Hispanic/Latino participants. While participants shared their use of recipes and nutrition education handouts and resources at home, it was also mentioned that there needed to be more Spanish materials available. A participant shared, "Because sometimes we ask for it to be in Spanish and there's not any resources. In whatever there is." Nutrition education materials should be useful in the home so that they can be readily utilized by participants. It would be useful to provide these materials

in both English and Spanish, as it was shared by focus group participants that their children mostly read in English.

Focus group participants shared their desire to learn about the prevention and basic information about chronic disease, with an emphasis on those most prevalent among the Hispanic/Latino population, including diabetes, hypertension, cholesterol and weight management. There was also interest in learning about specific dietary topics such as nutrients, portion control, calorie management, and healthy substitutions in cooking. These dietary topics of interest are foundations to preventing chronic disease and maintaining a healthy lifestyle. The incorporation of these topics into programming in a way that emphasizes the relationship between specific dietary needs and chronic disease would be beneficial to Hispanic/Latino participants and support the goal of the program to provide education that allows participants to achieve a healthy lifestyle.

Training and Professional Development Needs

Cultural competence assessment and interviews of nutrition education paraprofessionals identified a clear need and desire for training related to working with Hispanic/Latino participants. As indicated in the study conducted by Schim, it is thought that cultural diversity trainings may increase the incidence of cultural sensitivity in practice (Schim et al., 2006). There were three main areas of training that emerged that would be beneficial for programming efforts; trainings related to Hispanic/Latino culture, language services and chronic disease.

Desire for knowledge about Hispanic/Latino cultural values, beliefs and dietary practices

It was highly requested by paraprofessionals that there be training related to basics of understanding Hispanic/Latino culture and studies support that cultural sensitivity training is key in the success of culturally sensitivity interventions (Setiloane, 2014). There was interest in being trained by a Hispanic/Latino individual on topics such as traditional foods, religious practices, and social norms. Paraprofessionals were interested in learning from someone who was "in touch" with that community and could share best practices for working with Hispanic/Latino individuals. As stated by the developers of the Cultural Competence Assessment, it is not expected that these individuals be culturally competent in every possible aspect, but rather that their aim is to become competent regarding the cultures of their participants in order to better service their needs (Doorenbos &Schim, 2004).

Language Services:

The use of interpretative services in programming was reported by five paraprofessionals interviewed, however working with interpreters was not an area that paraprofessionals reported having training in. It is recommended by communications specialists that individuals that will be working with translators be trained on the role of an interpreter and the effect of that role on the cultural community and cross-cultural conflicts, so that they can work together effectively (Hwa-Froelich & Westby, 2003).

Many paraprofessionals expressed a need and interest in learning basic Spanish vocabulary. This was considered to be beneficial for providing education in programming and contributing to a welcoming atmosphere for Hispanic/Latino participants. In one

interview, a paraprofessional shared her desire for training in this area, “Even basic Spanish lessons, something…just quick conversation or introduction of yourself.” Providing opportunities in this area for paraprofessionals could contribute to their professional development and allow them to engage in a meaningful way with the Hispanic/Latino communities.

Chronic Disease Education:

Both paraprofessionals and participants indicated interest from the Hispanic/Latino community regarding chronic disease management. Diabetes and hypertension were among the most common diseases found among this group. Although nutrition education paraprofessionals are not required to have higher education in the area of dietetics and nutrition, it would be beneficial to provide educational opportunities on the prevention of these diseases. Equipping them with the skills to assist in preventing issues related to chronic disease and provide referrals to health professionals would allow them to better assist their participants’ needs related to their diet.

Strengths

The inclusion of both qualitative and quantitative methods in this study contributed to a mixed-methods approach to data collection. The inclusion of both nutrition education program staff and participants provided a comprehensive view of the program in relation to cultural sensitivity and reduced the likelihood of bias. Both interviews and focus groups were conducted throughout the state of Kentucky, in differing geographic areas to allow for a comprehensive view of nutrition education programming with Hispanic/Latinos in Kentucky. Study personnel consisted of several

bilingual individuals, familiar with differing Spanish dialects, which aided in accurate translation.

Limitations

The generalization of the study findings are limited due to the fact that the study examined a nutrition education program in only the state of Kentucky, which may not be representative of all state's programs and Hispanic/Latino communities. The study was also focused on the Hispanic/Latino population within Kentucky, which is 3.6% of the state's population. The aim of this study was largely focused on the nutritional aspect of the program and questions regarding physical activity education were limited. Theme 12 related to food preparation education may have been emphasized by the program paraprofessionals because it is a lesson within the nutrition education curriculum. We acknowledge we did not clarify if their experience with non-Hispanic/Latino program participants benefitted equally or more than the Hispanic/Latino groups.

CHAPTER FIVE: CONCLUSIONS AND SUMMARY

The purpose of this study was to learn how cultural sensitivity was integrated and perceived in community nutrition education of an existing program offered by the University of Kentucky Cooperative Extension Service Nutrition Education Program. The key findings of this study are the needs identified for culturally sensitive nutrition education materials and training and professional development related to cultural sensitivity.

The data collected indicate that the program has the opportunity to improve the outcomes relative to the dietary habits of participants and can be an effective strategy for improving health of Hispanic/Latino communities in Kentucky. Areas of opportunity were identified for improving the cultural sensitivity of the program. Specifically, the findings support 1) the inclusion of culturally sensitive and relevant program materials and resources, 2) emphasize the relationship of dietary habits and chronic disease development common to this ethnic group in the curriculum and the training provided to paraprofessionals, 3) including information on dietary habits and traditions of Hispanic/Latino participants in addition to information about American dietary habits and traditions and 4) inclusion of cultural values, such as *familiso,* which encourages that program modifications consider the inclusion of children in programming.

