1-1-2013

Using a Community-Based Participatory Research Approach to Address Individual and Community Health in Charleston, MS. The Initial Step: A Formative Needs Assessment

Catherine Dane Woodyard
University of Mississippi

USING A COMMUNITY-BASED PARTICIPATORY RESEARCH APPROACH TO ADDRESS INDIVIDUAL AND COMMUNITY HEALTH IN CHARLESTON, MISSISSIPPI

THE INITIAL STEP: A FORMATIVE NEEDS ASSESSMENT

A Dissertation presented for the Doctorate of Philosophy Degree
in the Department of Health, Exercise Science, and Recreation Management
The University of Mississippi

CATHERINE DANE WOODYARD

May 2013

ABSTRACT

The purpose of this formative study was to use a Community-Based Participatory Research (CBPR) approach to conduct a comprehensive health needs assessment (CHNA) in Charleston, Mississippi (MS) to determine perceived needs of the community and identify priority health issues. A second purpose was to provide methodological and scholarly contributions to the existing literature regarding CBPR and CHNAs. The target population was residents living in Charleston, MS (N=2,193). Eighty-five residents participated in the study. This was a five-part study including: (1) Key informant interviews (n=11), (2) Focus groups (n=8), (3) Assessment of the built environment, (4) Assessment of the nutrition environment, and (5) Assessment of policy.

Findings of the needs assessment revealed the priority health concerns in the community: obesity, diabetes, hypertension, asthma, stroke, cancer, stress, depression, prescription drug non-compliance, heart disease, limited access to health care, limited access to healthy foods, and limited health knowledge. The greatest social concerns identified were high school drop out rate, teen pregnancy, poverty, domestic violence, poor housing, alcohol abuse, drugs, smoking, limited jobs, limited education, illiteracy, and few social opportunities. Findings revealed the environmental concerns were chemicals from farming, smoking, the water supply system, and the lack of recycling available in the community.

The assessment of the nutrition environment showed that residents have limited options available for purchasing healthy food. The assessment of the built environment showed the

community is not physical activity friendly and residents have limited resources for physical activity. The assessment of policies revealed a need for policies to support health. Findings also identified assets, resources, and organizations in the community contributing to health and wellness. To improve health and wellness in the community there is need for a community recreation facility, worksite and community wellness programs, community health education, after school programs, group fitness classes, a farmers market, outdoor recreation facilities, increased job opportunity, recycling, and policy changes. Findings of the needs assessment describe and identify the priority health issues, needs, and service gaps and will be used to inform future planning, development, implementation, and evaluation of programs to improve health.

DEDICATION

This dissertation is dedicated to my friends and my entire family for their constant encouragement, continuous support, and unconditional love. I knew there was love in my family before I even knew the word for it. Specifically, this dissertation is dedicated, to my mom, JoAnne, and my stepfather, Gary, who allowed me to live at home during this four-year journey. Thank you for the trips we took at just the right times, for the morning and evening conversations, and for always being there and uplifting me when I was down or when it was November and April and the semester was roaring in full swing with enormous stress. Their kindness, understanding, generosity, friendship, and companionship helped make this journey possible. And to my sister, Anna, who served as my running partner at least twice a week over the years, for her friendship, support, encouragement, wisdom, and ability to listen. Those runs were often all I had time for in terms of us hanging out but they meant more to me than she could ever know and I will forever treasure our time here in Oxford together. She is the most wonderful and incredible person I know and I am blessed to call her my sister. And lastly this dissertation is dedicated to Ben, my best friend and confidant, who came into my life in the heat of the journey and often felt the burden associated with dating someone who is working on her PhD. His unprecedented patience, companionship, continuous encouragement, support, and friendship also helped make this journey possible and much much more enjoyable. I cannot imagine this journey without my family nearby and I am forever grateful to The Lord for leading us all to Oxford for this time in our lives. It has been a very special time.

LIST OF ABBREVIATIONS OR SYMBOLS

Abbreviation	Description
US	United States
MS	Mississippi
NY	New York
UM	University of Mississippi
RWJF	Robert Wood Johnson Foundation
CARE	Charleston Arts and Revitalization Effort
USDHHS	United States Department of Health and Human Services
CDC	Centers for Disease Control and Prevention
NIH	National Institutes of Health
CBPR	Community-Based Participatory Research
CHNA	Comprehensive Community-Based Health Needs Assessment
CAB	Community Advisory Board
NEMS	Nutrition Environment Measures Survey
NEMS-S	Nutrition Environment Measures Survey – Store
NEMS-R	Nutrition Environment Measures Survey – Restaurant
RALA	Rural Active Living Assessment
S-PAPA	School Physical Activity Policy Assessment
GLBTQ	Gay, Lesbian, Bi-sexual, Transgender, and Questioning Youth

Abbreviation	Description
NYAANCART	New York Asian American Network for Cancer Awareness Research and Training
NYYWA	New York Taxi Workers Alliance
MSFW	Migrant and Seasonal Farm Workers
AI	American Indian
IHCRC	Indian Health Care Resource Center
NGT	Nominal Group Technique
HCRC	Health Care Resource Center
RD	Registered Dietician
ER	Emergency Room
ATV	All Terrain Vehicle
WIC	Women Infants and Children
STD	Sexually Transmitted Disease
MRI	Magnetic Resonance Imaging
CT Scan	Computed Tomography Scan
ODD	Oppositional Defiance Disorder
ADD	Attention Deficit Disorder
SHI	School Health Index
NHIS	National Health Interview Survey
BRFSS	Behavioral Risk Factor Surveillance System
ADHD	Attention Deficit Hyperactive Disorder
PTSD	Post Traumatic Stress Disorder

Abbreviation	Description
ADHD	Attention Deficit Hyperactive Disorder
PTSD	Post Traumatic Stress Disorder
BMI	Body Mass Index
WC	Waist Circumference
WtHR	Waist to Hip Ratio
RN	Registered Nurse
LPN	Licensed Practical Nurse

ACKNOWLEDGEMENTS

I would like to thank the two funding sources that made this dissertation and study possible, The Community Foundation of Northwest Mississippi and The James C. Kennedy Foundation. Without their funding and support this study would not have been possible.

A gracious thank you goes to the Charleston community, the focus group participants and the key informants who allocated their time and energy and helped me to complete this study. Namely, I would like to thank Glenna Calendar and Cal Trout for their time, energy, efforts, and help with subject recruitment, interview guide questions, and data analyses. I would also like to thank Clay McFerrin, the editor of the Tallahatchie County Sun Sentinel Newspaper for so graciously allowing us space in the newspaper time and again as a way to reach and communicate with residents. I would also like to thank Dr. Ed Meek for his help and for introducing me to this community.

I am forever grateful for and indebted to my dissertation committee made up of Dr. Jeff Hallam, Dr. Dwight Waddell, Dr. Sarah Przybyla, and Dr. John Green, who worked with me throughout the last year to take this project from an idea, through a proposal, and then through to its fruition. I am especially thankful for my advisor and mentor, Dr. Hallam, for his unending continual support, consistent encouragement, and open door for whenever I needed anything from a question answered or an idea approved to an ear to listen or a shoulder to cry on. I am undoubtedly grateful for the exposure to that caliber of leadership and advising, as he is an incredible mentor, an advocate for his students, an outstanding teacher, and a great friend. I am

also incredibly grateful to have had the opportunity to have Dr. Przybyla “P” as a professor, mentor, and member of my comprehensive exam committee. She provided me great feedback and her courses challenged me and provided me with a plethora of new knowledge and helped to shape my research interests. She too has been an instrumental part of my graduate school journey. I also cannot go without specifically thanking Dr. Waddell for his friendship, encouragement, support, and influence over my tenure as a graduate student. For serving on both my Master’s Thesis and my Dissertation committees and for all the times we all talked, vented, laughed, and learned together. I am incredibly grateful for those memories.

I would also like to thank T. Davis and Bob Davis both graduate students who assisted me with data collection and took many trips to Charleston and back with me. I am also very grateful for their friendship and what they mean to me as colleagues.

Although Dr. John Bentley did not work specifically with me on my dissertation, I took three classes from him, we published a paper and had several conference presentations together, and he served on my doctoral comprehensive exam committee. He was an instrumental mentor in my tenure as a graduate student and I cannot go without thanking him for his important influence on my graduate school career and journey. From him and through his classes I received top of the line statistical training, I learned to overcome self-doubt and build confidence in my ability as a student, and I learned that I am capable. He provided me with great leadership, guidance, instruction, and direction over the years and I am very thankful to have had such an incredible statistics teacher and now a life long friend and colleague.

