2020

Focus group research for health promotion in faith-based communities

Meghan K. Pendleton

Focus group research for health promotion in faith-based communities

Degree Type
Open Access Senior Honors Thesis

Department
Health Sciences

First Advisor
Heather Hutchins-Wiese, PhD, RD

Second Advisor
John Carbone, PhD, RD

Third Advisor
Colleen L. Croxall, PhD

Subject Categories
Dietetics and Clinical Nutrition

FOCUS GROUP RESEARCH FOR HEALTH PROMOTION IN FAITH-BASED COMMUNITIES

By

Meghan K. Pendleton

A Senior Thesis Submitted to the

Eastern Michigan University

Honors College

In Partial Fulfillment of the Requirements for Graduation

With Honors in Dietetics

Approved at Ypsilanti, Michigan, on this date March 26th of 2020

Supervising Instructor; Heather Hutchins-Wiese, PhD, RD

Honors Advisor; John Carbone, PhD, RD

Department Head; Colleen L. Croxall, PhD

Honors Director; Ann R. Eisenberg, PhD

FOCUS GROUP RESEARCH FOR

HEALTH PROMOTION IN FAITH-BASED COMMUNITIES

Meghan K. Pendleton

Eastern Michigan University

A Senior Thesis Submitted to the

Eastern Michigan University

Honors College

In Partial Fulfillment of the Requirements for Graduation

With Honors in Dietetics

Table of Contents

I. Introduction

Nutrition influences health at every stage of life. The development of chronic diseases such as obesity, diabetes, and cardiovascular disease is complex, but can be influenced for better or worse by dietary choices. In the United States, these diet-related chronic diseases are occurring more frequently, with associated mortality projected to increase from 38 million deaths in 2012, to 52 million by 2030.[1] Additionally, these diseases disproportionally affect older adults. In 2012, at least 63% of Medicare beneficiaries aged 65+ reported having one or more diet-related chronic diseases.[2] Considering these statistics, older adults are an important population for health promotion programming. As a person ages, it becomes increasingly important to promote lifestyle behaviors that mitigate and manage health conditions, facilitate independent living, and the best quality of life. Older adults have an increased risk of disease development, due to the concomitant nature of older age and decline in physiological functions. Though age is an unmodifiable risk factor for chronic diseases, nutrition is a modifiable risk factor. Lifestyle interventions related to nutrition and physical activity have the ability to prevent and/or delay chronic diseases.[3] Therefore, interventions that improve dietary practices in older adults are warranted, as they help to reduce the risks of diet-related disease and occurrence of associated morbidities and mortality.

The dietary patterns and health practices of older adults need to be understood in order to create culturally relevant health promotion. The current recommendations for a healthy diet, set by the U.S. Department of Health and

Human Services and U.S. Department of Agriculture, are to include a variety of vegetables, fruits, whole grains, dairy, protein foods, and oils, in conjunction with appropriate caloric intake, and limited amounts of saturated fats, added sugars, and sodium.[4] This dietary pattern should ensure proper consumption of energy and nutrients. However, older adults consistently fall below intake requirements for a considerable number of nutrients.[5] This puts them at a higher risk for compromised health. Though dietary patterns can be generalized for the American population, it is important to note the inherent variability for different demographics. This should be considered when developing health programming, because interventions should never be provided with a "one size fits all" approach. Developing effective health programming requires researchers to study the target population of interest closely.

Faith-based organizations have been identified as environments in which health research and programming could be advantageous, especially when considering the older adult.[6] This is especially salient considering that the majority of Christians in America are of 50 years of age or older,[7] and the retention rate of church members is typically static. These characteristics suggest that the church environment would be a favorable one in which to study older adults and to implement health programming, since this target population would be easily accessible.

One way that researchers can study the older adult population is through the use of focus groups. Focus groups are especially useful for studying a target population because they give insight not only to the range of needs of the target

population, but also how they understand and value health, and the ways in which they communicate about health.[8] The dialogue generated through focus groups is rich and contextual. It also offers a way to make programming culturally appropriate for the target population by facilitating dialogue and partnership with researchers, integrating existing community strengths and insights, and establishing trust between all partners of the research.

A. Older Adults

Life expectancy in the United States has increased dramatically over the past 100 years. The current life expectancy from birth for all races, origins, and sexes is 78.6 years, compared to 56.4 years in 1920.[9,10] Though life expectancy has increased, it is important to keep in mind that it is a statistical measure that describes the average age of death for a given population. It does not take into account factors specific to an individual, such as lifestyle choices, which can dramatically influence the quality of the individual's health, and consequently their aging process. Healthspan is a concept which describes the length of time in a person's life that is spent in good health, as perceived by the individual.[11] Health is a continuous and dynamic variable. Health status will change throughout life, generally declining with age; therefore, it is important to extend and maximize a person's healthspan to achieve an optimal quality of life.

Healthy aging involves preserving the functional ability that enables a good quality of life in older age.[12] Though quality of life is relative to the individual, it generally pertains not only to the maintenance of physical and

cognitive health, but also independence, mobility, and other measures which people may use to value their life. The goal of healthy aging is not only to increase years of life but also to increase healthy, active years. Healthy aging and quality of life are certainly not determined only by the lack of disease or infirmity, but it is undeniable that they are intrinsically linked. Poor health can often be debilitating. Despite an increase in longevity in the United States, rates of chronic disease continue to increase.[1] It is important to understand how to prevent and mitigate these diseases that commonly affect aging populations in order to facilitate healthy aging and a good quality of life.

1. Aging, Nutrition, and Health Outcomes

Health is affected uniquely at different life stages by nutrition. The health of an older individual can become compromised if nutrition is inadequate for the unique needs of an older life stage. The needs for some nutrients increase due to aging-related decline in absorption and utilization, and energy needs become lower.[13] In addition to a change in baseline needs, it is common for older adults to consume certain nutrients below recommended intake levels, which include but are not limited to, protein, omega-3 fatty acids, fiber, calcium, and vitamin D.[14] Further, many older adults use medications that affect their nutritional status by causing drug-nutrient interactions, in which absorption, metabolism, utilization, or excretion of nutrients is altered.[15] Other physiological changes in an older adult include taste and smell, decreased appetite, and problems with chewing and swallowing.[16] Lifestyle changes may also occur that affect dietary behaviors.

Older adults may experience the loss of close family and friends, or may have to take care of a parent, which changes the dynamics of their social and support networks. There may be challenges in procuring food due to limited mobility or access to transportation.[17] All of these changes, which can have nutritional consequences, must be addressed by adopting a healthful diet in order to prevent poor health outcomes. Indeed, inadequate nutrition is uniquely linked with increased risk of chronic diseases including cardiovascular disease, hypertension, type 2 diabetes, and osteoporosis.[18]

2. Nutrition in Disease Prevention

Many chronic diseases can be prevented or mitigated by improving nutrition through dietary behaviors. It is estimated that eliminating major risk factors for chronic disease, which include poor dietary behaviors, would reduce the risk of CVD, stroke, and type 2 diabetes by 80%.[19] An increased emphasis on nutrition care across all levels of prevention is necessary to support the health of the aging population.

The focus of primary prevention is to slow or halt the development of disease in healthy individuals.[20] This could be achieved through the provision of health education, information on health risks associated with lifestyle behaviors, and clinical preventive services. An example of a primary prevention effort is the promotion of healthy eating via the distribution of information on basic nutrition, with the goal of preventing diet-related diseases.

Secondary prevention aims to detect disease at early states in order to identify risk factors present in an individual and prevent further disease development and/or complications.[20] Common settings for this type of prevention include schools, health fairs, and community organizations. An example of a secondary prevention effort is a blood pressure screening at a health fair to identify people who are unaware that they may have high blood pressure. The individual would be able to take this information to a healthcare provider and receive care to control their blood pressure and prevent further complications, like heart attack or stroke.

The purpose of tertiary prevention is to manage existing disease and reduce complications.[20] This could be done by helping people manage chronic health problems in order to maximize their functional potential, quality of life, and longevity. An example of tertiary prevention is to provide medical nutrition therapy in a stroke rehabilitation program.

3. Generational Characteristics of Older Adults

Healthcare must address the dynamic demographic profile of the United States in order to provide relevant and effective interventions to improve health. Interventions should be designed with the consideration of the lived experience of the individual. In making this consideration for any level of prevention, certain demographics may be segmented based on shared experiences that create common values among the group of people. When thinking about the aging population, it would be too simple to group mature and older adults into a single,

large range of ages. The broad segmentation in age that is sometimes used in health promotion programming neglects to acknowledge generational differences within a large segment. Within the age range of 55 and older, there are three generations: Matures/Traditionalists, Baby Boomers, and Generation X.

Traditionalists (Pre-1946)[21]

Those born before 1946 are termed “Traditionalists.” They have had the common experiences of the Great Depression and World War II. The Great Depression and war expenditures brought economic hardships to many families. Food was a large expenditure for families in the 1930s.[22] This made it hard for many families to consume nutritious meals with small budgets. Malnutrition and food insecurity were widespread problems, and so cooking focused largely on providing sustenance. It was important to maximize the use of available foods. Even the use of spices and seasonings was discouraged, as they were seen as stimulants to the body, similar to caffeine, and were thought to encourage overeating.[23] The conservative use of food continued through World War II, and it was not until the 1950s and 60s, when the war was over and the U.S. economy improved, that the use of non-traditional ingredients, consumption of culturally different foods, and the attitude that food could be consumed for pleasure became more common. These factors can continue to influence the way that not only Traditionalists prepare and consume foods, but their children as well.

Currently, many Traditionalists have one or more health conditions. Their generation also has the highest rate of healthcare utilization.[24] Traditionalists

value loyalty and relationships. They trust figures of authority to make decisions. Information is given on a “need-to-know” basis to those that they trust, and structured and specific directions are preferred. They may not believe that a lot of the technology used today is necessary for everyday life, as they did not grow up with the internet, cell phones, or computers.

Baby Boomers (1946-1964)[21]

Baby Boomers are optimistic, having grown up in a time of prosperity; however, from the lived experience of the Vietnam War and the civil rights movement, they question systems that do not speak to their values. Baby boomers started the first large wave of dual-income and dual-career families. They are more comfortable with using technology, but are quick to recognize its pitfalls. Baby boomers are interested in the authenticity of a figure’s authority, and they gently question decisions. Baby boomers are also increasingly taking care of their parents, who are Traditionalists. Some baby boomers are in transition to becoming empty nesters, while others already are. Many are also starting to develop health concerns. These factors can play a significant role in the way baby boomers approach dietary choices. Baby boomers may become more mindful about food that nourishes and promotes health, and they may actively seek what they think are healthful choices. They look for health benefits from their food for the purposes of weight management, cardiovascular health, and digestive health. They are more likely to define a healthy eating style by paying attention to serving sizes and eating in moderation.[25] Baby boomers may,

however, find making changes in diet difficult because they have to learn to cook for a different number of people, learn about healthful lifestyle habits, and think about how they can invest in their health for the future.

Generation X/The Baby Bust (1965-1980)[21]

Generation X value independence and free agency. They like clear communication and clear expectations. Generation X uses technology as a more integral part of life due to technological development booming during this time. Major historical influences include the fall of the Berlin Wall and the Gulf War. Social pressures weigh more heavily on decision making for Generation X. They are skeptical of hierarchies and authority, and they like doing research for products and services or receiving recommendations from peers. Generation X is now in middle age, and many have children. Generation X is becoming more focused on the relationship between their health and their food choices. They are more focused on weight loss than other age groups, and a strong majority believes that lifestyle factors have at least some impact on the risk of developing cancer.[26] Food and beverage choices are often influenced by whether they might reduce the risk of developing some health conditions, perceived environmental sustainability, and their trust in brands to provide “clean” ingredients in their products.[26]

Food provides not only nourishment, but also integral social and cultural components of our lives that are transformed and redefined by lived experiences. These lived experiences result in generational differences in values, attitudes,

education, learning and communication styles, technical competence, and other characteristics that can affect health decisions, including food choices.[21] Generational characteristics can be used to inform the development of health promotion programming by considering how the perception and utilization of the programming will be influenced by the target group's lived experiences. Ultimately, different skills, tools, and resources will be required. To understand the best methods for providing interventions to different groups of people, they should be directly engaged in the planning process. Who better to learn from than those who are to be worked with?