For over 100 years, the Cooperative Extension Service has provided education in response to the needs of the community (National Institute of Food and Agriculture, n.d.). As the cultural diversity of the country has drastically changed within the past several decades, it is critical that Cooperative Extension programming adapt to the changing

needs of the community and the individuals living within it. By modifying and adapting programing to make it relevant to the needs of a culturally diverse audience, Cooperative Extension can continue to meet its goal of providing education that improves the lives of citizens.

Cultural sensitivity in program delivery by nutrition education paraprofessionals is also essential to meeting the needs of Hispanic/Latino participants. In order to feel prepared to work with Hispanic/Latino participants, paraprofessionals expressed the desire to receiving specific training on Hispanic/Latino cultural values, beliefs and dietary practices. Future studies should assess cultural competence of paraprofessionals before and after receiving cultural sensitivity training, including a long-term assessment as studies show that cultural sensitivity is an iterative process (Campinha-Bacote, 1999; Doorenbos &Schim, 2004).

The contributions to science from this study include the following: 1) the study supports the use of paraprofessionals to assess nutrition-related needs of communities which were confirmed by the focus group findings, 2) the study presents new knowledge about the limited knowledge related to American food and food systems of immigrants from Spanish speaking countries.

APPENDICES

Appendix A: IRB Approval Letter

University of Kentucky Office of Research Integrity
IRB, RDRC

EXEMPTION CERTIFICATION

MEMO: Caroline Durr
Human Env. Sci. Administration
Dietetics and Human Nutrition
212 Funkhouser
PI phone #: (859)230-4531

FROM: Institutional Review Board
c/o Office of Research Integrity

SUBJECT: Exemption Certification for Protocol No. 17-0525-X4B

DATE: July 31, 2017

On July 28, 2017, it was determined that your project entitled, *Cultural Sensitivity in Cooperative Extension Nutrition Education Programming in Kentucky*, meets federal criteria to qualify as an exempt study.

Because the study has been certified as exempt, you will not be required to complete continuation or final review reports. However, it is your responsibility to notify the IRB prior to making any changes to the study. Please note that changes made to an exempt protocol may disqualify it from exempt status and may require an expedited or full review.

The Office of Research Integrity will hold your exemption application for six years. Before the end of the sixth year, you will be notified that your file will be closed and the application destroyed. If your project is still ongoing, you will need to contact the Office of Research Integrity upon receipt of that letter and follow the instructions for completing a new exemption application. It is, therefore, important that you keep your address current with the Office of Research Integrity.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" from the Office of Research Integrity's IRB Survival Handbook web page [http://www.research.uky.edu/ori/IRB-Survival-Handbook.html#PIresponsibilities]. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site [http://www.research.uke.edu/ori]. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at (859) 257-9428.

Please note: You must submit a modification request if you wish to include Spanish speaking subjects.

University of Kentucky
Office of Research Integrity
IRB, RDRC

Modification Review

IRB Number
17-0525-X4B

TO: Caroline Durr,
Human Env. Sci. Administration
Dietetics and Human Nutrition
212 Funkhouser
PI phone #: (859)230-4531

FROM: Institutional Review Board (IRB)

SUBJECT: Approval of Modification Request for Protocol 17-0525-X4B

DATE: July 5, 2018

On July 5, 2018, the Institutional Review Board approved your request for modifications in your protocol entitled:

Cultural Sensitivity in Cooperative Extension Nutrition Education Programming in Kentucky

If your modification request necessitated a change in your approved informed consent/assent form(s), attached is the new IRB approved consent/assent form(s) to be used when enrolling subjects. [Note, subjects can only be enrolled using informed consent/assent forms which have a valid "IRB Approval" stamp, unless waiver from this requirement was granted by the IRB.

Note that at Continuation Review, you will be asked to submit a brief summary of any modifications approved by the IRB since initial review or the last continuation review, which may impact subject safety or welfare. Please take this approved modification into consideration when preparing your summary.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" from the Office of Research Integrity's Guidance and Policy Documents web page [http://www.research.uky.edu/ori/human/guidance.htm#PIresp]. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site [http://www.research.uky.edu/ori]. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at (859) 257-9428.

Appendix B: Cultural Competence Assessment

Greetings NEP Assistants,

My name is Dr. Julie Plasencia and I work at the University of Kentucky's Dietetics and Human Nutrition Department. A study is being conducted to assess the needs related to cultural diversity needs of the Nutrition Education Program. The topic of this study is driven by the increasing diversity of people in the communities we serve through the University of Kentucky's Cooperative Extension Services. You are receiving an invitation to participate in this survey because your feedback will inform needs for the Nutrition Education program as perceived by you, Program Assistants.

This survey is designed to explore your knowledge, feelings, and actions when you interact with others in the context of your work with the Nutrition Education Program. Questions on this survey are intended to gather information about how you personally think, feel, and act. Some questions may not fit your situation exactly depending on the type of work you do at this time. Please try to answer every question. If you are unsure or have no opinion on an item, use the "No Opinion" or "Not Sure" options. There are no "right" or "wrong" answers.

Completing this survey is completely voluntary. It will take about 20 minutes of your time. You may choose not to participate. You may stop at any time. Your completion of the survey indicates your informed consent to participate in this study.

After completing this survey, you will have the option to click a link that will open a new tab in your Internet browser to enter a drawing to win one of ten $15 Amazon egift cards. Your odds in the drawing are 10/114.

The researchers will put your answers together with those of others to get an overall profile for group cultural competence and educational needs. Your response to the survey is anonymous which means no names will appear or be used on research documents, or be used in presentations or publications. Neither your identity nor your individual answers will be shared with anyone. Your answers are strictly confidential. The results of the surveys will be seen by a Nutrition Education Program staff member, but will not be associated with personal identities.