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CHAPTER 1

INTRODUCTION

Known as the "Gateway to the Delta," and loved by all who stumble upon her, Charleston, Mississippi (MS) is located in the heart of the MS Delta and is home to 2,193 residents (US Census Bureau[1], 2012). The demographic make-up of the city is 39% White, 60% Black, 1% other, and 54% female. Charleston is located in Tallahatchie County along with four other towns, Glendora Village, Sumner Town, Tutwiler Town and Webb Town. Founded in 1833, Tallahatchie County is 80% rural and is one of ten counties in MS to have two county seats, Charleston and Sumner. According to the US Census Bureau, the county's total population is 15,378 (U.S. Census Bureau[1]) and according to the County Health Rankings the county's population is 12,638 (Robert Wood Johnson Foundation (RWJF[1]), 2012).

Tallahatchie County is located in the MS Delta, an impoverished region facing challenges in many areas of psychosocial, physical, and economic development, including issues pertaining to health, society, education, and economic conditions (Mirvis, Steinberg, & Brown, 2009). The health and economic challenges facing the MS Delta are vast, multi-faceted, and interconnected. One of the most pressing challenges facing the Delta region is the rapidly declining health status and increasing prevalence of chronic disease in the region. The social gradient is a global phenomenon and depicts that the poorest people also have the poorest health, as is the case in the MS Delta (Berkman & Kawachi, 2000). Numerous factors manifested politically, socially,

biologically, and environmentally influence health; namely, poverty, as it is one of the greatest determinants of poor health (Link & Phelan, 1995; Yen & Syme, 1999). Poor health status leads to lower educational attainment and reduced economic development both of which lead to poor health conditions and reduced quality of life (Mirvis et al., 2009).

Throughout the entire state and specifically the Delta region, chronic diseases such as, obesity, type II diabetes, cancer, and cardiovascular disease are pervasive and on the rise. More specifically, Tallahatchie County is ranked 81st of 82 counties in MS in terms of overall health status (RWJF County Health Rankings[1,2], 2012). The county has the highest rates of obesity, teenage pregnancy, sexually transmitted infections, diabetes, and heart disease in MS. In Tallahatchie County, 37% of residents report poor or fair health, 14% have diabetes, 23% smoke, 37% are obese, 34% are physically inactive, 25% are uninsured, 11% drink excessively, 44% of children live in poverty, and 51% of adults have graduated from high school. For a more comprehensive list of health statistics and demographic information for the county and the state, please refer to Table 4 on page 169. These data paint a clear picture of the need to address these issues and provide residents with the knowledge, education, and resources necessary to improve their health and implement policies that will lead to enhanced health status and environmental improvements. In doing so, it is imperative for academicians and community members to collaborate to address and improve the health and social issues facing the county.

To improve the health and societal well-being of the community, the University of Mississippi (UM) along with Charleston residents including: city officials, pastors, school personnel, business owners, and other stakeholders will partner together using a Community-Based Participatory Research (CBPR) approach to address the health issues facing the community. The formation of the partnership is essential for success and to improve health and

quality of life. The city of Charleston was chosen as the first community in Tallahatchie County to begin working in and to conduct a formative assessment because University faculty were invited into Charleston to assist by the Charleston Arts and Revitalization Effort (CARE). CARE is an organization that was developed in 2003 with a mission to foster the economic growth and redevelopment of Charleston through the arts and community involvement while preserving the historical significance of the city. It was through the initial relationship with CARE that the community-university partnership began to grow.

With limited data and minimal knowledge of the community, developing services and programs to provide quality education, empowerment, and access to resources conducive to health is challenging. Furthermore, rural communities present a unique challenge for sustainability of health promotion programs and outcomes due in part to resource limitations common in small communities (Downey, Castellanos, Yadrick, Threadgill, Kennedy, Strickland, Prewitt, & Bogle, 2010). Thus, the use of CPBR provides a means to develop community capacity and engagement thereby enhancing the potential for sustainability and effectiveness of health programs and outcomes. Therefore, it is important for academicians and researchers to place an emphasis on establishing partnerships and relationships with communities prior to potential research proposals in order to engage the community and to identify and better understand the community's needs.

Thus, the purpose of this formative study was to use a CBPR approach to conduct a community-based comprehensive health needs assessment (CHNA) in Charleston, MS to determine the perceived needs of the community and to identify priority health issues. A second purpose of this study was to provide methodological and conceptual scholarly contributions to the existing literature regarding CBPR and CHNAs. Findings of the formative assessment will be

used to inform future program planning, research efforts, and resource allocation in the community.

Formative evaluation is the use of systematic analysis of needs and the appropriate fit of previous and future programs to achieve objectives in relation to meeting those needs. Green and Kreuter (2005) define formative evaluation as any combination of measurements obtained and judgments made before or during the implementation of materials, methods, activities, or programs to discover, predict, control, ensure, or improve the quality of performance or delivery. Formative assessment is research conducted prior to program development in order to better understand the context and environment in which potential programs will be developed and implemented (Green & Kreuter, 2005). It is vital to improving the relevance, sustainability, and effectiveness of community-based health programs. The formative assessment identifies specific high-risk health behaviors and determinants of those behaviors, community attitudes and beliefs that could hinder or enhance program goals and objectives, environmental influences (real and perceived), and existing and available resources, programs, and services. In order for successful programs and services to be created, implemented, and evaluated, meaningful community involvement is necessary as the specific needs within a community must be clearly defined and understood (Corona, Gonzalez, Cohen, Edwards, & Edmonds, 2009).

The Healthy People 2010 Report identifies community partnership as one of the most effective strategies in eliminating health disparities and considers it a necessary and vital element for improving health and quality of life (USDHHS, 2000). A critical component in creating strong community partnerships is the use of CBPR as it allows community members, leaders, and academicians an opportunity to collaborate and participate actively in the research process. CBPR engages community members and academic researchers in a collaborative process of

scientific investigation, co-learning, and social action (Teufel-Stone, Siyuja, Watahomigie, & Irwin, 2006). Using CBPR to create community partnerships has several advantages including joining partners with diverse skills, improving the quality and validity of research efforts, and providing resources to communities (Israel, Schulz, Parker, & Becker, 2001). Further, the use of CBPR leads to richer interpretations of data, greater knowledge of high priority intervention areas, improvements in assessment and evaluation, and an increased commitment to scientific rigor in the area of health behavior and promotion (Srinivasan & Collman, 2005; Walker, Bezyak, Gilbert, & Trice, 2011; Williams, Bray, Shapiro-Mendoza, Reisz, & Peranteau, 2009).

CBPR is a process of empowerment through which communities can improve their capacity to address problem areas by developing solutions that use local assets. The approach enables community members to: (1) Become researchers who address important issues to their community, (2) Develop locally relevant research questions, and (3) Identify local factors that influence the context and shape target behaviors (Teufel-Stone et al., 2006). Community residents provide valuable sources of information as their knowledge, skills, and expertise can guide the scope of investigation and help determine data collection protocols; they are experts in using local information networks and negotiating local systems of influence and policy (Carney, Hendrika, Maltby, Mackin, & Maksym, 2009). Such guidance and insight are vital to developing and implementing an assessment protocol that portrays the resources, attitude, beliefs, and behaviors of the community.

Community involvement allows for a richer and more thorough formative evaluation as involvement by the community prevents superficial results by documenting not only observable resources, behaviors, and attitudes that are easily identified and explained by outsiders, but also shedding light into intangible resources such as social cohesion and social capital (Israel, Schulz,

Parker, & Becker, 1998; Israel et al., 2001; Minkler, Blackwell, Thompson, & Tamir, 2003; Teufel-Stone et al., 2006). Community involvement identifies subtle cultural and social assets reflected in internal systems of communication and social interaction, as well as, local issues or controversies that can hinder intervention plans or program development (Israel et al., 1998; Shalowitz, Isacco, Barquin, Clark-Kauffman, Delger, Nelson, Quinn, & Wagner, 2009). In the case where community members are not scientific researchers, experienced researchers or academicians can be involved in the partnership by contributing their skills and expertise thus, highlighting the importance of community-university partnerships (Carney et al., 2011). Scientific rigor and expertise is necessary to develop an objective research approach and a systematic plan to identify local health issues and determinants that influence behaviors, beliefs, and attitudes.