B. Focus Group Research

Focus groups research is a qualitative method of gathering data pertaining to the ideas, attitudes, beliefs, and knowledge of a targeted group of people.[8] During a focus group, a small group of a people who share similar characteristics of interest is brought together. They are asked a series of questions regarding a particular topic of interest to the researcher. The group discusses the questions with both the researcher and each other. The researcher will transcribe the discussion and identify important themes and information in order to understand their topic of interest better.

Focus group research has been used in a variety of different industries. This method of research is commonly used in health research, especially when developing health promotion programming, as they can be more useful than other methods of data collection, such as surveys or one-on-one interviews

because of the interactions that occur during a discussion. Focus groups for health promotion planning are able to give researchers insight to the range of needs of the community being studied including how they understand and value health, and the ways they communicate about health in a group setting that provides social and cultural context.[27] This is important because many health choices are related to social and cultural systems. To figure out how to develop health promotion programming that encourages changes in health-related behaviors on an environmental level, researchers must understand the individual within the social and cultural context. This context ultimately allows for more comprehensive, personalized, and therefore, more effective programming to be created. Health promotion programming must take into consideration all unique determinants that influence a target community's health.

1. Conducting a Focus Group

Focus groups must be carefully planned in order to elicit comprehensive discussion from participants. From the questions asked to the environment in which the group takes place, there are many considerations to think about when planning a focus group. It is important to identify the topic of interest, what type of information the researcher wants to obtain from the discussion, the target population, and the most effective means of communication with the target population. Indeed, a clear purpose and procedures are necessary for the discussion to be productive.

Participants of the focus group should possess characteristics that are representative of the target community.[8] These characteristics could be based on age, gender, geographical location, occupation, or any other characteristic of interest. Personalized health programming generally requires homogeneity in a group, so that a range of insights may more accurately be assessed for a specific community. To ensure that the focus group captures the desired types of people, screening questions should be created. A screen specifies the characteristics that researchers want the participants to have.[8] The screen will be used during recruitment of participants. Various methods can be used for recruitment, such as advertisement, nominations by community partners, or organizational recruitment. For health programming, five to eight participants is recommended per focus group.[8] Smaller groups can allow for more in-depth discussions, and are easier to manage. However, it is important to note that a limitation of smaller groups is that the range of insights may be underrepresented.

The questions asked during a focus group can be used to gain a range of information about the needs of the target community, existing resources and barriers, attitudes, opinions, and beliefs. These questions, called the questioning route, are designed to encourage conversation between the participants of the focus group.[8] The purpose of the focus group is to be a social experience, so the questions should not only provide insight from the participants as individuals, but also as the collective community. The questioning route should be easy to understand, open-ended, and sequenced so that the discussion flows naturally between each topic. The questions should flow from general to more specific

content. It is also important to consider how many questions are to be asked in light of the length of duration of the focus group. The number of questions and length of time it will take to answer them should be estimated based upon the complexity, participants' expected knowledge about the topic, number of participants, and how much information you want to collect about the topic.

The focus group should be guided by a skilled facilitator. It is important that the leader knows how to facilitate the discussion in a productive manner, keep the conversation on track, and evoke conversation from all participants. They should also have some knowledge in the topic being discussed and understand the purpose of the focus group. It may be necessary to bring in a person from outside of the core research team who is skilled in leading focus groups if no member of the team is qualified. The ability, or lack of ability to, facilitate a clear, open, and safe discussion can influence how much information is shared by the participants.[8] People are more comfortable and willing to participate in guided discussions that often include sharing personal information if they feel like the facilitator is professional, yet personable, and that their voices will be respected.

Participants will also feel more comfortable giving full disclosure if the environment in which the focus group occurs is welcoming. Having it in a familiar place that is easily accessible could encourage participation. It is also recommended to provide light refreshments, and mingle with participants before the discussion starts. Additionally, discussing "ground rules" for the discussion can help to set the tone and establish trust between the participants. Ground

rules should establish that there are no wrong answers to questions, all input is valuable and should be freely expressed, and that every person has the ability to agree with, challenge, or clarify anyone else's input. When the group of participants agrees on ground rules, they feel more comfortable and safe to participate.

Also important to making participants feel comfortable is the provision of an informed consent form.[8] This form should explain what participation in the focus group involves; any benefits and risks to be expected; and protection of privacy and confidentiality provided to the participants. It should also indicate that participation is not required, and there are no penalties for not participating. If any questions make participants feel uncomfortable, they should not be obliged to answer. The informed consent form should be provided to each participant, reviewed with the group, and signed before the discussion begins.

2. Recommendations for Focus Groups

Previous studies using focus groups have provided common recommendations for effective facilitation. It is important to look at previous studies, their methods, limitations, and recommendations so that future studies and focus groups can improve. Additionally, it is important to look at any focus groups whose participants share similar demographics of interest to the current research topic so that special considerations can be made.

It is commonly recommended to involve a person who belongs to the community of interest as a key partner of the focus group research; this person is

often referred to as a “lay leader”. Involving a lay leader can help to address the fact that the researchers are seen as “outsiders”. This could create a reluctance from participants to attend the focus group, or to share their insights. Further, there could be language and knowledge gaps between the researchers and participants. A lay leader can ease nervousness by providing a familiar face, and encourage engagement.[28] Additionally, when conducting a focus group in a community in which the researchers possess significantly different demographics from the participants, inclusion of a lay leader can enhance the credibility and trustworthiness of the researchers.[29] Potential roles of a lay leader could be involvement in the recruitment of participants, reviewing the questioning route, co-facilitation of the focus group, and clarification of the data.

Also of importance is the emphasis of privacy and confidentiality. It is helpful to explain the specific measures for the protection of privacy and confidentiality, and to allow adequate time for questions. Some people may feel cautious against allowing themselves to be audio recorded for fear of being recognized. In the case that audio recording may be a deterrent and affect the number of participants in a negative way, it would be helpful to have a notetaker available to scribe the discussion. Additionally, protection of privacy and confidentiality should not only be reinforced between the researchers and participants, but also between the participants themselves. Especially when conducting in a small community setting, the social familiarity between participants may discourage full disclosure of insights.[30]

Researchers should be aware of the general schedule of the target community.[30] Community events, holidays, and work schedules could influence the ability of participants to attend the focus group. Additionally, events like funerals, or wakes could affect the moods of participants, their responses to questions, and potentially their will to participate. Recognizing any events that may alter attendance can help the researcher recruit participants more easily; this may require consulting with community leaders.

3. Focus Groups in Nutrition Research and Programming

When designing personalized nutrition programming, it is essential to understand not only the target communities' dietary practices and beliefs, but also the communities' perceived realities. Perceptions about health and factors that influence health behaviors, like barriers to making choices, and resources for making choices, can be dramatically different between the researcher and the community. The researcher should understand the perceptions of the community. A researcher may be able to identify a health concern, resources, and barriers, but if the community does not believe these things are relevant, programming that addresses these factors may be ineffective. Interventions that acknowledge the communities' perceived realities will be the most valued and well-received. Previous focus group research that concerns nutrition in terms of health promotion programming has identified common themes shared by particular demographics that include: rural geographic location, low-income, racial/ethnic minority, and older adults.

a) Rural Geographic Location

The geographic location of a community can distinctly affect health choices. Rural communities are defined differently by various federal agencies, however the different definitions share some characteristics that delineate rural from urban communities. Generally, rural communities have a lower population density, are less developed, and are not directly contiguous to an urban area.

Rural communities can face barriers that urban communities may not. They can be distant from a variety of stores, and lack public transportation and fixed infrastructure. If a rural community is a food desert, in which there is restricted access to fresh foods, and it is difficult to travel to a nearby city, the community will have to rely upon the local food options.[30] These options usually include processed foods sold by small convenience stores that do not contribute adequate nutrients or variety for an optimal diet. Consequently, access, affordability, and acceptability related to the procurement of nutritious foods can be barriers to making healthy eating choices. Additionally, many foods typical of rural culture are fried, and are higher in fat and calories.[32] Changing eating patterns that one has been brought up with can be seen as difficult and discomforting when healthier dietary choices do not align with an individual's culture or typical eating pattern. Food provides not only physiological nourishment, but emotional nourishment as well. When an individual believes that eating more healthfully means exclusion of their favorite foods instead of consuming them in moderation, food culture can be perceived as a barrier.

Rural residents note various resources that could help healthy eating.[31-34] Many rural residents have self-sufficient methods for obtaining food. Normal to rural culture is having a garden or purchasing produce from a local farm or farmer's market. Rural communities also may have food banks or pantries they can rely on. Additionally, social networks in rural communities can be strong since the communities are small.

Various focus group participants who are rural residents have identified programing ideas that can capitalize on resources typical of rural communities. For example, gardening classes that encourage cultivating produce for personal use could improve food security and nutrition.[31] Rural residents also have noted that promoting socialization with other community members could be beneficial. Interactions around food, such as eating, cooking, or sharing food, could improve dietary choices if residents encouraged each other to eat healthy and provided company to one another.[31,33] Additionally, modifying traditional foods to be healthier could improve dietary choices. Residents may be open to making changes in eating patterns if their food preferences are accommodated while still improving the nutritional value of the foods.[32]

b) Low-Income

People who are low-income are at a disproportionately higher risk for poorer health outcomes compared to those who are more affluent.[35] Poorer nutrition-related health outcomes are related to a variety of health disparities that

those in poverty also face, such as lack of education, transportation, housing insecurity, and food insecurity.

Those who are low-income recognize these disparities, but often do not know how to overcome or adapt to them in order to make better health choices.[36,37] Further, dealing with the stresses that come with being low-income leaves little energy to expend in doing things that would promote better nutrition, like finding transportation to reach a store that sells nutritious foods, spending time cooking, or trying to find educational resources to help make better dietary choices.[38,39]

An important resource identified by those who are low-income is the use of government nutrition programs, such as SNAP and WIC.[37,41] These are nutrition-assistance programs that serve the eligible low-income population to improve food security and health outcomes. Additionally, some focus group participants identified access to the Internet through smartphones or other devices as a way to access health information. However, it is important to note that rural residents reported limited access to public Internet, and with limited phone data, access to the Internet was not always available.[36]

c) Racial/Ethnic Minorities

People who are of racial or ethnic minorities are often affected by multiple health disparities that include sociocultural, environmental, economic, and biological factors. There are few nutritional epidemiological studies that compare racial or ethnic groups, but it has been determined that the health status of

minority populations may be affected more greatly by nutrition than the white population.[39] For example, African Americans are at a higher risk for diet-related chronic diseases such as hypertension, diabetes, stroke, and obesity.[40]

Focus groups in which the participants were of racial or ethnic minorities identified a major barrier to healthy eating as culturally determined eating patterns. African American focus group participants describe soul food cooking, and acknowledge that it is often prepared in an unhealthful way, such as fried chicken or fried corn. Unhealthful methods of soul cooking was related to poverty and food insecurity experienced by minorities in prior generations, in which they used food scraps for cooking. Additionally, eating pleasurable, high-fat and high-sugar foods was noted as an emotionally comforting experience.[41] Hispanic focus group participants report using larger quantities of sodium, sugar, and fat-based products; a lack of a variety of vegetables; and not using measuring utensils in food preparation.[42,43]

Strong social networks can be an important resource for racial or ethnic minority communities. Minority communities often have strong familial, friend, or organizational networks.[44] Interactions within these networks can influence decisions about food choices. Social support and encouragement from others can help motivate an individual to make changes.