Upon completion of this survey, you will also be given an option to click a link if you are interested in participating in an interview with study personnel relating to cultural needs of the Nutrition Education Program. This link will open in a new tab in your Internet browser and will not be associated with your survey answers. Interview participants that meet inclusion criteria will receive a $15 Amazon gift card for their participation.

We hope to receive completed questionnaires from about 100 people, so your answers are important to us. Of course, you have a choice about whether or not to complete the survey/questionnaire, but if you do participate, you are free to skip any questions or discontinue at any time. Although we have tried to minimize this, some questions may make you upset or feel uncomfortable and you may choose not to answer them. If some questions do upset you, we can tell you about some people who may be able to help you with these feelings.

If you have questions about the study, please feel free to contact me; my contact information is given below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Please click the following link to participate in the study.
https://uky.az1.qualtrics.com/jfe/form/SV_cUCjwPtg8qEQNxP
Thank you in advance for your assistance with this important project.
Sincerely,
Julie Plasencia, PhD, RDN
Assistant Professor
Department of Dietetics and Human Nutrition
859-257-4146
julieplasencia@uky.edu

Cultural Sensitivity in Cooperative Extension Nutrition Education Programming

For each of the following statements, put an 'X" in the box that best describes how you feel about the statement.

Q1 Overall, how competent do you feel working with people who are from cultures different than your own?

- o Very competent (1)
- o Somewhat competent (2)
- o Neither competent nor incompetent (3)
- o Somewhat incompetent (4)
- o Very incompetent (5)

Q2 Race is the most important factor in determining a person's culture.

- o Strongly Agree (1)
- o Agree (2)
- o Somewhat agree (3)
- o Neutral (4)
- o Somewhat disagree (5)
- o Disagree (6)
- o Strongly disagree (7)
- o No opinion (0)

Q3 People with a common cultural background think and act alike.

- o Strongly Agree (1)
- o Agree (2)
- o Somewhat agree (3)
- o Neutral (4)
- o Somewhat disagree (5)
- o Disagree (6)
- o Strongly disagree (7)
- o No opinion (0)

Q4 Many aspects of culture influence health.

- o Strongly Agree (7)
- o Agree (6)
- o Somewhat agree (5)
- o Neutral (4)
- o Somewhat disagree (3)
- o Disagree (2)
- o Strongly disagree (1)
- o No opinion (0)

Q5 Aspects of cultural diversity need to be assessed for each individual, group, and organization.

- o Strongly Agree (7)
- o Agree (6)
- o Somewhat agree (5)
- o Neutral (4)
- o Somewhat disagree (3)
- o Disagree (2)
- o Strongly disagree (1)
- o No opinion (0)

Q6 If I know about a person's culture, I don't need to assess their personal preferences for nutrition education and information.

- o Strongly Agree (1)
- o Agree (2)
- o Somewhat agree (3)
- o Neutral (4)
- o Somewhat disagree (5)
- o Disagree (6)
- o Strongly disagree (7)
- o No opinion (0)

Q7 Spiritual and religious beliefs are important aspects of many cultural groups.

- o Strongly Agree (7)
- o Agree (6)
- o Somewhat agree (5)
- o Neutral (4)
- o Somewhat disagree (3)
- o Disagree (2)
- o Strongly disagree (1)
- o No opinion (0)

Q8 Individual people may identify with more than one cultural group.

- o Strongly Agree (7)
- o Agree (6)
- o Somewhat agree (5)
- o Neutral (4)
- o Somewhat disagree (3)
- o Disagree (2)
- o Strongly disagree (1)
- o No opinion (0)

Q9 Language barriers are the only difficulties for recent immigrants to the United States.

- o Strongly Agree (7)
- o Agree (6)
- o Somewhat agree (5)
- o Neutral (4)
- o Somewhat disagree (3)
- o Disagree (2)
- o Strongly disagree (1)
- o No opinion (0)

Q10 I believe that everyone should be treated with respect regardless of their cultural heritage.

- o Strongly Agree (7)
- o Agree (6)
- o Somewhat agree (5)
- o Neutral (4)
- o Somewhat disagree (3)
- o Disagree (2)
- o Strongly disagree (1)
- o No opinion (0)

Q11 I understand that people from different cultures may define the concept of "health care" in different ways.

- o Strongly Agree (1)
- o Agree (2)
- o Somewhat agree (3)
- o Neutral (4)
- o Somewhat disagree (5)
- o Disagree (6)
- o Strongly disagree (7)
- o No opinion (8)

Q12 I think that knowing about different cultural groups helps direct my work with individuals, families, groups, and organizations.

- o Strongly Agree (1)
- o Agree (2)
- o Somewhat agree (3)
- o Neutral (4)
- o Somewhat disagree (5)
- o Disagree (6)
- o Strongly disagree (7)
- o No opinion (8)

For each of the following statements, put 'X' in the box that best describes how often you do the following.

Q13 When I do individual or organizational evaluations, I include cultural considerations.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q14 I seek information on cultural needs when I identify new people in my work or school.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q15 I have resource books and other materials available to help me learn about people from different cultures.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q16 I use a variety of sources to learn about the cultural heritage of other people.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q17 I ask people to tell me about their own explanations of health and illness.