As a result of its effectiveness and innovative approach to investigating the challenges of vulnerable populations, CBPR has become increasingly utilized in the US and worldwide (Craig, 2011; Tandon, Phillips, Bordeaux, Bone, Bohrer, Cagney, et al., 2007). Israel and colleagues describe CBPR as a collaborative approach to research that equitably involves, for example, community members, organizational representatives, and researchers in all aspects of the research process. The partners contribute unique strengths and shared responsibilities to enhance understanding of a given phenomenon and the social and cultural dynamics of the community and integrate knowledge gained with action to improve the health and well-being of community members (Israel et al., 1998, p.3). Similarly, Minkler and colleagues (2003) define CBPR as a collaborative process that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CPBR begins with a research topic of importance to the

community with the aim of combining knowledge and action for social change to improve community health and eliminate disparities (Minkler et al., 2003).

Planning health programs ultimately requires the active participation and insight from partners outside the traditional health sector (Green & Kreuter, 2005). Because the behaviors that affect health and development occur among a variety of people in an array of contexts, community health improvement requires engagement and participation of diverse groups and individuals from different parts of the community. Community participants can share their knowledge, expertise, and experience in helping to identify key problems to be studied, formulate research questions in culturally sensitive ways, and use study findings to help support relevant program and policy development or social change (Minkler et al., 2003). As such, CBPR holds tremendous relevance as health professionals attempt to take action to address the complex and multifaceted health problems of the 21st century.

In its report on educating health professionals for the 21st century, the Institute of Medicine included CBPR as one of eight new areas in which schools of public health should be supplementing their traditional curriculum (Gebbie, Rosenstock, & Hernandez, 2002). This adds to the growing body of support from health scholars and other government and private philanthropic organizations that argue many of our current multifaceted and complex health issues may be better studied and addressed through approaches that emphasize collaboration with communities to explore and act on locally identified concerns (Minkler et al., 2003). Through involving and building on the strengths of multiple stakeholders in the research process, CBPR offers the opportunity for partnership synergy, which is the idea that through collaboration multiple partners can address difficult and complex health issues more effectively than one could

alone. Furthermore, through community participation, the relevance of research outcomes is greatly enhanced (Israel et al., 1998; Minkler & Wallerstein, 2008).

The CBPR approach to research is not, within itself, a research method; rather, it is an orientation to research that counters the traditional paradigm in which community-based research was often implemented by scientific researchers and experts with little input from community members (Minkler & Wallerstein, 2008). Within the traditional approaches, issues often arose when researchers were insensitive to cultural norms and community perceptions and when data collection resulted in no tangible or visible benefits to the community. What is different about the CBPR approach is it establishes community members and key stakeholders as valued and respected partners in all phases of the research process, the research topic of interest is based on community concerns, and the goal is to empower the community to develop effective and sustainable programs that improve health and quality of life (Israel et al., 1998; Israel et al., 2001; Israel, Coombe, Cheezum, Schulz, McGranaghan, Lichtenstein, Reyes, Clement, & Burris, 2010; Minkler et al., 2003).

The CBPR approach involves partnerships and collaboration with community members and representatives throughout the entire research process and utilizes both academic and community expertise (Ahmed & Palermo, 2010; Nguyen, Hsu, Kue, Nguyen, & Yuen, 2010). Using a CBPR approach enhances the process of collaboration and collecting information in hard-to-reach communities making it a viable option and a highly successful approach to conducting research to improve public health and quality of life (Nguyen et al., 2010; Patel, Rajpathak, & Karasz, 2011). Using a CBPR approach allows for the understanding of the health needs of an underserved minority population and whose unique health issues are closely linked to cultural diversity (Ahmed & Palermo, 2010; Dong, Chang, Wong, Wong, Skarupski, &

Simon, 2010). To engage communities in CBPR effectively, an initial community-based needs assessment is recommended as a means of developing community capacity and involving members of the target population, community groups, and existing community agencies and organizations (Billings, 1995). Developing community capacity is an essential element to sustainability and lasting community change (Downey, et al., 2010). Needs assessments that are based on a CBPR approach can assist in the growth of community cohesion and the development and implementation of effective programs (Craig, 2011; Wright, Williams, & Wilkinson, 1998).

The Centers for Disease Control and Prevention (CDC) and many divisions of the National Institutes of Health (NIH) have increasingly called for proposals that mandate the use of CBPR such that in the last few years, CBPR programs funded by NIH and CDC have tripled (Walker et al., 2011). This emphasizes the importance of utilizing a CBPR approach in which a necessary first step to developing effective programs for improving health and quality of life in a community is a community health needs assessment (CHNA). Therefore, a CHNA was conducted in the city of Charleston, MS. A CBPR approach with a mixed-methods study design using both qualitative and quantitative data analyses were utilized.

Conducting a CHNA is an effective method of community empowerment and decision-making in the development of a plan to improve the health, well-being, and quality of life within a community (Corona et al., 2009, Wright et al., 1998). A CHNA is a technique that is used to identify the needs of a target population within a specific historical and geographical context (Berberet, 2006). Specifically, a CHNA is a systematic method for determining the health issues facing a population and leads to agreed priorities and resource allocation that will improve health and reduce health disparities. It involves epidemiological, qualitative, and comparative methods

to describe health problems of a population, identifies inequalities in health and access to services, and determines priorities for the most effective use of resources (Wright et al., 1998).

Improving community health requires changes in both the behaviors of individuals in the community and the conditions or social determinants that affect health and development. Thus, the CHNA conducted in this community involved the identification of priority health issues facing the target population, an assessment of current behaviors, the evaluation of existing health services and their impact on the target population, an environmental scan, and an assessment of current policies that influence the health of the community. The findings will be used to inform the development of programs and educational opportunities to address aspects of health and wellness as the translation of research knowledge into locally relevant policy and action is a primary strength and important goal of a CBPR study (Dong et al., 2010). The process of conducting a comprehensive and collaborative CHNA is challenging, yet the process is critical for developing effective programs and allocating resources to improve health and quality of life. By their presence in the community, academic investigators are able to build trust and demonstrate respect for the expertise of community members. All studies using a CBPR approach must obtain a balance between leadership by academics and leadership by community.

Purpose of the Study

The purpose of this formative study was to use a CBPR approach to conduct a CHNA in Charleston, MS to determine the perceived needs of the community and to identify priority health issues. A second purpose of this study was to provide methodological and conceptual scholarly contributions to the existing literature regarding CBPR and CHNAs. The methodological contributions of this study include: (1) The comprehensive approach of the needs assessment methodology, (2) The participant recruitment techniques, and (3) The utilization of

numerous measures to assess each aspect of the community. The scholarly contributions of this study include: (1) Differences found in residents' beliefs regarding the education system, (2) Differences in residents' beliefs about racism, (3) Residents' beliefs regarding chronic disease prevention, (4) The importance of efforts to improve health to come from within the community, (5) Paralleling the needs assessment with community programs and/or events, and (6) The validation of the social gradient of health phenomenon, as well as, the validation of the influence of social determinants on health. The scholarly contributions of this study are discussed further in Chapter Five.

Hypotheses

Due to the nature of this study using an exploratory approach to understand the Charleston community, specific hypotheses regarding the findings of focus groups, key informant interviews, environmental audits, and policy assessment were not developed.

Operational Definitions

1. ***Community-Based Participatory Research (CBPR)***

   CBPR is a collaborative approach to research that equitably involves community members, organizational representatives, and researchers in all aspects of the research process. The partners contribute unique strengths and shared responsibilities to enhance understanding of a given phenomenon and the social and cultural dynamics of the community and integrate knowledge gained with action to improve the health and well-being of community members (Israel et al., 1998, p.3). CBPR is a collaborative process that equitably involves all partners in the research process and recognizes the unique strengths that each brings. It begins with a research topic of importance to the community

with the aim of combining knowledge and action for social change to improve community health and eliminate disparities (Minkler et al., 2003).

2. Mixed Methods Research

Mixed methods research is a type of research design in which qualitative and quantitative approaches are used in types of questions, research methods, data collection and analysis procedures and/or inferences; it is research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry (Teddie & Tashakkori, 2009). Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone (Creswell & Plano-Clark, 2007).