Ideas suggested by previous focus group participants for effective programming focus on cultural and racial aspects. Incorporating cultural values into interventions could be better accepted and incorporated into minorities' lifestyles because helps the interventions to be relevant.[41-44] Respecting cultural

values also addresses the problem of researchers being seen as “outsiders”. Another way that interventions could be more effective is if they are provided by someone of similar race or ethnicity to the minority group. Facilitation by someone of a similar background can help to cultivate trust, especially in communities that have historically been marginalized.[41]

d) Older Adults

Older adults face not only a higher risk for compromised health as they age, but also sociocultural disparities that are associated with aging. Many older adults report social stigma regarding a lack of functional independence and social isolation.[45-48] There is a generational difference in views of accepting support in older people, in which self-reliability is greatly valued. Needing assistance with food procurement and preparation is seen as embarrassing, as well as seeking out social support. Reluctance to take action with these issues can place older people in a nutritionally vulnerable state if it prevents them from receiving assistance with eating. Interestingly, social networks were also reported to be a potential resource for older adults. Older adults often share food with those they are close to, and feel hospitable towards others. This complex social dynamic could have the potential to be acknowledged in a program. Congregate meal services and other social supports are seen as desirable, but some older adults may be hesitant to try them.[45]

Table 1 Common Themes in Focus Groups for Nutrition Research and Programming

Demographic	**Perceived Barriers to Healthy Eating**	**Perceived Resources for Healthy Eating**	**Programming Ideas for Encouraging Healthy Eating**	**Ref.**
Rural Geographic Location	• Lack of access to fresh foods • Residence in a food desert • Lack of public transportation • Food culture	• Food banks/pantries • Personal or community gardens	• Social support network • Providing healthier versions of traditional foods • Gardening classes	30-33
Low-Income	• Lack of transportation • Lack of food accessibility • Cost of fresh foods • Stress • Lack of education	• Government nutrition programs • Internet/phone data	• Increased awareness of food security programs • Education on budgeting	34-38, 41
Racial/Ethnic Minorities	• Food culture	• Strong social networks	• Incorporating cultural values into interventions • Facilitation by someone of similar race/ethnicity	41-44
Older Adults	• Social stigma of lack of independence • Social isolation	• Social relationships for food assistance	• Congregate meal sites • Social support network	45-47
All Demographics	• Lack of nutrition knowledge • Lack of self-efficacy • Lack of time to prepare foods • Ambivalence towards positive change • Lack of support from families • Lack of access to accurate information • Lack of, or inadequate health insurance	• Venues for programming: community centers and facilities, YMCA, churches, libraries • Desire to adopt healthy behaviors	• Nutrition education classes • Cooking classes • Cookbooks/recipes	29-47

C. Community-Based Participatory Research

Understanding the specific needs, resources, and barriers of a target community is necessary to develop programming that is effective and sustainable. This necessitates a research approach that appropriately determines both the actual and perceived health needs of a target community; allows interventions to be personally tailored to a target community to facilitate healthy choices; and addresses how programming can be designed with sustainability in mind.[48] A common approach that has been used in health research to address these concerns is Community-Based Participatory Research (CBPR). CBPR is an approach that creates collaboration between researchers and the community for which the programming is intended.[48] Both parties have a common goal: to address health problems within the community. CBPR creates an equitable partnership between researchers and the target community, generating not only useful information for researchers, but a relevant product for the community. Focus groups are commonly used in CBPR because they give an opportunity to communicate directly with community members, assess all relevant information, and establish rapport.[49]

1. Core Principles of CBPR

CBPR is conducted based on a set of nine principles that were developed by Barbara Israel and colleagues.[50] These principles have served as a framework for CBPR for all phases of the research process. Though the principles are distinct, the integration of them allows research to be conducted in

a clear, productive, and respectful manner for all partners. The principles focus on how to appropriately consider and collaborate with the communities, and ensure that the research process creates an equitable experience.

1) Community as a Unit of Identity

Members of a community can be identified by participatory interactions with others within a defined social or cultural structure. These structures not only provide an identity to individuals, but to the members as a collective. Sharing the structures strengthens the relationships between members, and reinforces shared values, beliefs, and practices. CBPR seeks to enhance interventions targeted at a particular community with the community's existing social and cultural strengths and relationships.

2) CBPR Capitalizes on Existing Community Strengths and Resources

CBPR is used to identify existing community strengths and resources that could be useful not only for the intervention implementation, but also to ensure sustainability of healthy behaviors. By identifying strengths and resources, researchers and community members can also identify what supports or resources could be beneficial for the community.

3) Collaboration From Start to Finish

Community members are involved in every phase of the research process as equal members. A collaborative approach provides a more expansive and

thorough exploration of the needs of the community, and how those needs could be best met.

4) CBPR Integrates Knowledge and Action for Mutual Benefit of All Partners

All partners in the research can provide valuable contributions, and should benefit from the research process. Researchers can gain knowledge about their topic of interest, which drives action towards improving health for the community members.

5) Addresses Social Inequalities

CBPR recognizes that social inequalities may exist between community members and researchers. Marginalized communities often lack resources or knowledge to address health inequalities. Researchers should involve community members as equitable partners, who have the right to engage in every step of the research process and benefit in a meaningful way.

6) *Utilization of an Ecological Approach*

CBPR should us an ecological approach, in which multiple determinants of health are identified, such as sociocultural, environmental, biological factors. These determinants never occur in absence of another. Therefore, the intersectionality of these determinants should be considered when assessing a community's health behaviors.

7) *Use of an Ecological Perspective to Address Multiple Health Determinants*

CBPR recognizes the interrelations between individuals and their environments. Health is influenced by a multitude of factors, including lifestyle; living, working, and social conditions; community conditions; and background conditions. These factors intersect, and so they must all be addressed in order to promote effective change. Each community will have a unique set of factors that influence their health.

8) Dissemination of Findings

Analyses of findings should be shared with all partners in the research process, in a way that is culturally appropriate. No one partner is privy to the information, and all partners should engage in critique and idea generation using the findings. If findings are to be published, community members should be consulted beforehand, and their contributions should be acknowledged appropriately.

9) Sustainability of Programming

The establishment and maintenance of relationships and programming should be extended beyond the research project. The programming developed from CBPR should build community strengths and resources in a way that has a long-lasting impact for the community that it is implemented in. That way, the research project is truly beneficial for all parties involved.

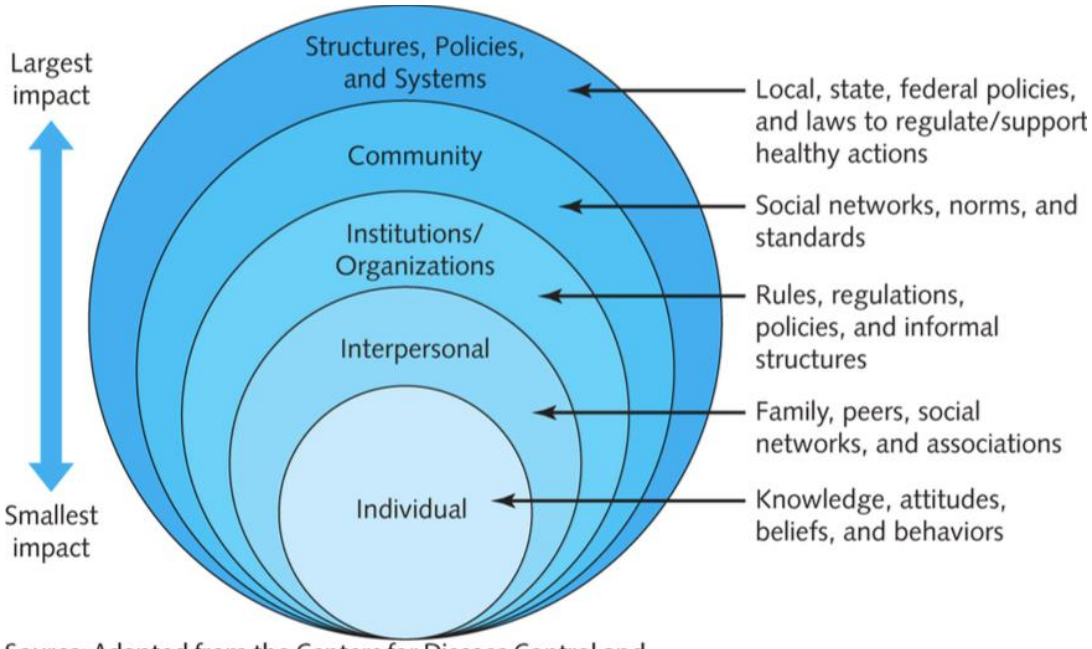
2. CBPR and Health Promotion

Public health can be improved through health promotion. Health promotion can be accomplished through a variety of activities, including, controlling risk factors for compromised health, risk appraisal, and education about health risks and the advantages of healthy lifestyles. Ultimately, the goal of health promotion is to change behaviors that affect health in a positive way.

It is common for health promotion programming to utilize ecological approaches**.** In order to close the gap in health inequities experienced by various communities, all determinants of health, and their dynamic relationship, should be considered. This can be done by using the socio-ecological model (SEM). This model is a framework that emphasizes multiple levels of influence on an individual's health behaviors.[51] The different levels are related to the individual in terms of relative proximity, and include individual, interpersonal, institutional, community, and government systems influences. Levels that have the largest impact on an individual's health behaviors are related to public policies, government systems, and environmental settings. According to the SEM, creating a social environment that takes into account the interactions between these levels will be conducive for promoting behavior change.

Using CBPR in conjunction with the SEM can be advantageous. Every community will have different variations in what shapes their health behaviors. While SEM provides a framework that addresses the complex interactions between all levels of influence, CBPR can be used to contextualize the SEM for a specific community of interest.

Social Ecological Model[21]



Source: Adapted from the Centers for Disease Control and Prevention (CDC), The Social Ecological Model: A Framework for Prevention

3. Faith-Based Organizations as a Partner for CBPR

A faith-based organization is a group of people who share religious beliefs and practices. Faith-based organizations have the potential to be environments in which health programming could be advantageous for many reasons.[6] First, they often include health and social services with their missions. Maintaining a person's well-being can be seen as morally imperative in order to maintain the integrity of the individual body and soul. Behavior change interventions could incorporate spiritual elements to increase effectiveness.[51] Second, faith-based organizations can be good environments to conduct health promotion, as they provide already-established social support networks. Social support can have a positive influence on health promotion if members are encouraging each other to

engage in better health behaviors.[52] The adoption of better health practices can be shared by the community and become part of the normal culture. Third, the retention rate of faith-based organization members is typically static. Increased exposure to interventions increases the likelihood of compliant behavior towards the interventions. Younger members, who should have access to the interventions, will also eventually fall into the “older adult” category. Finally, faith-based organizations are typically equipped with kitchens and meeting rooms. These resources can be used for interventions like educational classes, cooking classes, and more.

II. Methods

A. Research Design

This was a qualitative study using an emergent and systematic focus group design, with a community-based participatory research approach. A focus group methodology was chosen based on the type of information the researchers wanted to gain. The researchers wanted to understand how the subjects value health, and the ways they communicate about health in a group setting that provides social and cultural context. During the focus group, participants engaged in a discussion based on a list of predetermined questions called a "questioning route". The discussion was audio recorded and later analyzed. A community-based participatory research approach was chosen so that collaboration between researchers and the target communities would be an equitable and relevant experience for all parties involved.