- o Always (7)
- o Very Often (6)
- o Somewhat Often (5)
- o Often (4)
- o Sometimes (3)
- o Few Times (2)
- o Never (1)
- o Not Sure (0)

Q18 I ask people to tell me about their own explanations for nutrition education.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q19 I avoid using generalizations to stereotype groups of people.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q20 I recognize potential barriers to service that might be encountered by different people.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q21 I try to remove obstacles for clients of different cultures when I identify barriers to services.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q22 I remove obstacles for people of different cultures when people identify barriers to me.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q23 I welcome feedback from clients about how I relate to people from different cultures.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q24 I find ways to adapt my services to individual and group cultural preferences.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q25 I document cultural assessments if I provide direct client education.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Q26 I document the adaptations I make with clients if I provide direct client education.

- o Always (7)
- o Very often (6)
- o Somewhat often (5)
- o Often (4)
- o Sometimes (3)
- o Few times (2)
- o Never (1)
- o Not sure (0)

Your answers to these last few questions will help us understand responses from different kinds of people who complete the survey. ALL answers are strictly confidential.
Read each item below and decided whether the statement is True or False as it pertains to you personally. Mark your answers with an 'X' in the True or False box.

Q27 It is sometimes hard for me to go on with my work if I am not encouraged.

- o True (0)
- o False (1)

Q28 I sometimes feel resentful when I don’t get my way.

- o True (0)
- o False (1)

Q29 On a few occasions, I have given up doing something because I thought I was not skilled/able/knowledgeable enough.

- o True (0)
- o False (1)

Q30 There have been times when I felt like rebelling against people in authority even though I knew they were right.

- o True (0)
- o False (1)

Q31 No matter who I'm talking to, I'm always a good listener.

- o True (1)
- o False (0)

Q32 There have been occasions when I took advantage of someone.

- o True (0)
- o False (1)

Q33 I'm always willing to admit it when I make a mistake.

- o True (1)
- o False (0)

Q34 I sometimes try to get even rather than forgive and forget.

- o True (0)
- o False (1)

Q35 I am always courteous, even to people who are disagreeable.

- o True (1)
- o False (0)

Q36 I have never been irked when people expressed ideas very different from my own.

- o True (1)
- o False (0)

Q37 There have been times when I was quite jealous of the good fortune of others.

- o True (0)
- o False (1)

Q38 I am sometimes irritated by people who ask favors of me.

- o True (1)
- o False (0)

Q39 I have never deliberately said something to hurt someone's feelings.

- o True (1)
- o False (0)

Q40 In what year were you born?

_____

Q41 Using the categories below, what do you consider yourself? *(Choose one or more)*

- o Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish) (1)
- o White/Caucasian/European American (2)
- o Black/African American (3)
- o American Indian/Alaska Native (4)
- o Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian) (5)
- o Native Hawaiian/Pacific Islander (6)
- o Arab American/Middle eastern (7)
- o Other (8) _____

Q42 What is your highest level of education completed?

- o Less than high school (1)
- o Diploma (2)
- o High School or GED (3)
- o Associate Degree (4)
- o Bachelors Degree (5)
- o Graduate or Professional degree (6)

Q43 Have you ever participated in cultural diversity training?

- o Yes (1)
- o No (2)

Q44 If you have had prior diversity training, which option(s) below best describes the training?

- o Separate college course for credit (1)
- o Content covered in a college course (2)
- o Employer Sponsored Program (3)
- o On-line (computer assisted) Education (4)
- o Continuing Education Offered by a professional organization (5)
- o Other diversity training types (Specify) (6)

  _____

Q45 Which of the following best describes your current role?

- o SNAP-Ed Assistant (1)
- o EFNEP Assistant (2)
- o Other (3)

Q46 If cultural diversity training was offered through the Nutrition Education Program, what format would you prefer the training be delivered in? Please rank 1-3 or select No Preference.

_____ In-Person Training (1)
_____ Online Training (2)
_____ Self-Guided Module Training (at your own pace) (3)
_____ No preference (4)

Appendix C: Cultural Competence Assessment Scoring Guide

Cultural Competence Survey
CODING / SCORING INSTRUCTIONS

Marlow-Crowne Social Desirability Scale

27 28 29 30 32 34 37	Social Desirability Scale (Marlowe-Crown)	Code TRUE = 0 FALSE = 1 (items that are undesirable but probably true of most people)	Sum points for individual social desirability score Range = 0-13
31 33 35 36 38 39	Social Desirability Scale (Marlowe-Crown)	Code TRUE = 1 FALSE = 0 (items that are culturally acceptable) but probably untrue of most people)	Higher score = more need for approval

Non-Scaled QUESTIONS

1	Self-Reported CCA	5-4-3-2-1 ordinal scale	Greater number = greater self-reported overall competence
40	Age	Current year – year of birth = age	Demographic
41	Self ID Race/Ethnic	Dummy Code – Nominal Data	Demographic
42	Education level	Code 0 – 6 : lowest to highest	Demographic
43	Prior Diversity Training	Code 1 = yes 0 = no	Demographic
45	Type of prior training	Dummy Code – Nominal Data	Demographic
46	Current Role	Dummy Code – Nominal Data	Demographic

Page Break

Cultural Competence Assessment Scales

7	4 5 7 8 10 11 12	Cultural Awareness & Sensitivity Subscale (CAS)	Strongly Agree = 7 Agree = 6 Somewhat Agree = 5 Neutral = 4 Somewhat Disagree = 3 Disagree= 2 Strongly Disagree = 1 No Opinion = do not include item	Add all item codes and divide by # **items answered** individual Cultural Awareness & Sensitivity Subscale Score