3. Environmental Scan – Environmental Scanning

Environmental scanning is a method that enables individuals to understand the external environment and the interconnections of its various sectors and to translate this understanding into the community planning and decision making processes (Morrison, 1992). An environmental scan should enable residents and decision makers to understand current and potential challenges and changes taking place in their community's external environment. Environmental scanning includes the following objectives: (1) Detecting scientific, technical, economic, social, and political trends, organizations, services, and events important to the community, (2) Defining the potential threats, opportunities, weaknesses, or changes for the community implied by those trends and events, (3) Promoting a future orientation in the thinking of residents and community leaders, (4) Alerting residents to trends that are converging, diverging, speeding up, slowing down, or

interacting, and (5) Identifying the number and type of businesses, organizations, and other amenities in the community (Morrison, 1992).

4. Key Informant

A key informant is an expert source of information who as a result of their personal skills or position within a society, are able to provide rich information and deep insight into what is going on around them (Marshall, 1996). The characteristics of an "ideal" key informant are: (1) Role in community: Their role should expose them to the kind of information being sought by the researcher, (2) Knowledge: In addition to having access to the information desired, the informant should have absorbed the information meaningfully, (3) Willingness: The informant should be willing to communicate their knowledge to the interviewer and to cooperate as fully as possible, (4) Communicability: The informant should be able to communicate their knowledge in a manner that is intelligible to the interviewer, and (5) Impartiality: Key informants should be objective and unbiased. (Marshall, 1996, p.92).

5. Purposive Sampling

Purposive sampling is an informant selection tool (Dolores & Tongco, 2007). The purposive sampling technique is the deliberate choice of an informant due to the qualities the informant possesses. It is a nonrandom technique that does not utilize underlying theories or a set number of informants. Generally speaking, the researcher determines *a priori* what needs to be known and finds people who are willing and able to provide the needed information by virtue of knowledge or experience. Purposive sampling is exemplified through the key informant technique wherein one or a few individuals are recruited to act as guides to a culture or community.

6. ***Community Capacity***

Community capacity is the cultivation and use of transferrable knowledge, skills, systems, and resources that affect community and individual level changes consistent with public health-related goals and objectives (Goodman, Speers, & McLeroy, 1998, p.259).

7. ***Empowerment***

Empowerment is defined as a social action process that promotes participation of people, organizations, and communities towards the goals of increasing community control, political efficacy, improved quality of life, and social justice (Wallerstein, 1992).

8. ***Community-Institutional Partnerships***

Community-institutional partnerships are defined as collaborations between community members, grassroots organizations, and/or community-based organizations and academic institutions, state and local public health agencies, health care institutions, and/or funding agencies (Seifer, 2006, p.990).

Delimitations

The study was limited to the following:

1. Volunteers who are Charleston residents.
2. Volunteers who have lived in Charleston for at least six months.
3. Volunteers who are 18 years of age and older.
4. Volunteers who can speak and understand English.

Assumptions

The following assumptions apply to this study:

1. It was assumed that participants who volunteered for the focus groups would attend the focus groups at the designated times.
2. It was assumed that interview and focus group participants provided honest feedback and answered the questions to the best of their ability.

Overcoming the Challenges, Barriers, and Tensions related to CBPR

In their review of CBPR, Israel and colleagues (1998) provide key rationales for using CBPR, as well as, provide information on the challenges and facilitating factors in conducting CBPR. The information from the review was used in attempt to avoid potential problems and to ensure a smooth process for all individuals involved. The information from the review regarding the facilitating factors, lessons learned, and recommendations for using CBPR were utilized as well during this project. Also, the common characteristics of successful community-institutional partnerships provided and recommended by Seifer (2006) will continue to be used in developing a strong, successful partnership between the university and the community of Charleston.

Significance of the Study

Intended outcomes of this project included the development of a sustainable network of community and university partners committed to improving health, the identification of priority health issues and behaviors influencing health, perceived needs and existing resources available to Charleston residents, an assessment of the built and nutrition environment, and an assessment of existing policies influencing health. Findings will be used to inform and direct future planning, development, implementation, and evaluation of programs to improve the health and quality of life in Charleston. Future research articles will discuss the development of programs and stages of implementation and will evaluate the specific programmatic outcomes following the CHNA and synthesis of findings.

CHAPTER 2

REVIEW OF LITERATURE

This chapter includes a review of literature with a description of the CBPR approach to research, a description of numerous studies that conducted a CHNA using a CBPR approach, and information regarding focus groups and key informant interviews.

Community-Based Participatory Research (CBPR)

The role of community participation in health was initially recognized in the early 1970's resulting from the realization that health needs could only be met through increased participation and involvement of people at the local level (Ndirangu, Perkins, Yadrick, West, Bogle, Avis-Williams, Santell, & Connell, 2007). Since then, there has slowly been a shift away from the traditional, individual-focused bio-medical model to an increased interest in and use of CBPR methodology. CBPR is a partnership approach to research that involves community members, professionals, practitioners, and academicians in all aspects of the research process equitably, which enables all of those involved to contribute their expertise and share responsibility and ownership (Israel et al., 2010).

The nine key principles of CBPR include: (1) It recognizes the community as a social entity with an identity rather than as a setting or location, (2) It involves systems development and sustainability and builds on strengths and weaknesses within the community, (3) It is participatory and facilitates collaborative, equitable partnership in all phases of the research and

involves an empowering and power-sharing process that attends to social inequalities, (4) It integrates knowledge and achieves a balance between research and action for the mutual benefit of all partners, (5) It promotes co-learning and capacity building among all partners, (6) It involves systems development through a cyclical and iterative process, (7) It emphasizes public health problems of local relevance and also ecological perspectives that recognize and attend to the multiple determinants of health and disease. More generally, CBPR addresses health from both positive and ecological perspectives (a positive model of health emphasizes physical, mental, and social wellbeing, whereas, an ecological model of health encompasses biomedical, social, economic, cultural, historical, and political factors as determinants of health and disease), (8) It disseminates findings and knowledge gained to all partners and involves all partners in the dissemination process, and (9) It requires a long-term process and commitment to sustainability (Israel et al., 1998; Minkler & Wallerstein, 2008).

Inherent to the CBPR approach is research that leads to action as the purpose of CBPR is to improve the understanding of specific issues or phenomena within a community and to integrate the information obtained with actions to improve health (Israel et al., 2010; Shalowitz et al., 2009). CBPR involves a process in which various groups of people become partners in a collaborative manner that combines learning and action to increase awareness and knowledge about community health while improving the health of the community (Israel et al., 1998; Israel, Eng, Schulz, & Parker, 2005). Through involving community members as real and engaged partners, CBPR minimizes the likelihood of research that is insensitive or irrelevant to community concerns (Flicker, Travers, Guta, McDonald, & Meagher, 2007). CBPR involves community members in every step of the research process via: (1) Input: Communities initiate research ideas and projects, (2) Process: Communities remain engaged throughout data

collection, analysis, and interpretation phases, and (3) Outcome: Communities play significant roles in mobilizing the knowledge attained in CBPR projects for social change (Flicker et al., 2007).

As stated by Green and Mercer (2001), the participants involved in CBPR give more than informed consent as they share their knowledge and experience in helping to identify important issues to be examined, develop research questions in a culturally sensitive manner, and use study findings to help support pertinent program and policy development or social change (Green & Mercer, 2001; Israel et al., 2010). The CBPR approach is valued because community participation in the research process generates high response rates in hard to reach populations, retains participants in longitudinal studies, allows for the development of culturally appropriate and feasible measurement instruments, data collection procedures and interpretation of data, and garners greater support from community members (Bopp, Fallon, Bolton, Kaczynski, Lukwago, & Brooks, 2012; Shalowitz et al., 2009). Furthermore, community engagement provides the necessary "insider" information needed to translate research findings from a formative assessment into effective interventions that are implemented within a community.

CBPR combines community wisdom in an equal partnership with academicians' methodological rigor throughout the research process (Shalowitz et al., 2009). Equal partnership between researchers and communities facilitates trust, helps to ensure ethical conduct, and increases the likelihood for successful programs and projects. The CBPR approach serves community interests, encourages resident participation, and is geared toward influencing social change leading to improvements in health and quality of life within a community (Khobzi & Flicker, 2010). Through recognizing the importance and value of community insight and local knowledge, CBPR engages community members as co-researchers resulting in research that is

more accessible, effective, and relevant to the community. When individuals and communities are actively engaged in the research process they become better equipped to make lasting personal changes and improve structural and organizational inequalities (Israel et al., 1998).