B. Organizational and Participant Recruitment

Leaders of various faith-based communities in Washtenaw County, MI were contacted in order to establish partnerships. The communities were selected based on their urban or rural geographic locations. One urban and two rural communities were recruited, for a total of three communities. The communities included First Baptist Church of Ypsilanti (FBCY), Manchester United Methodist Church (MUMC), and Lincoln Community United Methodist Church (LUMC). FBCY and MUMC were recruited through telephone and email communication with the pastor. LUMC was recruited through a church leader

with connections to Eastern Michigan University's School of Health Science. In addition to partnering with the community leaders, a Project Champion was recruited at MUMC to function as a lay leader to other members of the community. By having a community member present and involved with the focus group activities as a lay leader, including being present during the focus groups, participants could feel more comfortable sharing their experiences. The lay leader also helped with recruitment, logistics, and provided insights to the researchers.

The community leader and Project Champion assisted in the development of focus groups through organizational recruitment. The goal number of participants to be recruited per focus group was at least five and no more than 15 participants. Potential participants were selected by identifying desirable demographic and observable characteristics. The target population included adults aged 50 and older, who were entering or in retirement and or/experiencing children moving out of the home. The participants were not randomized due to low recruitment numbers. Methods of advertising included flyers, word of mouth, and sign-up sheets.

C. Informed Consent

All procedures and materials were approved by Eastern Michigan University's Human Subjects Review Committee. Study subjects provided written, informed consent prior to participating in study activities. Prior to participation, subjects signed an informed consent form that was read verbatim

by the lead investigator. Time was allowed for the participants to ask questions before signing the informed consent form. There were no anticipated physical or psychological risks to the participants. The primary risk of participation in this study was a potential loss of confidentiality.

D. Focus Group Discussions

One focus group discussion occurred at each location, for a total of three discussions. Participation in the focus groups involved sharing opinions, ideas, and experiences. The focus group questions were designed to gain information about the beliefs, attitudes, and perceived needs and barriers related to nutrition in each community. Focus group questions are presented in Table 2 below, with specific questions asked by the co-investigator (AZ) or the student researcher (MP). The co-investigator started each focus group with “ground rules” for the participants to follow during the discussion. These rules encouraged open communication, sharing of opinions and ideas, respect of other participants, and maintenance of confidentiality of the discussions.

The logistics of each focus group occurred differently. The community leader and Project Champion helped plan logistics since they were well informed of their community’s needs. All focus groups were held in the respective congregation’s community meeting room so that the space was convenient and comfortable for participants. Scheduling of the focus groups was based on a variety of factors, including other church activities, time of day, and time of year, to make attendance convenient for participants. Time of day and year are

especially important for a geographic location like Michigan, where daylight ends early in the winters and roads can be icy. The focus group for FBCY was scheduled apart from other church activities in the early evening. At MUMC the focus group was also held in the early evening, but was scheduled before another event that participants were also attending. The focus group for LCUMC was held right after church service on a Sunday morning.

Each discussion lasted approximately an hour, which was a predetermined time frame based on the depth of the questions and anticipated responses. The focus group discussions were audio recorded for later transcription. In addition to information collected from focus group questions, a self-report demographic survey was administered. The demographic survey included questions about age, race, marital status, living situation, cooking behaviors, eating behaviors, employment status, health status, education, and income. See Appendix A for the demographic survey.

Table 2 Focus Group Questions
Tell us your name and how you get your groceries.
Imagine you have a healthy meal in front of you. What kinds of foods would be on your table?
Does anybody follow a special diet?
Where do you get information about nutritious foods and healthy eating?
What are barriers to healthy eating?
What helps you eat healthy?
What supports would help you eat healthier?

The focus group discussions were transcribed verbatim manually from audio recordings. *oTranscribe* (Muckrock Foundation, Massachusetts), a web

application, was used to assist the transcription. The audio was securely uploaded. The student researcher was able to toggle easily between controlling the audio player and text editor within the application using the computer keyboard. Transcriptions of the focus groups and survey information were used to interpret what needs could be prioritized for the communities, and to determine the best individualized and culturally-sensitive approaches. The community and lay leaders provided input into the interpretation of focus group transcripts for their respective communities.

E. Analysis

The focus group discussions were analyzed using tenants of the Grounded Theory analysis method from Glaser and Strauss.[54] The discussions were transcribed verbatim from audiotape and typed into a word document. The group discussion was used as the unit of analysis. Main themes were predetermined from the study purpose and developed based upon the focus group questions. The predetermined themes included barriers to healthful nutrition, facilitators for healthful nutrition, and desired supports for healthful nutrition. During review of the transcripts, open coding was used to develop codes for emergent subthemes in the margins of the transcripts. Each line of text was read to identify possible subthemes, and a tentative inventory of these subthemes were typed into another word document using codes. The codes were grouped together through axial coding based on commonality according to the predetermined themes. If codes had a relationship, they were grouped

together. After axial coding was done, selective coding was used to validate the predetermined main themes. It was determined that the subthemes appropriately related to the main themes. The inventory of main themes and subthemes was finalized.

III. **Results**

A. Focus Group Participant Characteristics

Data from the demographic survey is presented in Table 3. Twenty-one subjects participated in three focus groups with 5-8 subjects per focus group. The average age of the subjects was 68 years old. The majority of subjects were female (76.2%), white (90.5%), married or had a significant other (71.4%), had children (71.4%), were educated beyond high school (90.5%), and reported a household income of $80,000 or more (61.1%). Most subjects self-reported that they cook for their spouse/partner (42.9%) or themselves (66.7%). 66.7% of subjects reported eating with a spouse or partner, 38.1% eat by themselves, and 9.6% eat with their children. About half of the subjects were employed (48%), and about half were retired (52%) with length of retirement ranging from 1-24 years and an average of 13 years (n=11). The majority of subjects self-reported perception of their health as better than others' (52.4%), 28.6% about the same as others', and 19% worse than others'. All subjects reported independence in their activities of daily living.

Table 3. Demographic Data
n/%

	First Baptist Church of Ypsilanti (n=8)	Manchester United Methodist Church (n=5)	Lincoln Community United Methodist Church (n=8)	Total (n=21)
Age[a]				
50-54	0%	1/20%	2/25%	3/14.3%
55-73	5/62.5%	0%	5/62.5%	12/57.1%
74+	3/37.5%	4/80%	1/12.5%	6/28.6%
Sex				
Male	2/25%	0%	3/37.5%	5/23.8%
Female	6/75%	5/100%	5/62.5%	16/76.2%
Primary Language				
English	8/100%	5/100%	8/100%	21/100%
Ethnicity				
White/Caucasian	6/75%	5/100%	5/100%	19/90.5%
Black/African American	2/25%	0%	0%	2/9.5%
Country Born In				
USA	8/100%	5/100%	8/100%	21/100%
Marital Status				
Marred/Significant Other	5/62.5%	4/80%	6/75%	15/71.4%
Divorced	1/12.5%	0%	0%	1/4.8%
Single	0%	0%	1/12.5%	1/4.8%
Widowed	2/25%	1/20%	1/12.5%	4/19%
Do You Have Children?				
Yes	6/75%	5/100%	4/50%	15/71.4%
No	2/25%	0%	4/50%	6/28.6%
Who Do You Live With?				
Alone	3/37.5%	1/20%	2/25%	6/28.6%
Spouse/Partner	5/62.5%	3/80%	6/75%	15/71.4%
Children	0%	1/20%	1/12.5%	2/9.5%
Who Do You Cook For?				
Self	4/50%	2/40%	3/37.5%	9/42.9%
Spouse/Partner	5/62.5%	4/80%	5/62.5%	14/66.7%
Children	0%	1/20%	0%	1/4.8%

Table 3. Demographic Data n/%				
Does Someone Cook For You?				
Yes	2/25%	1/20%	4/50%	7/33.3%
No	6/75%	4/80%	4/50%	14/66.7%
If Yes, Who?[b]				
Spouse	2/100%	0%	4/100%	6/85.7%
Other	0%	1/100%	0%	1/14.3%
Who Do You Eat With?				
Alone	3/37.5%	2/40%	3/37.5%	8/38.1%
Spouse/Partner	5/62.5%	4/80%	5/62.5%	14/66.7%
Children	0%	1/20%	1/12.5%	2/9.6%
Have Any Children Recently Moved Out of the Home?[c]				
Yes	0%	0%	2/25%	2/9.5%
No	8/100%	4/100%	6/75%	18/90.5%
Employment				
Currently Employed	4/50%	2/40%	4/50%	10/48%
Retired	4/50%	3/60%	4/50%	11/52%
If Retired, How Long?[d]				
0-5.9 Years	0%	1/33.3%	2/50%	3/42.9%
6-9.9 Years	0%	0%	1/25%	1/14.3%
10-19.9 Years	3/75%	1/33.3%	1/25%	5/14.3%
20+ Years	1/25%	1/33.3%	0%	2/28.5%
How Do You Consider Your Health?				
Better than others'	5/62.5%	3/60%	3/37.5%	11/52.4%
The same as others'	3/37.5%	1/20%	2/25%	6/28.6%
Worse than others'	0%	1/20%	3/37.5%	4/19%
Activities of Daily Living				
Independent	8/100%	5/100%	8/100%	21/100%
What is Your Highest Level of Education?				
High School Graduate	1/12.5%	1/20%	0%	2/9.5%
Some College	2/25%	0%	2/25%	4/19%
College Graduate	0%	2/40%	1/12.5%	3/14.3%

Table 3. Demographic Data n/%				
Post-Graduate Work	5/62.5%	1/20%	5/62.5%	11/52.4%
Vocational Training	0%	1/20%	0%	1/4.8%
What Was Your Household's Total Income Last Year Before Taxes?[e]				
$20,000-$39,999	2/28.6%	0%	2/25%	4/22.2%
$40,000-$59,999	1/14.3%	0%	1/12.5%	2/11.1%
$60,000-$79,999	1/14.3%	0%	0%	1/5.6%
$80,000 or more	3/42.8%	3/100%	5/62.5%	11/61.1%

[a] Generations are segmented by birth year:
Generation X (1965-1980), Baby Boomers (1946-1964), Traditionalists (Pre-1946)
[b] FBCY n=2, MUMC n=1, LCUMC n=4
[c] MUMC n=4
[d] FBCY n=4, MUMC n=3, LCUMC n=4
[e] FBCY n=7, MUMC n=3

B. Focus Group Findings

Analysis of the focus group discussions led to the identification of three main themes: barriers to healthful nutrition, facilitators of healthful nutrition, and desired supports to facilitate healthful nutrition. Subthemes were also identified. Themes and subthemes are presented in Table 4.

Table 4. Themes and Subthemes Identified from Focus Group Discussions
Barriers to Healthful Nutrition
Lack of social supports
Food cultures and social norms
Life events that cause a change in food habits
Food environment and geographic location
Affordability of fresh foods
Time to prepare fresh foods
Lack of accurate or consistent information

Table 4. Themes and Subthemes Identified from Focus Group Discussions
Ambivalent attitude towards healthful eating
Facilitators of Healthful Nutrition
Social supports
Life events that cause a change in attitude about nutrition
Mindfulness
Innovations in services, products, and tools
Desired Supports to Facilitate Healthful Nutrition
Changes in community events in which food is an important component
Recipes of various specifications
Products to make healthier foods more convenient
Tips and tricks for making more healthful choices
Knowledge on updated dietary recommendations

1. Theme: Barriers to Healthful Nutrition

Barriers to healthful nutrition that were identified include lack of social supports; food cultures and social norms; life events that cause a change in food habits; food environment; geographic location; affordability of fresh foods; time to prepare fresh foods; and lack of accurate information.

One of the most commonly identified barrier between all focus groups was a lack of social support. Subjects felt that if members at home such as spouses/significant others or other family members did not support healthful behaviors, then it was harder for them to eat healthfully.