4	2 3 6 9	Cultural Awareness & Sensitivity Subscale – reverse coded items	Strongly Agree = 1 Agree = 2 Somewhat Agree = 3 Neutral = 4 Somewhat Disagree = 5 Disagree = 6 Strongly Disagree = 7 No Opinion = do not include item	Larger number means greater awareness & Sensitivity Range = 1 to 7
14	13 14 15 16 17 18 19 20 21 22 23 24 25 26	Cultural Competence Behavior Subscale (CCB)	Always = 7 Very Often = 6 Somewhat Often = 5 Often = 4 Sometimes = 3 Few Times = 2 Never = 1 Not Sure = do not include item	Add all item codes and divide by **# items answered** individual Cultural Competence Subscale Score Larger number means more Cultural competence Behaviors demonstrated Range = 1 to 7

Appendix D: Nutrition Education Program Paraprofessional Interview Guide

1. When you think of working with Hispanic/Latino clientele, what first comes to mind?
2. What interpretative services in programming with Hispanic/Latino clientele do you use?
3. What Nutrition Education Program resources do you typically use in programming with Hispanic/Latino clientele?
4. When working with Hispanics/Latinos, what changes do you make in the way you deliver the program?
5. Do you seek out information from other sources to provide nutrition education to Hispanics/Latino clientele? If yes, what resources do you use? Why do you use this resource?
6. What kinds of recipes do you include in your programming with Hispanic/Latino clientele, if any? Do you modify the recipes in any way?
7. What kinds of food preparation methods do you incorporate in your programming with Hispanic/Latino clientele, if any?
8. Based on your observations in working with Hispanic/Latino clienteles, what cooking or food preparation methods are most common?
9. How useful are the food preparation resources available for your programming needs? What resources are those you use the most?
10. What ideas for physical activities do you include in your programming that encourage family involvement? Why do you think incorporating family ideas/activities is important?
11. What health concerns do your Hispanic/Latino clientele most frequently report? Are there any other concerns they report?
12. What needs do your Hispanic/Latino clientele most frequently report?
13. How would you describe your relationship with your Hispanic/Latino clients?
14. What would you consider the ethnicities of the clients you work with most to be?
15. What training did you receive as part of your job skills training or professional development to work with ethnically diverse clients?
16. What would an ideal training look like in order to better prepare you to work with ethnically diverse clients?
17. What specific topics do you feel would be important for you to feel prepared to work with ethnically diverse clients relative to the Nutrition Education Program?
18. I would like to ask if you have any other cultural training suggestions for the Nutrition Education Program or any other information about this topic you would like to share?

Appendix E: Nutrition Education Program Participant Focus Group Guide

Focus Group Questions

Good morning/afternoon/evening and welcome. Thanks for taking the time to join our discussion about culture and the Nutrition Education Program. My name is _____ and I work with the University of Kentucky's _____, and I will serve as the moderator for today's focus group discussion. Assisting me is _____. The purpose of today's discussion is to get information learn new information from you focused on cultural sensitivity in nutrition education programming. You were invited because you have participated in the Nutrition Education Program within the last year. There are no right or wrong answers to the questions I am about to ask. We expect that you will have differing points of view. Please feel free to share your point of view even if it differs from what others have said. If you want to follow up on something that someone has said, you want to agree, disagree, or give an example, feel free to do that. Don't feel like you have to respond to me all the time. Feel free to have a conversation with one another about these questions. I am here to ask questions, listen, and make sure everyone has a chance to share. We're interested in hearing from each of you. So if you're talking a lot, I may ask you to give others a chance. And if you aren't saying much, I may call on you. We just want to make sure we hear from all of you. ____ and I will both be taking notes to help us remember what is said. We are also tape recording the session because we don't want to miss any of your comments. We have name tags on today, but no names will be included in any reports. I will now read a statement of informed consent. Please feel free to let me know if you have any questions.

Let's begin by having each person in the room tell us their name and favorite, healthy food to cook!

Additional Questions:

1. What is your Age?
2. What Gender do you identify with?
3. What is your heritage?
4. What is the highest grade you completed in school?
5. Where did you completed your education?
6. How long have you been in your current position?
7. How long have you lived in US and/or the state of Kentucky?
8. What do you like about the Nutrition Education Program?
9. In what language do you prefer to attend programs and classes in?
10. What do you think could be better about the Nutrition Education Program?
11. What language do you prefer to receive the in-person lessons of the program?
12. What language do you prefer to receive the written information or handouts from the lessons?
13. How have you used the information from handouts and take-home items?(Prompt: If not used, ask why.)
14. How long have you lived in Kentucky? If you are not from Kentucky, where did you live before relocating to Kentucky?
15. Since relocating to Kentucky, have you changed the types of foods you buy?

16. Are there foods you would like to buy but cannot find in Kentucky? IF so, what are they?
17. Are there foods you buy more often in Kentucky that you did not buy as much before moving to the Kentucky?
18. Have you changed your food preparation habits since living in Kentucky?
19. Have you prepared recipes from the program at home? Why or why not?
20. What topics of nutrition would you like to learn more about to help your family? (Prompt: Does someone if your family need help with nutrition? Examples: diabetes, heart disease, weight loss, other issues)
21. What changes in food choices have you made, if any, as a result of what you learned in the program?
22. What changes have you made, if any, in the way you prepare food as a result of what you learned in the program?
23. What physical activity changes have you made, if any, as a result of what you have learned in the program?
24. What topics of the Nutrition Education Program have helped you and your family? What topics were not included in the Nutrition Education Program that you are interested in learning more about?
25. What do you think are important characteristics of a nutrition educator?

Thank you so much for your time spent participating in this focus group today. Your responses are very important to us and we greatly appreciate your participation. Before we wrap up, is there anything else you would like to share with us?