CBPR has emerged as a promising new direction for health research. Minkler and Wallerstein (2008) argue that many health issues are very complex and often poorly suited for traditional research methods and interventions. The authors suggest that the use of CBPR can enrich and improve the quality of outcomes of health research in a numerous ways including: supporting the development of research questions that better reflect health issues of concern to the community members, improving researchers' ability to achieve informed consent and address issues of costs and benefits to the community, improving cultural sensitivity, reliability, and validity of measurement tools through high-quality community participation in designing and testing study instruments, and increasing the relevance of intervention approaches and the likelihood of success (Minkler & Wallerstein, 2008). As stated by Minkler and colleagues (2003), "CBPR holds considerable relevance as we attempt to study and take action to address the complex health problems of the 21st century" (Minkler et al., 2003, p.1213). Moreover, CBPR is a particularly feasible approach for addressing the distrust of academic research that is pervasive within marginalized communities and communities of color and for understanding and addressing the health issues and disparities experienced in those communities (Israel et al., 2010).

Common challenges encountered when using a CBPR approach include but are not limited to: gaining the trust of community members (this is typically the first and most important challenge to overcome), the lengthy time commitment inherent in using CBPR, sustaining community change, and the necessity to address perceptions of racism and ethnic discrimination

(Shalowitz et al., 2009). In attempt to overcome the challenge of sustainable community change, Israel and colleagues (2006) identified three dimensions to sustainability that should guide a community-university partnership: (1) Sustaining relationships and commitments between all partners, (2) Sustaining the knowledge, capacity, and values of the partnership, and (3) Sustaining funding, staff, programs, and policy change (Israel, Schulz, & Estrada-Martinez, 2006).

Israel and colleagues (1998) published a manuscript titled, "Review of community-based research: Assessing partnership approaches to improve public health" (Israel et al., 1998). In this review the authors provide key rationales for using CBPR that are discussed in the literature. The rationales include that CBPR: (1) Enhances the relevance, usefulness, and use of the research data by all partners involved, (2) Joins together partners with diverse skills, knowledge, expertise, and sensitivities to address complex problems, (3) Improves the quality and validity of research by engaging local knowledge and local theory based on the lived experience of the people involved, (4) Recognizes the limitations of the concept of a "value-free" science and encourages a self-reflexive, engaged, and self-critical role of the researcher(s) variously referred to as "critical subjectivity" and "informed subjectivity;" (5) Acknowledges that "knowledge is power" and thus the knowledge gained can be used by all partners involved to direct resources and influence policies that will benefit the community, (6) Strengthens the research and program development capacity of the partners, (7) Creates theory that is grounded in social experience and creates better informed/more effective practice that is guided by such theories, (8) Increases the possibility of overcoming the understandable distrust of research on the part of communities that have historically been the "subjects" of such research, (9) Has the potential to "bridge the cultural gaps that may exist" between the partners involved, (10) Overcomes the fragmentation

and separation of the individual from his/her culture and context that is often evident in more narrowly-defined, categorical approaches, (11) Provides additional funds and possible employment opportunities for community partners, (12) Aims to improve the health and well-being of the communities involved, both directly through examining and addressing identified needs and indirectly through increasing power and control over the research process, and (13) Involves communities that have been marginalized on the basis of, for example, race, ethnicity, class, gender, and/or sexual orientation in examining the impact of marginalization and attempting to reduce and eliminate it (Israel et al., 1998, p.180-181).

In addition to providing the key rationales for using CBPR, the authors provide information on the challenges and facilitating factors in conducting CBPR (Israel et al, 1998). Challenges, barriers, and tensions related to the partnership-related issues include: (1) Lack of trust and respect between researchers and community members, (2) Inequitable distribution of power and control, (3) Conflicts associated with differences in perspective, priorities, assumptions, values, beliefs, and language, (4) Conflicts over funding, (5) Conflicts associated with different emphasis on task and process, (6) Time consuming process, and (7) Who represents the community and how is community defined. Facilitating factors, lessons learned and recommendations for partnership issues include: (1) Jointly developed operating norms, (2) Identification of common goals and objectives, (3) Democratic leadership, (4) Presence of a community organizer, (5) Involvement of support staff/team, (6) Researcher role, skills, and competencies, (7) Prior history of working relationships, and (8) Identification of key community members (Israel et al., 1998, p.184-187). Challenges, barriers, and tensions related to the methodological issues include: (1) Questions of scientific quality of the research, (2) Proving intervention success, (3) Inability to fully specify all aspects of research up-front, (4) Seeking

balance between research and action, (5) Time demands, and (6) Interpreting and integrating data from multiple sources. Facilitating factors, lessons learned, and recommendations for methodological related issues include: (1) Methodological flexibility and different criteria for judging quality, (2) Involvement of community members in research activities, (3) Conduct community assessment/diagnosis, (4) Development of jointly agreed upon research principles, (5) Conduct educational forums and training opportunities, (6) Involve partners in the publishing process, and (7) Create interdisciplinary research teams (Israel et al., 1998, p. 187-190). Challenges, barriers, and tensions related to the broader social, political, economic, institutional, and cultural issues include: (1) Competing institutional demands, (2) Risks associated with achieving tenure and promotion within academia, (3) Expectations/demands of funding institutions, (4) Political and social dynamics within the community, and (5) Deterrents to institutional, community, and social change. Facilitating factors, lessons learned, and recommendations for the broader issues include: (1) Broad-based support: top down and bottom up, (2) Provision of financial and other incentives, and (3) Actions promoting policy changes (Israel et al, 1998, p. 190-193).

Although the use of CBPR presents challenges, it offers an approach to research that has great promise in addressing the complex health issues of the 21st century and can bridge the gap between theory, research, and practice, which has been problematic in the public health and health promotion professions (Israel et al., 1998). The authors state that the CBPR approach is especially useful in marginalized communities where residents lack access to resources and have limited decision-making ability. Through the use of CBPR approaches and the combined efforts and expertise of all partners involved, the health and well being of individuals and communities will be improved. The authors express the need for more research using a CBPR approach and

the need for more evaluations of the context, process, and outcomes of CBPR projects and experiences.

Community Health Needs Assessment (CHNA)

Description of the Health Needs Assessment

According to Wright et al., (1998), a health needs assessment is the systematic approach to ensuring that the community and health service providers use its resources to improve the health of the population in the most effective way. Conducting a CHNA provides opportunity for: (1) Describing the patterns of disease in the local population and the differences from district, regional, or national disease patterns, (2) Learning more about the needs and priorities of residents and the local population, (3) Highlighting the areas of unmet needs and providing a clear set of objectives to work towards to meet these needs, (4) Deciding rationally how to use resources to improve their local population's health in the most effective and efficient way, and (5) Influencing policy interagency collaboration or research and development opportunities (Wright et al., 1998). The authors note that there is no easy quick fix for conducting a CHNA and different topics will likely negate different approaches. The various approaches to conducting a CHNA may include using a combination of both qualitative and quantitative research methods to collect information. Wright and colleagues (1998) recommend that the following questions be asked when assessing health needs: (1) What is the problem, (2) What is the size and nature of the problem, (3) What are the current services, (4) What do residents/patients want, (5) What are the most appropriate and effective solutions, (6) What are resource implications, and (7) What are the outcomes to evaluate change and the criteria to audit success?

Conducting a CHNA is an effective way to identify needs and resources within a community. A necessary first step to using and conducting CBPR is to conduct a CHNA. Eight CHNAs that were conducted using a CBPR approach in different places with diverse populations are described below.