"There are just a lot of things that my husband doesn't like, and so I have to fix something for him, and sometimes I'll fix two meals because I'll fix

something for him and something for me. And sometimes I don't have time or I don't feel like cooking two meals, and so I end up eating stuff I shouldn't eat."

"Barriers can sometimes be just cooking for the rest of the family… you want to watch your weight let's say, but you still have to prepare meals or have all sorts of food in the house that allows you to prepare those meals, then that can be barrier because you're more apt to temptations."

Extending beyond home, social networks within other settings that do not support healthful behaviors were also seen as a barrier. Specifically within faith-based communities, community potlucks or memorial services events where food is an integral component can be a challenging settings to eat healthfully if the established food culture does not focus on healthful options.

"It's hard to find something that's healthy… often the salads are pasta salads and potato salads and broccoli salad with all kinds of creamy stuff on it. So it negates the healthy stuff. Very seldom do you have just a plain bowl of fruit or a bowl of berries."

"Even at the memorial service… somebody brought the big huge plate of brownies from Gordon's, and they're already cut in squares. And I said something like, you know we could probably cut those in half because

people are probably going to take a brownie and cookies and this and that, and I don't remember who it was, they just kind of looked at me like are you crazy? And I was like okay, never mind!"

Food culture and social norms were identified to play a big part in dietary choices, and could be a barrier in situations where healthful food is seen as a less desirable option. Though some subjects felt that healthful food can be desirable for health and taste reasons, they also felt that other people around them did not feel the same way. The idea of food existing within a dichotomy of "good" and "bad" rather than on a spectrum of healthfulness, and this idea being more detrimental than helpful, came up multiple times.

"There's too much emotional impact with food. The whole idea of comfort food is what you correlate to good things in your life. And you think healthy food, and never the twain meets."

"Someone asked me, who is punishing you, because they saw a sandwich I had. I had one of my absolutely favorite sandwiches: sliced tomatoes, and sprouts, and mixed greens on whole grain bread. And they said, what did you do that you're being punished that you're eating this?"

“I think sometimes [a barrier is] being too rigid about good foods versus bad foods… it seems to be counter productive to say "I can't have this, this is bad. I can't eat that”.

“That's our dilemma as human beings. [What] tastes good is generally stuff that we shouldn't be eating, so it's a challenge to eat something really healthy because it doesn't give you a fix.”

“In my life I've often wished somehow that God made broccoli taste like ice cream to me. That would be awesome. But that hasn't happened yet.”

Another barrier that was identified was life events that cause a change in food habits. These events surrounded a change in family size, such as children moving out of the home or a death of a family member. For those who were responsible for preparing food for their family, a change in family size made it difficult to adjust the way they prepared foods.

“Cooking for one is a big problem because either you cook too much, sometimes if you do it on purpose you eat it two days, which is okay, but after two days it's not fun.”

“Not all recipes split good… You take something you've been making your whole life for your family, and you're like, I’m going to cut that in half, and it doesn't work as well.”

Time to prepare foods and affordability of foods were perceived as a barrier for many subjects. When use of time was in competition, convenient yet processed and unhealthful options were more likely to be chosen. Healthier foods were also perceived to be more expensive than processed, and subjects found this to be a significant influence on purchasing decisions.

“[Healthy snacks] aren’t good for you mentally because they cost so dog gone much.”

“I'm not the kind [of person] who likes to put a half hour worth of work for a meal… If I have to put that much effort into it, I'll probably eat it in 10 minutes, it just seems like a bad choice.”

Approximately six months prior to the focus group discussion, one of the rural communities lost their town’s grocery store and was now considered a food desert. This was also seen as a barrier. Additionally, these subjects live in a geographic location that experiences cold, snowy, and icy winter seasons. Subjects identified that this weather affects access to food, especially in food deserts due to issues of transportation and availability of food.

“Now we've got ahead of us winter roads. We still have to go at least ten miles.”

“The unfortunate part is having lost the grocery store. Some of the local gas stations, convenience stores, Dollar General, whatever, they've tried to pull in a little more things to allow for people who can't really drive out of town to be able to have something but it's still not the same as having a grocery store. And you figure that a farmer's market is only once a week. So that's only one day out of the week. And if it's fresh, is it going to stay until the next farmer's market?

“So many of the seniors that can't drive outside of town right now are really struggling because of the food desert sort of situation. And some people have even volunteered to shop for other seniors who can't get out… so we've kind of been struggling since February in figuring out what's going to work for the community.”

Subjects felt that a lack of accurate or consistent information from various sources made it difficult to feel confident in making healthful dietary choices. There were multiple times that subjects asked the researchers, which included a registered dietitian and a dietetic student, clarifying questions about their own nutrition. Between conflicting information online, fad diets, and differing advice from doctors and dietitians, trying to make nutritious choices could be

overwhelming and create a sense of ambivalence. Subjects also pointed out that the education they received in school was different than the various iterations of dietary recommendations and guidelines that have since come out.

> *"We were just grocery shopping with my daughter and she said we need canola oil. And I said stop, because years ago I remember they said canola oil was the best oil to get, so that's what we used for years. And recently I heard something that canola oil wasn't good for you. And I'm like, I don't know, should we get the vegetable, should we get the canola, because it changes. You know, like eggs used to be bad for you, then they were good for you."*

> *"I can't tell you the number of people I know who have done keto and they've lost so much weight and it's ridiculous, and yet my nutritionist son-in-law is like… it's not good for you. And yet you say something like that to someone who's doing keto, and they're like, no, no, no, I'm under doctor's supervision. And so, if a dietitian knows it's not good, and you shouldn't be doing it, then why are doctors supervising that? And so, like it's baffling. It's absolutely baffling… Doctors, if the statistic hasn't changed, get a couple hours out of all their training in what you should eat."*

> *"It gets discouraging sometimes"*

“When I was in elementary school, they talked about the seven basic food groups, and then at some point, I don't remember when, it went to four food groups, and now they talk about a food pyramid. That was in for a while, I don't know what it is now.”

A barrier that was not specifically mentioned by subjects, but that was noted by the researchers, was an ambivalent attitude towards healthful eating. All of the previously mentioned barriers could certainly contribute to this attitude. Some subjects had an interest in making healthful dietary choices, and some had an ambivalent attitude towards healthful eating. A few times it was identified that even though healthful eating could be beneficial for a subject’s health, it was not a priority, even if they had a diet-related chronic disease. Other subjects felt that they had spent so much of their life eating a diet that may not be considered optimal, that it would be too uncomfortable or inconvenient to make changes, even if the changes would be beneficial.

“I have not moved into the newer generation with the really healthy foods or organic food… At my age and my situation it's very difficult for me to change… It’s too late to change.”

“I know that cookies aren't exactly the best thing to eat, and it's a bad choice to make, but it's just what you do”

“I figure we've all got to die of something.”

2. Theme: Facilitators of Healthful Nutrition

Facilitators of healthful nutrition that were identified include having social supports; life events that cause a change in attitude about nutrition; mindfulness, awareness, and knowledge; innovations in services, products, and tools; and self-sufficient activities like hunting and gardening.

Just as a lack of social support was commonly identified as a barrier, having social supports was seen as a major facilitator of healthful nutrition across all focus groups. Social supports between family, friends, and other groups were perceived as sources of encouragement and strength for making and sustaining healthful decisions. This was seen as especially true when people within the subjects’ social networks not only supported healthful behaviors, but also partook in the behaviors as well.

“I think it really helps that the two of us have the same diet plan. It helps with cooking and shopping and everything because we have the support of each other.”

“I think it helps that when I go out to eat with some of the other widows and most of us take something home. I learned that I'm satisfied, stop!”

“If my wife, if she's on a health kick, so am I. It's hard not to be consistent with one another.”

This idea that social supports can encourage healthful behaviors extended beyond the family to include environments such as the church or other organizations. This was attributable to having a sense of accountability, seeing success and benefits of healthful eating in others, and feeling encouraged to make healthful choices.

> *"There's something about being in an atmosphere where people don't encourage you to eat badly."*

> *"'I've found going to the [weight loss] program… it just talks about healthy eating and healthy choices and things like that, I have lost weight… I think that like, going to the TOPS group or having a friend that is encouraging or someone that can help keep you focused [is a help]."*

> *"I remember last year… just about everyone had a cold, but when she got the cold, hers was over in just a couple days and everyone else was just suffering for days and days and she just got over it so quickly. I was so jealous."*

Multiple times, life events related to health were cited as reasons why subjects made changes in their diet. These events were powerful enough to be a motivation for making healthful choices.

“Medical issues [led to a diet change]. Diabetes and other, some of the other things… [We’ve noticed changes in] blood pressure, cholesterol, sugar levels… energy levels, weight loss.”

“I realized somewhat when my husband was going through cardiac rehab a few years ago, and they told him to watch the calories, you know all that stuff, and mindful eating… and I realized that if I had a cup of tea and a sandwich at lunch, I had no room for a fruit or vegetable, so I went to one piece of bread instead of two and put the same meat on it, and then I had room for my veggies or my fruit. So I started eating better, and then we were walking… three times a week so I started losing weight, so I'm watching my weight and it goes up and down and I'm just keeping aware of it. I'm trying to eat better.”

Mindfulness of choices and how they affect the individual was also identified as a facilitator. Eating healthfully can make the body feel good, just as not eating healthfully can make the body feel bad. Being mindful of how choices affect the body can encourage healthful choices. This concept went in hand with having a proactive mindset to perform activities that assist in making healthful choices like meal planning or being aware of portion control.

“We've noticed when we go out to eat, if we eat fish and chips or something that's overly greasy or just out of what we normally eat, we

don't feel good afterwards. We've talked about that, like it sounds good, but I remember last time I felt awful."

"Meal planning [helps]. But knowing what you're going to make so you don't just start throwing stuff together."

"We'll make a choice before we even get our main course, or when they set it down in front of us, cut it in half and that's going home… Right from the beginning, boom!"

"I got hooked on Stouffers dinners. And then I noticed my rings would hardly move, and I started reading all the sodium in there. So that was my big healthy move was not to have any more of the frozen foods."

Subjects identified recent innovations in services, products, and tools that assist them in making mindful choices. The Internet can be a resource for information and recipes, and there are a number of phone apps that one may download to journal food and keep track of their intake. Recent changes in food labeling laws, such as menus listing nutrient content, can be used to track intake as well.[55] Some subjects use meal delivery services as a way to have pre-proportioned meals to fit their dietary needs, or grocery delivery services as a convenient shopping tool. Additionally, kitchen tools such as Instapot that are

designed and marketed to help make cooking more convenient can aid in preparing fresh foods.

“The Internet helps because it's so easy to get recipes and ideas now than it used to be before your time, when we had to go to the library.”

“The internet can also be a help because we had a situation with the garden this year where long after they should have put producing, the butternut squash kept producing all these little ones and we knew that there wasn't enough days in the season left for them to ripen. So I googled how to prepare immature or something… so it can be a help too.”

“Those food journaling apps [are helpful]. You can put what you eat and it tells you how many calories you've had that day and how much salt.”

“We wandered into an ice cream shop… and they had the calories listed…Good thing and bad thing they have the calories listed.”

“One advantage of Hello Fresh, it's all measured out and if you look at the menus and make sure you don't order stuff that is unhealthy, then it's all measured out for you.”

“One thing that I've found that really helps regardless of what kind of diet you have that works with time constraints, is I really like an Instapot. You can cook with little or no oils, it cooks fast.

3. Theme: Desired Supports for Healthful Nutrition

Desired supports for healthful nutrition varied across each focus group and pertained to social changes and education. Community events in which food is an important component are common in faith-based organizations; one group suggested the need for more healthful options at these events.

“Come to our next potluck and say [don’t eat] that”

“It's hard to find something that's healthy, and that would be salads, but often the salads are pasta salads and potato salads and broccoli salad with all kinds of creamy stuff on it. So it negates the healthy stuff. Very seldom do you have just a plain bowl of fruit or a bowl of berries. That would just be delightful.”