Appendix F: Spanish Version Focus Group Guide

Preguntas para los grupos de enfoque

Buenos días / tardes / noches y bienvenidos. Gracias por tomar el tiempo para unirse a nuestra discusión sobre la cultura y el Programa de Educación de nutrición. Mi nombre es _____ y trabajo en _____ con la Universidad de Kentucky. Hoy serviré como moderador(a) de la discusión del grupo. Ayudándome es _____. El propósito de la discusión de hoy es para aprender nueva información de usted centrada en la sensibilidad cultural y en la programación de la educación de nutrición. Usted fue invitado porque ha participado en el Programa de Educación de la Nutrición en el último año. No hay respuestas correctas o incorrectas a las preguntas que voy a hacer. Esperamos que tenga diferentes puntos de vista. Por favor, siéntase libre de compartir su punto de vista, incluso si es diferente de lo que otros han dicho. Si quiere *añadir* a algo que alguien ha dicho, esta de acuerdo, en desacuerdo o quiere dar un ejemplo, siéntase libre de hacerlo. No sientan que tienen que responderme todo el tiempo. Siéntase libre de conversar unos con otros acerca de estas preguntas. Estoy aquí para hacer preguntas, escuchar y asegurarme de que todos tengan la oportunidad de compartir. Estamos interesados en escuchar de cada uno de ustedes. Así que si están hablando mucho, voy a pedirles que les dé a otros una oportunidad. Y si no están diciendo mucho, voy a llamarles. Sólo queremos asegurarnos de que escuchamos de todos ustedes. ____ y yo estaremos tomando notas para ayudarnos a recordar lo que se dice. También estamos grabando la sesión porque no queremos perder ninguno de sus comentarios. Tenemos etiquetas de nombre hoy, pero no se incluirán nombres en ningún informe. Ahora voy a leer una declaración de consentimiento informado. Por favor, no dude en hacérmelo saber si tiene alguna pregunta.

Vamos a empezar con cada persona diciendo su nombre y sus alimentos saludables favoritos para cocinar!

1. ¿Cual es su edad?
2. ¿Con que género o sexo identifica usted?
3. ¿Cuál es su patrimonio cultural o etnicidad?
4. ¿Cuál es el grado más alto de escuela que completo?
5. ¿En dónde complete su educación?
6. ¿Cuánto tiempo ha estado en su position de trabajo actual?
7. ¿Cuánto tiempo ha vivido en los Estados Unidos y/o en el estado de Kentucky?
8. ¿Si no es de Kentucky, donde vivían antes de llegar a Kentucky?
9. ¿Que les gusta del Programa de Educación sobre la nutrición?
10. ¿En que idioma prefieren asistir a los programas y clases?
11. ¿Qué creen que se podría mejorar con respecto al Programa de Educación sobre la nutrición?
12. ¿En qué idioma prefieren recibir las lecciones del programa que se realizan en persona?
13. ¿En qué idioma prefieren recibir la información escrita o los folletos?

14. ¿Cómo han utilizado la información de folletos y artículos que llevan a su casa? (Para solicitar más información, pregunte: Sin no los utilizaron, por que no?)
15. ¿Desde que llegaron a vivir a Kentucky, han cambiado el tipo de alimentos que compran?
16. ¿Hay alimentos o productos que les gustaría comprar, pero no pueden encontrar en Kentucky? ¿Cuáles y que tipo de alimentos son?
17. ¿Hay alimentos que ustedes compran más aquí en Kentucky, que tal vez antes no compraban tanto?
18. ¿Han cambiado sus hábitos de preparación de alimentos desde que viven en Kentucky?
19. ¿Han preparado recetas del programa en casa? ¿Por qué o por qué no?
20. ¿Qué temas de la nutrición quisieran aprender más para ayudar a sus familias?
21. ¿Qué cambios han hecho en su alimentación como resultado de lo que aprendieron en el programa?
22. ¿Qué cambios en la forma de preparar sus alimentos han hecho como resultado de lo que aprendieron en el programa?
23. ¿Qué cambios en actividad física han hecho como resultado de lo que aprendieron en el programa?
24. ¿Qué temas del Programa de Educación sobre la nutrición le han ayudado a usted y a su familia?
25. ¿Qué temas en el Programa de Educación sobre la nutrición no fueron incluidos, pero que usted está interesado en aprender más?
26. ¿Que características creen que son importantes para un educador de nutrición?

Muchas gracias por su tiempo para participar en este grupo de enfoque. Sus respuestas son muy importantes para nosotros y les agradecemos mucho su participación. Antes de terminar, ¿hay algo más que les gustaría compartir con nosotros sobre?

REFERENCES

Appendix 1. Physical Activity Guidelines for Americans. (n.d.). Retrieved March 11, 2017, from https://health.gov/dietaryguidelines/2015/guidelines/appendix-1/

Ayala, G. X., Baquero, B., & Klinger, S. (2008). A systematic review of the relationship between acculturation and diet among Latinos in the United States: implications for future research. Journal of the American Dietetic Association, 108(8), 1330-1344.

Aycinena, A. C., Jennings, K. A., Gaffney, A. O., Koch, P. A., Contento, I. R., Gonzalez, M., & Greenlee, H. (2017). ¡ Cocinar Para Su Salud! Development of a Culturally Based Nutrition Education Curriculum for Hispanic Breast Cancer Survivors Using a Theory-Driven Procedural Model. Health Education & Behavior, 44(1), 13-22.

Berrigan, D., Dodd, K., Troiano, R. P., Reeve, B. B., & Ballard-Barbash, R. (2006). Physical activity and acculturation among adult Hispanics in the United States. Research Quarterly for Exercise and Sport, 77(2), 147-157.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

Broyles, S. L., Brennan, J. J., Herzog, K., Kozo, J., & Taras, H. L. (2011). Cultural adaptation of a nutrition education curriculum for Latino families to promote acceptance. Journal of Nutrition Education and Behavior, 43(4 Suppl 2), S158.