CHNA for Gay, Lesbian, Bisexual, Transgender, and Questioning Youth

Gay, lesbian, bisexual, transgender, and questioning (GLBTQ) youth are an at-risk population and few programs exist that target the needs of these individuals (Craig, 2011). Therefore, a CHNA was conducted in Miami, Florida in order to determine the needs and issues facing GLBTQ youths in order to develop a system of care. The CHNA consisted of four primary phases. Phase one included an environmental scan and key informant interviews and phase two consisted of focus groups comprised of GLBTQ youths from the community under study. Forty-five key informant interviews were conducted with community leaders and agency personnel to discuss provider's perspectives of GLBTQ needs, service gaps, community assets, and their opportunities for engagement. Ten focus groups were conducted with 180 youth. Phase three involved the development, implementation, and analysis of a survey of the target population. Relevant measures were identified from current existing literature and a draft of the questionnaire was developed and reviewed by key informants. The design of the questionnaire was determined during three meetings with staff from interested social service agencies. During the meetings topics and questions were added, modified, and/or deleted based on what the staff wanted to include in the research and a final consensus was reached on the questionnaire contents. A non-random sample of 273 GLBTQ youths was collected using venue-based sampling. Phase four consisted of solicited community feedback about the findings of the

CHNA, as well as, the identification of particular services for implementation. The authors state that the solicitation of community feedback is an important component of CBPR.

In order for CHNA initiatives to be successful, careful research and collaboration between stakeholders is essential. Service partnerships are working groups that use techniques of community development and research to create systems of care (Craig, 2011). Service partnerships are often made up of an organized group of community and agency representatives from public and private sectors that coalesce around a shared notion that a collaborative approach will have a greater impact on perceived needs. Examples of successful service partnerships include the elimination of an identified community health concern of decreasing substance abuse in youth (Lubman, Hides, & Elkins, 2008), the coordination of services for low-income residents in neighborhood-based partnerships (Ahsan, 2008) and the development of services for vulnerable populations (Corona et al., 2009). Based on the successful establishment and use of service partnerships in this study and existing literature, the authors recommend the use of service partnerships when conducting CHNAs.

CHNA for South Asian and Korean Americans in New York City

The New York Asian American Network for Cancer Awareness, Research, and Training (NY AANCART) program was developed based on the principles of CBPR and has been conducting cancer control education, research, and infrastructure-building activities in New York for South Asian and Korean Americans (Islam, Kwon, Ahsan, & Senie, 2005). NY AANCART initiated outreach to the South Asian and Korean American communities in New York City through a series of round table discussions with many of the community-based organizations serving these populations. During these meetings, the goals and mission of NY AANCART were discussed and NY AANCART received feedback and initial impressions from the community

leaders regarding the public health needs of their communities. Through these discussions, the lack of available scientific data documenting the health needs of the communities was brought up. The community-based organizations expressed a need to collect baseline data on access to health services, preventive health screening behavior, and health beliefs among members of the communities before building a research or program plan.

To address this need, the first project initiated by NY AANCART was a health needs assessment survey that was conducted in the South Asian and Korean communities in New York City (Islam et al., 2005). In order to develop the survey, questions from the National Health Interview Survey (NIHS) and the Behavioral Risk Factor Surveillance Survey (BRFSS) were used. NY AANCART, in partnership with various organizations whose members included South Asian and Korean Americans, developed and conducted the survey. To capture the health needs of South Asians and Koreans in New York City, taxi drivers were selected for inclusion in the survey because taxi drivers represent a workforce of more than 40,000 people and 70% of taxi drivers in New York City are South Asian or Korean. NY AANCART partnered with the New York Taxi Workers Alliance (NYTWA) who was already interested in pursuing a health campaign for drivers but lacked the resources to do so. Thus, the development of the partnership was timely and beneficial for both partners because the NYTWA was interested in conducting a survey of their drivers and the proposed survey offered them the opportunity to do so. The initial survey was modified to incorporate additional questions exploring NYTWA's issues of concern for the drivers. Surveys were administered to 175 drivers waiting in the New York City airport holding lots during the summer of 2001.

After analyses of the data, the NYTWA met with the NY AANCART to discuss the design of their health campaign (Islam et al., 2005). Results from the survey were used to

develop and build the health program to address the needs of the South Asian and Korean taxi drivers. The partnership was very successful and resulted in a health fair for taxi drivers and more than 20 hospitals, health clinics, and social service agencies participated and served more than 500 drivers, providing health screenings, health insurance enrollment, and educational outreach. The drivers responded very positively to the health fair with some drivers expressing that this was the first time they had received any medical care since coming to the US. The authors state that although labor and time intensive, using a CBPR approach allowed for the creation of a sustainable community infrastructure that continues to support many projects in the community. Furthermore, the use of a CBPR approach allowed the researchers to gain important information about the community while also affording community members the opportunity to make social changes by empowering the residents to identify their needs and decide collectively how they should address those needs. The relationship between the NYTWA and NY AANCART was recognized in 2004 by the National Cancer Institute's Center to Reduce Cancer Health Disparities as an outstanding university-community collaboration.

CHNA for Hualapai Youth

Using a CBPR approach, a tribe-university research team conducted a formative assessment of local factors that influence Hualapai youth wellness in order to guide the design of a culturally and locally relevant health promotion program in Peach Springs, Arizona (Teufel-Stone et al., 2006). The CBPR team consisted of three native community members (the Tribal Health Department director, a former elementary school teacher, and a former coordinator of youth programs) who had all lived in the community for more than 25 years and one nonnative public health practitioner who had worked in the community for more than 20 years. The community investigators were exposed to a variety of research methods through their

collaboration with the university partner to prepare for their role as researchers. The following two research questions were developed by the team: (1) What has your community been doing to support youth wellness? and (2) What factors influence youth wellness in our community? Open-ended semi-structured interviews with key informants (n=48 interviews), a school self-assessment using the CDC's School Health Index (SHI) and a locally generated environmental inventory provided data that were triangulated to yield a composite of influential factors and perceived needs within the community.

Using a sampling design and their collective knowledge of community members' involvement in local activities, the researchers identified potential "information-rich" interviewees (Teufel-Stone et al., 2006). Both tribal and nontribal members who were school employees completed the SHI and an inventory of local facilities and practices that promote healthy and unhealthy behaviors in youth was created informally at a public meeting. A number of various people who were familiar with the community were able to contribute to the formative database through the abovementioned methods. Two researchers conducted the interviews; one served as the interviewer and the other took notes. The 25-45 minute interviews were not tape recorded in attempt to ensure anonymity in the small community. Following each interview, the researchers reviewed the notes and added any information recalled by either of the researchers that had not been recorded. Using the theoretical framework provided by Patton (2002) an independent consensus method of analysis was developed and utilized. Findings provided valuable insight into the community and show that local and university perspectives and abilities can be combined to yield a culturally relevant formative assessment that is useful to public health planning.

The authors state that CBPR holds promise as a particularly valuable approach in indigenous communities where: (1) Distrust of research is high, (2) Reaction to culturally incompetent programs is apathy, and (3) The demotion of community members to non-decision making tasks within research-intervention projects has disempowered and exploited communities (Teufel-Stone et al., 2006). The authors stress the importance of engaging the community and incorporating cultural knowledge in all phases of the research and note the importance of a formative assessment because it allows the CBPR team to integrate the community members' knowledge of the local history and social behaviors with the academicians' skills in objective systematic data collection and together, produce a shared picture of the sociocultural context. The collaborative approach and process builds on the strengths of the "insider" and "outsider" perspectives that the investigators bring to the project and enhances the overall effort and effectiveness of the project.

CHNA for Migrant and Seasonal Farm Workers in East Texas

The purpose of a study conducted by Doyle and colleagues in a seven-county region of East Texas was to establish community-based partnerships for CBPR and conduct a preliminary qualitative assessment of perceived health needs and capacities (Doyle, Rager, Bates, & Cooper, 2006). Principles of CBPR were applied amongst migrant and seasonal farm workers (MSFWs). Key informant interviews and a snowballing technique were used in order to identify stakeholders and recruit participants from three stakeholder groups: health care providers, social service providers, and MSFWs. Methods included a nominal group technique (NGT) that was applied in a series of five qualitative group interviews: One group of healthcare providers (n=9), one group of social service providers (n=11), and three groups of MSFWs (one male group, n=4; one female group, n=8; and one mixed-gender group, n=8). In each interview the participants

collectively identified behavioral, psychological, environmental, social/economic, and health service access/treatment factors believed to contribute to the health status of the MSFW community.