Two groups identified a desire for recipes that cater to a small household or are easy and healthy; yet subjects from another group stated they do not use recipes and would not find them helpful.

“Recipes for small numbers of people because we're one or two person households here.”

“I see recipes that look really good, and then look at all these steps. I just think well I don't want to do all that. So healthy and easy. Quick.”

“Easy healthy recipes… that don’t take me 4 hours to cook. I can make it when I get home from work…It has to be as easy as making a cheese sandwich.”

Another desire was to have tips and tricks to help eat more healthfully. Subjects seemed at least somewhat knowledgeable about general healthful nutrition, and it was identified that a lack of education for most subjects was not an issue. They desired information such as how to use non-traditional produce, making healthy ingredient swaps, or choosing better products.

“I don't think the problem is lack of education as much as choices… If you could educate us on how to make the choices that taste good and are right.”

“I would think [cooking demonstrations] would be a valuable thing because part of what stops me sometimes from trying something new, or I'll see various vegetables in the grocery store now, and it's like, oh I wonder what you do with that. So demonstrations of how to prepare

something which is healthy but a little unusual that we haven't seen forever. You know, that's not green beans or broccoli or whatever."

"I think that sometimes we're not aware of the things that we can do to tweak it and I think that would be really valuable as opposed to recipes."

"If it came time to take a trip to the store, and you gave a list that said if you want this, try this, maybe that would be useful… If we had some kind of substitution chart, just something we could refer to, we're pretty good at hanging things on the walls like to do lists."

"I would be open to [small tweaks]. Not a complete overhaul, don't come into my kitchen and take everything out and say this is bad. I know this is bad. But I'd be willing to be introduced to a few different ways to do things without completely changing."

For some subjects, a desire was to know updated dietary recommendations.

"It would be good to hear the updated information, because when I was in elementary school there were seven [food groups], and I can't even remember what they all were, how it was broken down."

IV. Discussion

This qualitative research study, grounded in CBPR principles for the development of health promotion activities at rural and urban churches in Washtenaw county found that older adult needs varied by location (rural/urban), perception and presence of chronic disease, and perceived barriers and facilitators to healthy eating.

Older adults generally have specific age-related needs that should be considered when developing health promotion programming. With older age comes an increased occurrence of chronic disease and medical events that may affect health needs and behaviors. Multiple participants in our focus groups reported chronic diseases, such as diabetes and high blood pressure. There were also some other participants that did not identify that they had a specific chronic disease, but did identify other diet and health-related issues such as increased body weight and low energy levels. We asked these participants what nutrition practices they performed in order to manage these health conditions. We found that perceptions about barriers and facilitators of healthful nutrition were important in influencing dietary behavior and attitudes about nutrition. Our findings support similar research in other populations, and suggest that these perceptions of barriers and facilitators for healthful nutrition are influenced by factors including, but not limited to social, environmental, and cultural factors.[56-58]

Interestingly, many of the identified perceived barriers and resources for healthful eating were opposite to one another. As the subjects listed an item in one category of being a barrier or facilitator, often the item was discussed, and

was also put in the opposite category. For example, if one subject identified having a lack of social support from their spouse as a barrier, another may identify having social support from their spouse as a facilitator. This trend has also been identified in other studies, surrounding various issues like social support, time, and food access.[59,60]

A. Barriers to Healthful Nutrition

The perceived barriers that were identified in our study seemed to build on each other in a way that could accumulate and lead to an ambivalent attitude towards healthful eating. For example, subjects in all groups recurrently identified the cost of fresh foods and time to prepare them as barriers towards healthful eating. Especially in the younger subjects who were still employed, work was cited as a reason why they stated they did not have time to prepare fresh foods. They also stated that it takes more time to shop for fresh food because it has to be done on a more frequent basis since the fresh food will perish before packaged, processed foods. These subjects could identify that processed foods are often less healthful than fresh, but saw their free time as more of a priority than how their diet affects their health. Time was identified as a barrier in both the urban and rural focus groups, and it has consistently been identified as a barrier to nutritious eating in past studies by a variety of demographics including low-income, racial/ethnic minorities, older adults, and rural residents.[29-47] Interestingly, time was also identified as a barrier even for some older participants who were retired and hypothetically would have more free time. Most

often, these older participants were also single or widowed. Without having to fill the role of preparing meals for someone else, relying on processed foods was seen as more convenient. They also stated it was difficult to prepare meals for just themselves without excess food spoiling or recipes not turning out right when downsized, therefore contributing to wasted food and money.

In the rural focus groups, it did not seem that reliance on processed foods was influenced by their farther distances from grocery stores compared to the urban focus group. Compared to some previous studies with rural demographics that reported far distances from grocery stores as a barrier to healthful eating, access to food was not a concern for most subjects in our focus groups.[30-33] The subjects acknowledged that they may have a farther distance to drive, but they also have access to farmer's markets. Indeed, studies in rural communities highlight farmers markets or home gardens as common food resources.[31-34]

One of our rural focus groups, which was also located in a food dessert, did note that in their community, some of the oldest adults, or some older adults with less functional independence, had to rely on others to drive far and shop for them because they are unable to drive. This could be of concern, as it has been identified that there is sometimes a social stigma regarding lack of functional independence among older adults.[61] Whether the individual feels like a burden or wants to preserve their independence, some older adults may not want to ask for help in regards to acquisition of food, and may have detrimental health outcomes because of it if. Previous studies have identified that older adults may be reluctant to ask for assistance pertaining to acquiring food.[45-47] This focus group

pointed out that although the members within the focus group did not have trouble affording food, some of the older adults in the larger community may have trouble because they are on fixed incomes. Lack of transportation and food accessibility have been identified as barriers in other studies exploring barriers to food intake.[34-38] In the rural setting, public transportation is often minimal, if existent at all. In this particular focus group, the apparent risk for poor nutrition was higher for the intersecting demographics of rural geographic location, low-income, and older individual.

B. Facilitators of Healthful Nutrition

The most commonly identified facilitator of healthful nutrition was having social support from significant others. Most participants of the focus groups were in a relationship. These participants stated that the desires, choices, and willingness to support change in their significant others greatly impacted the course and sustainability of modifying dietary behaviors. In situations where a spouse was supportive and also partook in implementing better nutrition behaviors, both people actually benefited. Attenuating health conditions such as high blood pressure, diabetes, and weight loss was the reason that was most cited for making a household change in dietary behaviors. For example, one couple who attended a focus group identified that one spouse wished to make dietary changes in order to improve various poor health conditions. The other spouse was initially reluctant to participate, but did so in order to provide support and encouragement. Both found that making change was easier when making

changes together, and both experienced improvements in their health that encouraged them to sustain their changes. The notion of synchronization of dietary choices being a facilitator for healthful nutrition was identified by other participants as well. Benefits of support from a spouse extended beyond just a social aspect to also include help with shopping and preparing foods. Other studies have identified the importance of social support for health behaviors.[62.63] Further, older adults have been identified at risk of poor health related to social isolation and loss of support as they age through death of a spouse, family, and friends.[64-66]

Innovations in services, products, and tools was also a remarkable finding from our focus groups. Participants commonly identified the internet as a useful tool for facilitating healthful nutrition. They stated that they used the internet to find recipes and look up information. Specific websites for meal prepping and shopping for groceries were discussed. It did seem that participants of all ages were familiar or comfortable using the internet. Some participants utilized meal delivery, e.g. Blue Apron, or grocery delivery services, e.g. Shipt, to make preparing fresh foods easier. However, paid meal services can be costly and may not be accessible for all income levels. The participants from our focus groups identified that some older adults in the community who are on fixed incomes may not be able to afford to pay for home-delivery of meals and groceries.

C. Desired Supports to Facilitate Healthful Nutrition

The desired supports for healthful nutrition that were identified largely centered around education. Subjects wanted to know about updated dietary recommendations, tips for making more healthful choices in purchasing and preparing foods, and recipes to fit their specific needs. It was interesting that many of the subjects had previously identified the internet as an important facilitator for healthful nutrition by means of looking up information or recipes, yet the participants felt like they wanted more education. Many subjects did identify that they are confused about what they should eat, due to conflicts of information online, received from health professionals, and products pushed by the food industry. With so much conflicting information, it can be frustrating to figure out what to eat. It is easy to see how a lack of confidence in knowing what to eat can lead to ambivalence in dietary choices. It seemed that subjects of a wide range of ages often used the internet. With the growing integration of technology into everyday life for people of all ages, nutrition interventions can capitalize upon this. However, it is important to note that access to internet or computers, and levels of health and technological literacy, can vary in different communities, especially low-income and rural.[67]

Another desired support for healthful nutrition was a change in organizational food culture. Especially in the faith-based community, events largely center around food. Most of the foods brought to these events were not what the subjects felt were “healthy”. Other studies have identified that foods typical of Christian religious events, especially in rural and non-white

communities, can be higher in fat, sugar, sodium, and calories.[32, 41-43] Though the subjects thought that modifying the foods at these events to be healthier would be beneficial for the community, reluctance to initiate change was apparent due to foreseen disagreement from other community members. The subjects did not wish to create social friction, seeing that sticking with the status quo was easier.

It was evident that many subjects could identify their own or community nutrition behaviors as being either beneficial or harmful towards their health. Most participants appeared to have enough baseline knowledge to make generally healthful decisions. This population did overall have high levels of education, with the majority of participants having college education (85.7%) compared to the entire county (55.2%).[68]

It seemed that a lack of knowledge or cognizance of their own behaviors was not a barrier to healthful eating; rather, attitudes, motivations, and social factors seemed to play a larger part in influencing their behaviors. Perhaps the most commonly identified external influencing factor from our study that affected an individual's dietary choices was that of their social context, whether through interactions within families, or within the communities at large. This finding supports several other qualitative studies that have found social support provided from a variety of sources including family, friends, community members, and healthcare professionals, as essential for encouraging healthful behaviors.[69-72]

D. Generational Differences Amongst Focus Group Participants

We did note some generational differences between participants. First, it was clear that in discussing dietary recommendations, different generations had

received different education in their formative education. Nutrition recommendations continue to evolve over time, and if there is a 20 year difference between two individuals, the education they received regarding nutrition as they grew up and that stuck with them through their adulthood would be conceivably different. Second, the younger participants seemed to be more comfortable using technology, mostly the internet, to perform diet-related activities such as looking up recipes and using online grocery delivery services.

V. Conclusion

Communities that share similar demographics tend to also share similar beliefs surrounding health. However, these commonalities are not absolute and the resources and priorities of communities may be different. Therefore, in order for programming to be effective, it must take into consideration all unique determinants that influence a target community's health. For some people, facing a multitude of perceived social, emotional, monetary, and otherwise barriers towards eating healthfully can outweigh the benefits, even in the face of disease. Exploring ambivalence of the individual within the context of their community, and acknowledging their perceptions and the realities of their environments, is crucial for effective health promotion programming.[73,74] Programming should also seek to capitalize on existing resources within the population's community in order to help the individuals adapt their behaviors in a sustainable way and encourage self-efficacy.[50]

Faith-based organizations can serve as a vehicle for health promotion programming in that the organizational structure can influence beliefs, values, and behaviors. These organizations can provide social, cultural, and physical resources for implementing interventions. Faith-based organizations can especially be useful for interventions targeting older adults, as the median ages of members belongings to major religions within the United States are over 50 years old and growing.[75] To understand the needs of the organization members as a community, focus groups can provide valuable insight into perceived barriers and facilitators of, and desired supports for, health behaviors. This study

found various factors that influence the dietary behaviors of older adults in the faith-based community, and suggests that interventions should consider intersecting factors that contribute to the nutrition-related behaviors of an individual and the community.