Campinha-Bacote, J. (1999).Amodel and instrument for addressing cultural competence in health care. Journal of Nursing Education, 8, 203-207.

Caraher, M., Dixon, P., Lang, T., & Carr-Hill, R. (1999). The state of cooking in England: the relationship of cooking skills to food choice. British food journal, 101(8), 590-609.

Cason, K., Nieto-Montenegro, S., & Chavez-Martinez, A. (2006). Food choices, food sufficiency practices, and nutrition education needs of Hispanic migrant workers in Pennsylvania. Topics in Clinical Nutrition, 21(2), 145-158.

Castro, F. G., Barrera, M., & Martinez, C. R. (2004). The cultural adaptation of prevention interventions: Resolving tensions between fidelity and fit. Prevention Science, 5(1), 41-45.

Centers for Disease Control and Prevention. (2004). Health disparities experienced by Hispanics--United States. MMWR: Morbidity and mortality weekly report, 53(40), 935-937.

Committee for Hispanic Children and Families (2004) Creating a Latino Child Welfare Agenda: A Strategic Framework for Change. Committee for Hispanic Children and Families, Inc, New York.Condrasky, M. D., & Hegler, M. (2010). How culinary nutrition can save the health of a nation. Journal of extension, 48(2), 1-6.

Community Nutrition Education Logic Model. (2015). Retrieved from https://nifa.usda.gov/resource/community-nutrition-education-cne-logic-model

Contento, I. R. (2010). Nutrition education: linking research, theory, and practice. Jones & Bartlett Publishers.

Doorenbos, A. Z., Morris, A. M., Haozous, E. A., Harris, H., Flum, D. R. (2016). ReCAP: assessing cultural competence among oncology surgeons. *Journal of oncology practice*, *12*(1), 61-62.

Doorenbos, A. Z., & Schim, S. M. (2004). Cultural competence in hospice. American Journal of Hospice and Palliative Care, 21(1), 28-32.

Doorenbos, A. Z., Schim, S. M., Benkert, R., & Borse, N. N. (2005). Psychometric evaluation of the cultural competence assessment instrument among healthcare providers. Nursing research, 54(5), 324-331.

EFNEP California. (n.d.) History. Retrieved from http://efnep.ucanr.edu/About_EFNEP/About_EFNEP/History/

Expanded Food and Nutrition Education Program. (2018). Retrieved from https://nifa.usda.gov/program/expanded-food-and-nutrition-education-program-efnep

Evans, A., Chow, S., Jennings, R., Dave, J., Scoblick, K., Sterba, K. R., & Loyo, J. (2011). Traditional foods and practices of Spanish-speaking Latina mothers influence the home food environment: implications for future interventions. Journal of the American Dietetic Association, 111(7), 1031-1038.

FFF: Hispanic Heritage Month 2016. (2016, October 13). Retrieved March 11, 2017, from https://www.census.gov/newsroom/facts-for-features/2016/cb16-ff16.html

Flegal, K. M., Carroll, M. D., Kit, B. K., & Ogden, C. L. (2012). Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. Journal of the American Medical Association, 307(5), 491-497.

Greenlee, H., Gaffney, A. O., Aycinena, A. C., Koch, P., Contento, I., Karmally, W., ... & Maurer, M. (2015). ¡ Cocinar Para Su Salud!: randomized controlled trial of a culturally based dietary intervention among Hispanic breast cancer survivors. Journal of the Academy of Nutrition and Dietetics, 115(5), 709-723.

Guilamo-Ramos, V., Dittus, P., Jaccard, J.,Johansson, M., Bouris, A. & Acosta, N. (2007) Parenting practices among Dominican and Puerto Rican mothers. Social Work, 52, 17–30.

Hales, C. M., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2017). Prevalence of obesity among adults and youth: United States, 2015-2016. US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

He, X. Z., & Baker, D. W. (2005). Differences in leisure- time, household, and work-related physical activity by race, ethnicity, and education. Journal of general internal medicine, 20(3), 259-266.

Hispanic Health. (2015, May 05). Retrieved March 10, 2017, from https://www.cdc.gov/vitalsigns/hispanic-health/index.html

Horodynski, M. A. O., Hoerr, S., & Coleman, G. (2004). Nutrition education aimed at toddlers: a pilot program for rural, low-income families. Family & Community Health, 27(2), 103-113

Hwa-Froelich, D. A., & Westby, C. E. (2003). Considerations when working with interpreters. Communication Disorders Quarterly, 24(2), 78-85

Ingram, M., Ruiz, M., Mayorga, M. T., & Rosales, C. (2009). The Animadora Project: identifying factors related to the promotion of physical activity among Mexican Americans with diabetes. American Journal of Health Promotion, 23(6), 396-402.

Isasi, C. R., Ayala, G. X., Sotres-Alvarez, D., Madanat, H., Penedo, F., Loria, C. M., ... & Van Horn, L. (2015a). Is acculturation related to obesity in Hispanic/Latino adults? Results from the Hispanic community health study/study of Latinos. Journal of Obesity, 2015.

Karberg, E., Cabrera, N., Fagan, J., Scott, M. E., & Guzman, L. (2017). Family stability and instability among low-income Hispanic mothers with young children.

Kumpfer, K. L., Alvarado, R., Smith, P., & Bellamy, N. (2002). Cultural sensitivity and adaptation in family-based prevention interventions. Prevention science, 3(3), 241-246.

Larson, A. (2000). Migrant and Seasonal Farmworker Enumeration Profiles Study California. Final Report prepared for the Migrant Health Program, Bureau of Primary Health Care, Health Resources and Services Administration, Department of Health and Human Services.