The study took place over the course of two years and included a series of preliminary community meetings and key informant group interviews that were designed to establish CBPR partnerships, followed by the aforementioned qualitative group interviews (Doyle et al., 2006). An initial step of this study was the development of strategies for partnership development, as CBPR requires community partnerships in the beginning stages of research design. The authors note that one challenge to developing effective partnerships between researchers, health professionals, and community members is that collaboration requires work to establish mutual consideration and respect for what each party brings to the project. Therefore, the goal of the preliminary meetings was to establish mutual respect between the groups involved. In order to accomplish this task methods included initial meetings with key informants within various community groups to begin building rapport and project interest. In subsequent meetings, the goal was to develop collaborative partnerships through which the health issues of MSFWs could be addressed.

The research team used a traditional key-informant approach to interview the contacts by asking the following questions: (1) What are general health needs of the local MSFW community? (2) What is currently being done about meeting those needs? and (3) What should be done about resolving needs that are not currently being addressed? (Doyle et al., 2006). More people were needed for the interviews to further explore stakeholder perceptions and begin to develop community consensus about needs and possible solutions. In order to accomplish this, a snowballing technique was used in which the key informants were asked to invite at least five

other people with knowledge and interest in MSFWs health to future meetings. In total, the research team met with 20 health and social service professionals who were self-identified as having interest in the health and wellbeing of MSFWs.

The researchers assured the community members who were present in the meeting that they were committed to working in the community for as long as mutually beneficial partnerships could be sustained (Doyle et al., 2006). They also cautioned the potential partners that the nature of effective needs assessment is laborious, tedious, and time-consuming and therefore, there could be times in the beginning stages of the project when the research team may appear to be working slowly or not at all. The researchers promised open communication and asked the potential partners to be patient during this stage of the research. This approach helped to secure partnerships and when the meeting was over all attendees signed an interest list indicating a willingness to participate in the project and the qualitative group interviews, which was the next stage of the research project. Findings from the interviews provided information on the needs of MSFWs, as well as, ideas and strategies for developing programs and directing efforts to improve the health of MSFWs and meet their needs. The partnerships established between MSFWs, health and social service providers, and university researchers serve to address and meet the needs of MSFWs and provide hope for the future of the MSFW community.

CHNA for Latino Youth in Richmond, Virginia

A needs assessment was conducted in Richmond, Virginia to examine the health needs of youth in the Latino community (Corona et al., 2009). Little is known about the health needs of Latinos in Richmond. Therefore, a community-university partnership was developed to identify health concerns and service needs as they relate to Latino youth living in Richmond and the surrounding area. The study was conducted using a mixed-methods design. Quantitative

techniques were used to administer a survey to 212 Latino adults. The majority of surveys were collected during a community event, El Papucho Latino, and a research assistant collected the remaining surveys at soccer games. Qualitative techniques were used to conduct key informant interviews with 15 community leaders and focus groups with 23 Latino parents (16 mothers, seven fathers) and six Latino boys. Focus group topics included: (1) Problems and barriers faced by adolescents and parents, (2) Violence and safety prevention needs, (3) Family communication patterns, (4) Difficulties parents and adolescents have with each other, (5) Attitudes and beliefs about drugs, delinquency, AIDS, and sexual behavior, (6) Suggestions for programs or services to address health, child development, and safety needs, and (7) Feelings and attitudes about the changing racial/ethnic demographic and subsequent effect on interactions with other individuals. Findings from the study provided the local community with information on the health concerns and service needs of Latino youth and findings were presented to local community and city organizations. The information from the findings was used to respond to the identified needs and concerns and informed the direction of program planning, development, and implementation efforts. The authors state the process in which the data were obtained may be useful for other interested parties in obtaining local level health information in emerging and developing communities.

CHNA for Pike County, Illinois

A CHNA was conducted in Pike County by the Illinois Institute for Rural Affairs and the Pike County Community Health Partnership (Struthers, 2008). The outcome of the assessment was a comprehensive document that illustrated health needs and service gaps and identified the most pressing health needs in Pike County and the rationale for choosing health needs. The purpose of the CHNA was to involve the community in examining local data and gain

perspectives on the health needs in the county. Through the information and knowledge gained during the CHNA, health professionals, researchers, and community members were able to examine and identify current health problems and use the information to develop a community plan to address Pike County's health needs for the future and to improve the health of the county. The CHNA included an examination of demographic, business/economic, environmental, and health indicator data. Primary data was also collected through telephone interviews (n=47) with local health and social service providers and focus groups interviews with community residents (n=24 residents). The purpose of the interviews was to identify how health and service providers perceive healthcare provision in the county and to assess residents' knowledge about and perceptions of existing programs. The responses from the healthcare providers were separated into three group categories: (1) A doctor group, which consisted of doctors, dentists, nurse practitioners, and pharmacists, (2) Another healthcare group, which consisted of other healthcare professionals (i.e., eye care, chiropractors, health program administrators, and others), and (3) A social service providers group. The telephone interview consisted of eight questions: (1) How successful do you feel your practice or program is at meeting the health (or social service) needs of residents in Pike County? (2) How could your practice or programs be improved to better meet the needs of residents in Pike County? (3) What resources would help you better meet the health (or social service) needs of residents in Pike County? (4) What health and social service programming do residents of Pike County need? (5) Are there populations you feel are underserved in Pike County? Who are they? (6) What prevents Pike County residents from getting the health and social services they need? (7) What do you see as the three most important health issues in Pike County? and (8) Are there any other comments you would like to make regarding healthcare and social services in Pike County?

Because of time constraints, a decision was made to ask groups to participate in the focus groups that already had regular meetings scheduled in late August or early September (Struthers, 2008). Therefore, focus group participants were convenience samples and not randomly selected interviews with community residents. The goal was to hold three or four focus groups with between five to 15 participants per group. Three focus groups were held with senior citizens, parents of young children, and representatives from local churches. A total of 24 residents participated in the focus groups. Participants were asked five open-ended questions: (1) What are the advantages for you (and your family) of living in Pike County? (2) What are the disadvantages for you (and your family) of living in Pike County? (3) What health or social services are available to residents of Pike County? (4) Are there health or environmental concerns in the area that worry you? and (5) What programs or services would enhance good health and well-being in Pike County for families with children? Families with aging relatives? Area youth? Through a CHNA in Pike County priority health issues were identified and information was obtained regarding programs and services from current healthcare and service providers. Community residents and service providers provided valuable information, which was used to inform the direction of health program planning and resource allocation in the community.

CHNA for Chinese Older Adults in Chicago's Chinatown

Due to the existing health problems and lack of evidence-based research among Chinese older adults a qualitative CHNA was conducted among Chinese older adults (Dong et al., 2010). The objective of the CHNA conducted in Chicago's Chinatown was to examine the cultural views of healthy aging, knowledge and barriers to services, and perception of health sciences researchers among community-dwelling Chinese older adults. CHNA is a useful instrument for

determining the health issues and priorities in a community and to identify inequalities in health and access to services in a minority population. CHNAs help community members understand the health problems within their community and identify culturally relevant strategies for health programs. The study was qualitative in nature and was guided by the Precede-Proceed conceptual model with a CBPR design. The Precede-Proceed model was designed to identify community needs and plan educational interventions accordingly (Green & Kreuter, 2005). The model suggests that changing an individuals' predisposing, enabling, and reinforcing factors can improve local health problems. The predisposing, enabling, and reinforcing factors influencing the health needs of the study population were identified through focus group interviews. The overall objectives of the CHNA were to: (1) Assess perceived health issues of the community, (2) Gain understanding of service utilization patterns, and (3) Examine perception and knowledge of health sciences research. A grounded theory framework was used to systematically guide the thematic structure of the data. Eight focus groups were conducted with 78 Chinese older adults (age 60 years and older).

A community advisory board (CAB) was established to involve members who have a vested interest and understanding of the community (Dong et al., 2010). CAB members identified a list of needs assessment topics most relevant to the Chinese community's concerns that were incorporated into focus group topics. The focus groups helped to reveal the cultural beliefs, values, and motivations that affect one's health behavior and well-being. Potential participants were recruited following Chinese American Service League sponsored cultural activities such as calligraphy or Tai Chi classes. Prior to the focus groups, participants gave written consent for audio recording. Participants' perception of health needs, access, and barriers to healthcare services and knowledge of health sciences research were examined by the

following questions: (1) What does healthy aging mean to you? (2) What do you think are some of the biggest problems in our community? (3) How would you describe a healthy older adult in the community? (4) What makes older adults in our community happy? (5) How would you describe an unhappy older adult in the community? (6) What makes them upset or lonely? (7) What are your good/bad experiences in healthcare in the US? (8) How would you describe an ideal healthcare service for Chinese older adults? (9) What do you think are the potential benefits/problems/impact of health sciences research in our community? and (10) What advice can you give us about bringing research into our community?