This study was mainly limited by its demographic profile and small sample size. Most participants were white, even though African-Americans tend to have a higher proportion of religious involvement than other ethnicities.[76] People who are not white often face more disparities that affect their nutrition poorly.[77] All focus groups took place in Christian churches, and did not engage communities of other religions. Though Christianity is one of the United States' major religions, Islam is the fastest growing religion[78], and every religion has different dietary practices and nutritional considerations. Most of the participants were women, had higher levels of education, and had higher level of incomes. Two rural faith-based communities were interviewed while only one urban community was interviewed. Considering these limitations, the findings amongst different demographics of older adults and rural geographic location were consistent with previously reviewed literature. In addition, participants may have experienced social desirability bias if they thought that misrepresenting their beliefs and eating habits to seem more healthful would make them viewed by their peers more favorably.[79,80]

Overall, this study supports existing research about perceived barriers and facilitators for healthful nutrition in older adults in the faith-based community, and further explores the rural demographic. Health promotion programming should be

informed by themes that commonly occur within the demographics of its target communities, while still respecting the community as unique with its own particular needs and resources. It should also consider intersecting demographics and the intersection of themes. Future research could explore behavioral themes related to healthful nutrition in other major religions, especially those that have particular dietary practices.

VI. References

1. Mendis S. Global status report on noncommunicable diseases 2014. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/148114/9789241564854_eng.pdf;jsessionid=8D40106D0056F3773FFA505555F3AC61?sequence=1. Published 2014. Accessed September 20, 2019.

2. Division of Population Health, Healthy Aging Program. Healthy Aging At A Glance 2015. https://www.cdc.gov/chronicdisease/resources/publications/aag/pdf/2015/healthy-aging-aag.pdf. Accessed September 20, 2019.

3. Schmidt H. Chronic Disease Prevention and Health Promotion. Public Health Ethics: Cases Spanning the Globe. https://www.ncbi.nlm.nih.gov/books/NBK435779/. Published April 13, 2016. Accessed September 20, 2019.

4. U.S. Department of Health and Human Services and U.S. Department of Agriculture. Dietary Guidelines for Americans 2015–2020 8th Edition. https://health.gov/dietaryguidelines/2015/guidelines/. Published December 2015. Accessed September 20, 2019.

5. NHANES. Usual Nutrient Intake from Food and Beverages, by Gender and Age, What We Eat in America 2013-2016. Food Surveys Research Group : USDA ARS. http://www.ars.usda.gov/nea/bhnrc/fsrg. Published July 31, 2018. Accessed October 2, 2019.

6. Campbell MK, Hudson MA, Resnicow K, Blakeney N, Paxton A, Baskin M. Church-based health promotion interventions: evidence and lessons learned. Annu Rev Public Health. 2007;28:213–234.

7. Pew Research Center. Religious Landscape Study. Pew Research Center's Religion & Public Life Project. https://www.pewforum.org/religious-landscape-study/christians/christian/. Published May 11, 2015. Accessed September 21, 2019.

8. Krueger RA, Casey MA. Focus Groups: A Practical Guide for Applied Research. Los Angeles: Sage Publ.; 2014.

9. Arias E, Xu J. United States Life Tables, 2017. Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_07-508.pdf. Published June 24, 2019. Accessed November 9, 2019.

10. Shrestha L. Life Expectancy in the United States. Congressional Research Service.

https://www.everycrsreport.com/files/20050303_RL32792_ca5374f4af13937c82f8749ffee41be74a3f5909.pdf. Published March 3, 2015. Accessed November 9, 2019.

11. Kaeberlein M. How healthy is the healthspan concept?. Geroscience. 2018;40(4):361–364. doi:10.1007/s11357-018-0036-9.

12. What is Healthy Ageing? World Health Organization. https://www.who.int/ageing/healthy-ageing/en/. Published February 8, 2018. Accessed November 10, 2019.

13. Rémond D, Shahar DR, Gille D, et al. Understanding the gastrointestinal tract of the elderly to develop dietary solutions that prevent malnutrition. Oncotarget. 2015;6(16):13858–13898. doi:10.18632/oncotarget.4030.

14. Millen BE, Abrams S, Adams-Campbell L, et al. The 2015 Dietary Guidelines Advisory Committee Scientific Report: Development and Major Conclusions. Adv Nutr. 2016;7(3):438–444. Published 2016 May 16. doi:10.3945/an.116.012120.

15. Trovato A, Nuhlicek DN, Midtling JE. Drug-nutrient interactions. Am Fam Physician. 1991;44:1651–1658.

16. Pilgrim AL, Robinson SM, Sayer AA, Roberts HC. An overview of appetite decline in older people. Nurs Older People. 2015;27(5):29–35. doi:10.7748/nop.27.5.29.e697.

17. Huang DL, Rosenberg DE, Simonovich SD, Belza B. Food Access Patterns and Barriers among Midlife and Older Adults with Mobility Disabilities. J Aging Res. 2012;2012:231489. doi:10.1155/2012/231489.

18. Niccoli T, Partridge L. Ageing as a risk factor for disease. Current Biology. 2012;22(17):R741–52. 10.1016/j.cub.2012.07.024.

19. Preventing chronic diseases: a vital investment. World Health Organization. http://www.who.int/chp/chronic_disease_report/en/. Published December 21, 2015. Accessed November 10, 2019.

20. Feinleib M. Dictionary of Epidemiology, Fourth Edition - Edited by John M. Last, Robert A. Spasoff, and Susan S. Harris. OUP Academic. https://academic.oup.com/aje/article/154/1/93/117432. Published July 1, 2001. Accessed November 9, 2019.

21. Boyle MA. Community Nutrition in Action: An Entrepreneurial Approach. Boston, MA: Cengage Learning; 2017.

22. Normalized food expenditures by final purchasers and users, from previously-published estimates. https://www.ers.usda.gov/data-products/food-expenditure-series/food-expenditure-series/#Archived Food Expenditure Tables. Published September 20, 2018. Accessed December 23, 2019.

23. Creamed, Canned And Frozen: How The Great Depression Revamped U.S. Diets. NPR. https://www.npr.org/sections/thesalt/2016/08/15/489991111/creamed-canned-and-frozen-how-the-great-depression-changed-u-s-diets. Published August 15, 2016. Accessed December 24, 2019.

24. Institute of Medicine (US) Committee on the Future Health Care Workforce for Older Americans. Retooling for an Aging America: Building the Healthcare Network. Washington DC: National Academies Press https://www.ncbi.nlm.nih.gov/books/NBK215401/?report=classic. Accessed December 24, 2019.

25. 2016 Food and Health Survey: A “Booming” Generation: Beliefs, Barriers, and Behaviors. https://foodinsight.org/wp-content/uploads/2016/05/FINAL-IFIC-Foundation-Food-Health-Boomer-Report-1-3_0.pdf. Published May 11, 2016. Accessed December 25, 2019.

26. 2019 Food and Health Survey: Special Report on Gen X Consumers. https://foodinsight.org/wp-content/uploads/2019/10/Gen-X-Special-Report_AICR-IFIC-.pdf. Published October 15, 2019. Accessed December 25, 2019.

27. Huff RM, Kline MV. Health Promotion in the Context of Culture. https://www.sagepub.com/sites/default/files/upm-binaries/23214_Chapter_1.pdf. Published January 1, 2007. Accessed October 13, 2019.

28. Casstevens W. A pilot study of health and wellness program development in an International Center For Clubhouse Development (ICCD) clubhouse: Procedures, implementation, and implications. Psychiatric Rehabilitation Journal. 2011;35:37–43. doi: 10.2975/35.1.2011.37.43.

29. Sloane DC, Diamant AL, Lewis LB, et al. Improving the nutritional resource environment for healthy living through community-based participatory research. J Gen Intern Med. 2003;18(7):568–575. doi:10.1046/j.1525-1497.2003.21022.x.

30. Teufel-Shone NI, Williams S. Focus groups in small communities. Prev Chronic Dis. 2010;7(3):A67.

31. Shanks CB, Haack S, Tarabochia D, Bates K, Christenson L. Factors Influencing Food Choices Among Older Adults in the Rural Western USA. SpringerLink. https://link.springer.com/article/10.1007/s10900-016-0283-6. Published October 21, 2016. Accessed October 3, 2019.

32. Hagues R, Lee JS, Phua J. Nutrition Education for Low-Income Population through Social Marketing: Insight from SNAP-Ed Eligible Participants. The Federation of American Societies for Experimental Biology Journal. https://www.fasebj.org/doi/abs/10.1096/fasebj.30.1_supplement.901.24. Published April 1, 2016. Accessed October 4, 2019.

33. Gutschall M, Marchetti J, Thompson K. Counseling Strategies to Improve Nutrition Care for Rural Appalachian Patients. Topics in Clinical Nutrition. https://journals.lww.com/topicsinclinicalnutrition/FullText/2019/01000/Counseling_Strategies_to_Improve_Nutrition_Care.9.aspx?casa_token=-7Eo5LV_BLkAAAAA:deVjlcLybG1TagF4dq5tJ8S7Mhn8LAyZzlybVhgOmECII-bZARlGP5ZaPCM7ntCGByQyErSFH4d8i_xtD7nEGReB. Published January 1, 2019. Accessed October 3, 2019.

34. Sriram U, Morgan EH, Graham ML, Folta SC, Seguin RA. Support and Sabotage: A Qualitative Study of Social Influences on Health Behaviors Among Rural Adults. Wiley Online Library. https://onlinelibrary.wiley.com/doi/full/10.1111/jrh.12232?casa_token=v45WwrWtGgcAAAAA:E8XnMKW_0oeHaJNRwhkFWDwLKgulpXH4Y-BfXAkY90QuuzCx9F7Eu5GrWf8_WF715blmLTznMuL5cX-8. Published January 3, 2017. Accessed October 1, 2019.

35. Gregory CA, Coleman-Jensen A. Food Insecurity, Chronic Disease, and Health Among Working-Age Adults. U.S. Department of Agriculture. https://www.ers.usda.gov/webdocs/publications/84467/err-235.pdf?v=0. Published July 2017. Accessed October 13, 2019.

36. Kaiser L, Martinez J, Horowitz M, et al. Adaptation of a culturally relevant nutrition and physical activity program for low-income, Mexican-origin parents with young children. Prev Chronic Dis. 2015;12:E72. Published 2015 May 14. doi:10.5888/pcd12.140591.

37. Hagues R et al. Social marketing nutrition education for low-income population. Taylor & Francis. https://www.tandfonline.com/doi/full/10.1080/19371918.2018.1469065. Published May 14, 2018. Accessed October 4, 2019.

38. Reicks M, Randall J, Haynes B. Factors affecting consumption of fruits and vegetables by low-income families. https://jandonline.org/article/0002-8223(94)92467-8/fulltext. Published November 1994. Accessed October 15,

2019

39. Laraia B, Leak T, Leung C. Biobehavioral Factors That Shape Nutrition in Low-Income Populations: A Narrative Review. American Journal of Preventive Medicine. https://www.sciencedirect.com/science/article/pii/S0749379716303099. Published January 18, 2017. Accessed October 15, 2019.

40. K.KumanyikaPHD S. Diet and nutrition as influences on the morbiditymortality gap. Annals of Epidemiology. https://www.sciencedirect.com/science/article/abs/pii/104727979390129R. Published July 14, 2010. Accessed October 15, 2019.

41. Cunningham TJ, Croft JB, Liu Y, Lu H, Eke PI, Giles WH. Vital Signs: Racial Disparities in Age-Specific Mortality Among Blacks or African Americans - United States, 1999-2015 [published correction appears in MMWR Morb Mortal Wkly Rep. 2017 May 12;66(18):490]. MMWR Morb Mortal Wkly Rep. 2017;66(17):444–456. Published 2017 May 5. doi:10.15585/mmwr.mm6617e1.