Lopez-Quintero, C., Berry, E. M., & Neumark, Y. (2009). Limited English proficiency is a barrier to receipt of advice about physical activity and diet among Hispanics with chronic diseases in the United States. Journal of the American Dietetic Association, 109 (10), 1769-1774.

Marquez, D. X., & McAuley, E. (2006). Gender and acculturation influences on physical activity in Latino adults. Annals of Behavioral Medicine, 31(2), 138-144.

National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). (2018, July 23). Retrieved from https://www.cdc.gov/chronicdisease/about/prevent/index.html

Vital Signs. (2015, May 05). Retrieved from https://www.cdc.gov/vitalsigns/hispanic-health/index.html

National Institute of Food and Agriculture. (n.d.). Retrieved from https://nifa.usda.gov/cooperative-extension-history

Nutrition Education. 2018. Retrieved from https://www.sneb.org

Nutrition Education Program. (n.d.). Retrieved from http://kynep.ca.uky.edu

Nynas, S. M. (2015). The assessment of athletic training students' knowledge and behavior to provide culturally competent care. *Athletic Training Education Journal, 10*(1), 82-90.

Obesity Information. (2014, February). Retrieved from http://www.heart.org/HEARTORG/HealthyLiving/WeightManagement/Obesity/Obesity-Information_UCM_307908_Article.jsp#.WN_Y6VPyuRs

Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. Journal of the American Medical Association, 311(8), 806-814.

Plasencia, J., Hoerr, S., Carolan, M., & Weatherspoon, L. (2017). Acculturation and Self-Management Perceptions Among Mexican American Adults With Type 2 Diabetes. *Family & community health, 40*(2), 121-131.

Price, Michael L. (2011). Kentucky Population Growth: What Did the 2010 Census Tell Us? Kentucky State Data Center Research Report, 1(1), 1-13.

Satia-Abouta, J., Patterson, R. E., Neuhouser, M. L., & Elder, J. (2002). Dietary acculturation: applications to nutrition research and dietetics. Journal of the American Dietetic Association, 102(8), 1105-1118.

Savage, J. S., Fisher, J. O., & Birch, L. L. (2007). Parental influence on eating behavior: conception to adolescence. The Journal of Law, Medicine & Ethics, 35(1), 22-34.

Schim, S. M., Doorenbos, A. Z., & Borse, N. N. (2006). Cultural competence among hospice nurses. Journal of Hospice & Palliative Nursing, 8(5), 302-307.

Schneiderman, N., Llabre, M., Cowie, C. C., Barnhart, J., Carnethon, M., Gallo, L. C., & Teng, Y. (2014). Prevalence of diabetes among hispanics/latinos from diverse backgrounds: the HCHS/SOL(HCHS/SOL). Diabetes Care, 37(8), 2233-2239.

Setiloane, K. T. (2016). Beyond the Melting Pot and Salad Bowl Views of Cultural Diversity: Advancing Cultural Diversity Education of Nutrition Educators. Journal of Nutrition Education and Behavior, 48(9), 664-668.

Siega-Riz, A., Sotres-Alvarez, D., Ayala, G., Ginsberg, M., Himes, J., Liu, K., . . . Van Horn, L. (2014). Food-group and nutrient-density intakes by Hispanic and Latino backgrounds in the Hispanic Community Health Study/Study of Latinos. *The American Journal of Clinical Nutrition, 99*(6), 1487-98.

Sorlie, P. D., Allison, M. A., Avilés-Santa, M. L., Cai, J., Daviglus, M. L., Howard, A. G. & Wassertheil-Smoller, S. (2014). Prevalence of hypertension, awareness,

treatment, and control in the Hispanic Community Health Study/Study of Latinos. American Journal of Hypertension, hpu003.

Starr, S., & Wallace, D. C. (2009). Self-reported cultural competence of public health nurses in a southeastern US public health department. *Public Health Nursing*, *26*(1), 48-57.

Strolla, L. O., Gans, K. M., & Risica, P. M. (2006). Using qualitative and quantitative formative research to develop tailored nutrition intervention materials for a diverse low-income audience. Health education research, 21(4), 465-476.

Supplemental Nutrition Assistance Program Education (SNAP-Ed). (2018, April 23). Retrieved from https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-education-snap-ed

Taylor, T., Serrano, E., Anderson, J., & Kendall, P. (2000). Knowledge, skills, and behavior improvements on peer educators and low-income Hispanic participants after a stage of change-based bilingual nutrition education program. Journal of Community Health, 25(3), 241-262.

United States Census Bureau. (2016). Retrieved from https://www.census.gov

US Department of Health and Human Services. (2013). HCHS/SOLData Book: A report to the communities. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute. NIH Publication, (13-7951).

U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th ed. (2016). Retrieved from http://health.gov/dietaryguidelines/2015/

USDA Food and Nutrition Service Office of Research and Analysis, (2010). Nutrition Education and Promotion: The Role of FNS in Helping Low-Income Families Make Healthier Eating and Lifestyle Choices: A Report to Congress. Retrieved from https://fns-prod.azureedge.net/sites/default/files/NutritionEdRTC.pdf

Vollmer, R. L., & Mobley, A. R. (2013). A pilot study to explore how low-income mothers of different ethnic/racial backgrounds perceive and implement recommended childhood obesity prevention messages. Childhood Obesity, 9(3), 261-268.

Wakou, B. A., Keim, K. S., & Williams, G. S. (2003). Personal attributes and job competencies needed by EFNEP paraprofessionals as perceived by EFNEP professionals. Journal of Nutrition Education and Behavior, 35(1), 16-23.

Wittwer, M., & Herbold, N. (2009). Nutrition Professionals' Self-assessment of Cultural Competency and Adequacy of Professional Education. Topics in Clinical Nutrition, 24(2), 161-172.

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