42. Hurt T et al. Black Women's Recommendations for Developing Effective Type 2 Diabetes Programming - Tera R. Hurt, Asani H. Seawell, Carolyn Cutrona, Margaret C. O'Connor, Randie D. Camp, Roxanne Duran, Reid Elderts, Chrishelda Green, Vanessa Hara, Jenna Pattee, 2017. SAGE Journals. https://journals.sagepub.com/doi/full/10.1177/2333393617715335#articleCitationDownloadContainer. Published June 23, 2017. Accessed October 4, 2019.

43. Sealy Y. Parents' Food Choices: Obesity Among Minority Parents and Children. Taylor & Francis. https://www.tandfonline.com/doi/full/10.1080/07370010903466072. Published February 1, 2010. Accessed October 15, 2019.

44. Smith TM, Dunton GF, Pinard CA, Yaroch AL. Factors influencing food preparation behaviours: Findings from focus groups with mexican-american mothers in southern california. Public Health Nutr. 2016;19(5):841-850. http://ezproxy.emich.edu/login?url=https://search.proquest.com/docview/1771111620?accountid=10650. doi: http://dx.doi.org/10.1017/S1368980015001949.

45. Barnett T, Praetorius R. Knowledge is (Not) Power: Healthy Eating and Physical Activity for African-American Women. Taylor & Francis. https://www.tandfonline.com/doi/full/10.1080/00981389.2015.1005272. Published April 23, 2015. Accessed October 15, 2019.

46. USF Health, Villages Study Interdisciplinary Faculty Leadership Team and Advisory Board. "You Can't Get a Side of Willpower": Nutritional Supports and

Barriers in The Villages, Florida. Taylor & Francis. https://www.tandfonline.com/doi/full/10.1080/21551197.2014.907760. Published May 14, 2014. Accessed October 2, 2019.

47. USDA/NIFA Northeast Regional Technical Project. Community Priorities for Healthy Eating in Older Adults. Taylor & Francis. https://www.tandfonline.com/doi/full/10.1080/21551197.2017.1365039. Published October 19, 2017. Accessed October 3, 2019.

48. Israel et al BA. Methods for Community-Based Participatory Research for Health. 2nd ed. San Francisco, CA: Jossey-Bass; 2013.

49. Hoerr K, Francis S, Jennifer M, Peterson M, Franke W. Promoting the Congregate Meal Program to the Next Generation of Rural-Residing Older Adults. Taylor & Francis. https://www.tandfonline.com/doi/full/10.1080/21551197.2016.1163313. Published May 6, 2016. Accessed October 5, 2019.

50. Clark MJ et al. Involving Communities in Community Assessment. Wiley Online Library. https://onlinelibrary.wiley.com/doi/full/10.1046/j.1525-1446.2003.20606.x. Published October 28, 2003. Accessed October 6, 2019.

51. Israel B et al. Review of Community-Based Research: Assessing Partnership Approaches to Improve Public Health. Annual Review of Public Health. https://www.annualreviews.org/doi/full/10.1146/annurev.publhealth.19.1.173#_i6. Published May 1998. Accessed October 12, 2019.

52. Wilcox S, Laken M, Parrott AW, et al. The faith, activity, and nutrition (FAN) program: design of a participatory research intervention to increase physical activity and improve dietary habits in African American churches. Contemp Clin Trials. 2010;31(4):323–335. doi:10.1016/j.cct.2010.03.011.

53. Reblin M, Uchino BN. Social and emotional support and its implication for health. Curr Opin Psychiatry. 2008;21(2):201–205. doi:10.1097/YCO.0b013e3282f3ad89.

54. Foley G, Timonen V. Using Grounded Theory Method to Capture and Analyze Health Care Experiences. Health Serv Res. 2015;50(4):1195–1210. doi:10.1111/1475-6773.12275.

55. Center for Food Safety and Applied Nutrition. Menu and Vending Machine Labeling. U.S. Food and Drug Administration. https://www.fda.gov/food/food-labeling-nutrition/menu-and-vending-machine-labeling. Published April 12, 2018. Accessed February 2, 2020.

56. McAndrew LM, Musumeci-Szabó TJ, Mora PA, et al. Using the common sense model to design interventions for the prevention and management of chronic illness threats: from description to process. Br J Health Psychol 2008;13:195–204

57. Breland JY, McAndrew LM, Gross RL, Leventhal H, Horowitz CR. Challenges to healthy eating for people with diabetes in a low-income, minority neighborhood. Diabetes Care. 2013;36(10):2895-2901. doi:10.2337/dc12-1632

58. Heo S, Lennie TA, Moser DK, Okoli C. Heart failure patients' perceptions on nutrition and dietary adherence. Eur J Cardiovasc Nurs. 2009;8(5):323-328. doi: 10.1016/j.ejcnurse.2009.05.005

59. Wilcox S, Oberrecht L, Bopp M, Kammermann SK, McElmurray CT. A qualitative study of exercise in older African American and white women in rural South Carolina: perceptions, barriers, and motivations. Journal of women & aging. https://www.ncbi.nlm.nih.gov/pubmed/15914418. Published 2005. Accessed February 17, 2020.

60. Seguin R, Connor L, Nelson M, LaCroix A, Eldridge G. Understanding barriers and facilitators to healthy eating and active living in rural communities. Journal of nutrition and metabolism. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4276670/#B15. Published December 11, 2014. Accessed February 17, 2020.

61. Canvin K, MacLeod CA, Windle G, Sacker A. Seeking assistance in later life: how do older people evaluate their need for assistance?. Age Ageing. 2018;47(3):466–473. doi:10.1093/ageing/afx189.

62. Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: a meta-analytic review. PLoS Med. 2010;7(7):e1000316. Published 2010 Jul 27. doi:10.1371/journal.pmed.1000316.

63. Berkman LF, Glass T, Brissette I, Seeman TE. From social integration to health: Durkheim in the new millennium. Soc Sci Med. 2000;51(6):843–857. doi:10.1016/s0277-9536(00)00065-4.

64. Conklin AI, Forouhi NG, Surtees P, Khaw KT, Wareham NJ, Monsivais P. Social relationships and healthful dietary behaviour: evidence from over-50s in the EPIC cohort, UK. Soc Sci Med. 2014;100(100):167–175. doi:10.1016/j.socscimed.2013.08.018.

65. Vesnaver E, Keller H, Sutherland O, Maitland S, Locher J. Alone at the Table: Food Behavior and the Loss of Commensality in Widowhood. The Journals of

Gerentology. 2016;71(6):1059-1069.

66. Lumbers M., Raats M. Food choices in later life. In: Shepherd R., Raats M., editors. The psychology of food choice (Vol. Frontiers in nutritional science, No. 3) CABI Publishing; Wallingford, UK: 2006. pp. 280–310.

67. Anderson M, Kumar M. Digital divide persists even as lower-income Americans make gains in tech adoption. Pew Research Center. https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/. Published May 7, 2019. Accessed February 20, 2020.

68. U.S. Census Bureau QuickFacts: Washtenaw County, Michigan. Census Bureau QuickFacts. https://www.census.gov/quickfacts/washtenawcountymichigan. Accessed March 2, 2020.

69. Heo S. Bentley B, De Jong MJ, Moser DK, Peden AR. Factors related to nonadherence to low sodium diet recommendations in heart failure patients. Eur J Cardiovasc Nurs. 2005;4:331–336.

70. Khan MS, Bawany FI, Mirza A, Hussain M, Khan A, Lashari MN. Frequency and predictors of non-compliance to dietary recommendations among hypertensive patients. J Community Health. 2014;39:732–736. doi: 10.1007/s10900-014-9819-9.

71. Conklin AI, Forouhi NG, Surtees P, Khaw KT, Wareham NJ, Monsivais P. Social relationships and healthful dietary behaviour: evidence from over-50s in the EPIC cohort, UK. Soc Sci Med. 2014;100(100):167–175. doi:10.1016/j.socscimed.2013.08.018.

72. Ashton LM, Hutchesson MJ, Rollo ME, Morgan PJ, Collins CE. Motivators and Barriers to Engaging in Healthy Eating and Physical Activity. Am J Mens Health. 2017;11(2):330–343. doi:10.1177/1557988316680936.

73. Carnegie MA, Bauman A, Marshall AL, Mohsin M, Westley-Wise V, Booth ML. Perceptions of the physical environment, stage of change for physical activity, and walking among Australian adults. Res Q Exerc Sport. 2002;73(2):146–155. doi:10.1080/02701367.2002.10609003.

74. Nieuwendyk LM, Belon AP, Vallianatos H, et al. How perceptions of community environment influence health behaviours: using the Analysis Grid for Environments Linked to Obesity Framework as a mechanism for exploration. Health Promot Chronic Dis Prev Can. 2016;36(9):175–184. doi:10.24095/hpcdp.36.9.01.

75. Age structure and median age of U.S. religious groups. Pew Research Center. https://www.pewresearch.org/fact-tank/2016/07/11/which-u-s-religious-groups-are-oldest-and-youngest/ft_16-07-15_rlsbyage/. Published July 8, 2016. Accessed February 22, 2020.

76. Levin JS, Taylor RJ, Chatters LM: Race and gender differences in religiosity among older adults: findings from four national surveys. J Gerontol. 1994;49(3):S137–S145. 10.1093/geronj/49.3.S137.v.

77. Satia JA. Diet-related disparities: understanding the problem and accelerating solutions. J Am Diet Assoc. 2009;109(4):610–615. doi:10.1016/j.jada.2008.12.019.

78. The Changing Global Religious Landscape. Pew Research Center's Religion & Public Life Project. https://www.pewforum.org/2017/04/05/the-changing-global-religious-landscape/. Published December 31, 2019. Accessed February 24, 2020.

79. Hollander J. The Social Contexts of Focus Groups. Journal of Contemporary Ethnography. 2004;33(5):602-637. doi:DOI: 10.1177/0891241604266988.

80. Latkin CA. Social Desirability Response Bias and Other Factors That May Influence Self-Reports of Substance Use and HIV Risk Behaviors: A Qualitative Study of Drug Users in Vietnam. AIDS Education and Prevention: 2016;28(5):417-425.

Appendix A. Demographic Survey

Demographic Questions

Personal Data and History

Gender: ____ Male ____ Female

What is your birthdate? Month: _____ / Day:_____ / Year: _____

How old are you today? _____

What language do you primarily speak?

____ English ____ Other, please indicate: _____

Which of the following best describes your racial and ethnic background (check all that apply)?

____ American Indian or Alaskan Native
____ Asian/ Oriental or Pacific Islander
____ Black/ African American
____ Hispanic/ Spanish
____ White/ Caucasian
____ Other
____ Unknown

What country were you born? _____

Marital Status:

____ Married/ Significant Other
____ Separated
____ Divorced
____ Single
____ Widowed
____ Other

Live with, Check all that apply:

____ Spouse/partner
____ Children
____ Parents
____ Sibling(s)
____ Alone
____ Roommate
____ Other, please identify: _____

Do you have children?

____ Yes ____ No

If yes, how many? ____ 1
____ 2
____ 3
____ 4
____ 5 or more

If you have children, have they recently (in the last year) moved out from your home?

____ Yes ____ No

Are you employed outside of your home?

____ Yes ____ No

Are you retired?

____ Yes ____ No

If yes, how long ago did you retire? _____

Activities of Daily Living

____ Independent ____Need Assistance

What is the highest grade you completed in school?

____ 8th grade or less
____some high school
____ high school graduate
____ some college
____ college graduate
____ post-graduate work
____ other

Which of the following categories best describes your household's total income last year before taxes. Please include income from all sources such as salaries and wages, Social Security, retirement income, investments, and other sources.

____ Less than $20,000
____ $20,000 - $39,999
____ $40,000 - $59,999
____$60,000 - $79,999
____$80,000 or more
____ Do not know