Grounded theory was used to guide the qualitative data analysis and provided a general framework to develop themes and theories from collected data (Dong et al., 2010). The transcripts were imported into NVivo software. Two independent coders followed grounded theory to analyze the data. Initially, each coder independently labeled the texts with key words and phrases. Subsequently, key words were coded and analyzed for emerging categories in terms of cultural conception of health, knowledge, and barriers of health services and perception toward health science research. The two coders then discussed and compared their analysis to come up with dominant themes. Once the two coders reached consensus, the categorization of each response was finalized and a short summary was written for each category. This qualitative study on health needs contributes to the emerging literature of the complex nature of aging among immigrant older adults and carries important policy implications. The authors believe that this CHNA through a CBPR model is applicable to other communities and aging groups.

CHNA for Urban American Indians in Tulsa, Oklahoma

A CBPR project was conducted to identify the strengths and needs of American Indians (AI) living in the Tulsa area (Johnson, Bartgis, Worley, Hellman, & Burkhart, 2009). A mixed-

methods survey design was used and 650 AIs were surveyed regarding their attitudes and beliefs about their community. Findings from the survey were used in combination with other community research efforts to inform program development, support proposals for external funding, and develop a comprehensive service system model to be implemented in the community. The CHNA that was conducted was part of a larger project titled Strengthening Our Children. The purpose of the project was to develop a culturally appropriate service system model for treating children, youth, and their families who are struggling with serious emotional difficulties. In order to accomplish this purpose, the Indian Health Care Resource Center of Tulsa (IHCRC) staff forged numerous partnerships with community agencies and stakeholders. IHCRC staff and the University of Oklahoma-Tulsa partnered together to identify and assess the strengths and needs of the AI community by surveying a community sample of 550 adults and 100 youth. In order to achieve the aims of the project the community developed the following research questions: (1) What do community members perceive as the greatest social/health problems facing AIs in Tulsa? (2) What wellness and social programs are desired? (3) How connected and safe do AIs feel in the Tulsa community? (4) What strengths does the Tulsa AI community possess? and (5) How do adults and youth differ in their perceptions of problems and needs? IHCRC staff assembled a CAB consisting of tribal leaders and elders, parents, youth, IHCRC staff and board members, and other people and local organizations interested in developing programs to support the Tulsa AI community (e.g., police, teachers, social/youth services workers, religious leaders) to review and provide input on the purpose, design, methodology, instrument development, and findings. The CAB met monthly and was open to the public. The CAB, IHCRC staff, and the university research partners worked together to develop a telephone script and two surveys (one for youth and one for adults).

To develop the survey the team reviewed existing surveys and needs assessments and constructed original items proposed by community members. The survey was revised until all partners agreed on the content and included information about physical health, behavioral health, wellness, demographic characteristics, and community services and supports (Johnson et al., 2009). The survey contained both Likert and open-ended questions, which resulted in both qualitative and quantitative data. A variety of recruitment procedures were used including letters mailed out to parents, ads placed in AI and tribal newspapers, flyers passed out at community events and area churches, in-person requests at area pow-wows, and in-person requests in the IHCRC waiting room and at the reception desk. Surveys were conducted in an interview format, either via telephone or in-person and took about 25 minutes to complete. Specifically, for the adult interviews, 200 were conducted at IHCRC, 78 at area pow-wows, 272 via telephone. For the youth interviews, 15 were conducted at area pow-wows and 85 via telephone. Findings of the surveys identified community strengths and health needs and were presented and discussed at several CAB meetings.

Johnson and colleagues (2009) state that CBPR projects represent a valuable opportunity for both communities and universities and felt that this project demonstrated a successful partnership that benefitted IHCRC, the university research partners, and the Tulsa AI community in a variety of ways: (1) University faculty and staff learned about CBPR and community members learned about the research process, (2) The project provided meaningful information that was disseminated to the community and increased capacity for an Urban Indian Health Center, (3) The project served to assist IHCRC with developing an improved system of care and additional programs, and (4) The partnership led to other collaborative research and service

projects. The authors hope that this project can act as a model and serve others in developing and implementing community health research with University partners.

Summary of CHNAs

In summary, CBPR is an alternative approach to the more traditional forms of public health research and offers a promising approach to conducting research efforts that are effective and result in improved individual and community health. The necessary first step when using a CBPR approach is to conduct a CHNA in the community at hand. A CHNA is the systematic approach to ensuring that the community and health service providers use its resources to improve the health of the population in the most effective way. Numerous CHNAs described herein were successfully conducted in various places with diverse populations using a CBPR approach including GLBTQ youth, South and Korean Americans in New York City, Hualapai Youth, MSFWs in East Texas, Latino Youth in Richmond, Virginia, residents in Pike County, Illinois, Chinese older adults in Chicago's Chinatown, and Urban AIs in Tulsa, Oklahoma. Each study described used principles of CBPR to complete the CHNA. Each of the CHNAs described herein used a mixed methods research design using both interview techniques (key informant interviews and focus groups) and questionnaires to obtain necessary information. Secondary data sources were also used to obtain data on health related information in the communities. Using a CBPR approach to conducting CHNAs is an effective methodology and is useful for building community-university partnerships and for identifying the priority health needs, assets, resources, and challenges facing communities. Although the exact design of the studies varied, each study used a combination of qualitative and quantitative techniques and resulted in the development of partnerships and beneficial outcomes for the community of interest.

Community-Institutional Partnerships

In October 2002, the Examining Community-Institutional Partnerships for Prevention Research project began with the purpose of identifying and synthesizing knowledge about community-institutional partnerships for prevention research and to develop and evaluate strategies to foster community and institutional capacity for participatory research at national and local levels (Seifer, 2006). Community-institutional partnerships are defined as collaborations between community members, grassroots organizations and/or community-based organizations and academic institutions, state and local public health agencies, health care institutions and/or funding agencies. In order to gather the necessary information to achieve the project goals, ten organizations who were all involved in community-institutional partnerships for prevention research partnered together and each prepared a report answering the following questions: (1) What is meant by successful community-institutional partnerships for prevention research? (2) What are the factors that contribute to successful community-institutional partnerships for prevention research? (3) What are the barriers that interfere with successful community-institutional partnerships for prevention research? and (4) What ideas, recommendations, and strategies can build the capacity of communities, institutions, and funding agencies to engage in successful community-institutional partnerships for prevention research? In order to review, evaluate, and synthesize each report, a qualitative data analysis approach was used.

Findings from the reports indicate that partnerships are formed for numerous reasons and range from trying to understand and address a certain health problem to meeting funder requirements for community involvement in a grant proposal (Seifer, 2006). Twelve common characteristics of successful partnerships emerged from the reports and are described as follows: Successful partnerships (1) Are characterized by trusting relationships among partners, (2) Are

characterized by jointly developed processes and procedures that pay particular attention to issues of equity, shared influence, and control over decision making, (3) Convene and maintain a diverse group of partners including those who are directly affected by the topic of study, (4) Demonstrate tangible benefits with all partners by enhancing their capacity and learning from their environment and implement interventions, provide services, and build capacities that have a positive impact in the community, (5) Are able to balance time spent on process, activities, and outcomes, (6) Are able to conduct research that contributes to science and enhanced knowledge and understanding of a given phenomenon, (7) Are characterized by partners that have supportive policies and reward structures, (8) Have high quality, strong leadership at multiple levels across partners, involving people with multiple roles, (9) Have culturally competent and appropriately skilled staff and researchers, (10) Involve all partners in the dissemination of information about the partnership and project findings in forms that all partners can understand and use, (11) Regularly assess the effectiveness of their programs and processes, gather feedback from all partners and incorporate these findings into decision making, and (12) Are able to demonstrate and sustain their impact (Seifer, 2006, p.992-996). Please see Table 6 on page 174 for a brief list of the 12 characteristics of successful partnerships.

Successful partnerships are often able to sustain their impact by applying for and receiving funding from various sources. However, funding mechanisms, policies, and procedures present many challenges to the development of successful partnerships including: (1) Funding agency requirements, definitions, timelines, and reviews are often not conducive to community-based research, (2) There is a lack of funding and funding mechanisms that specifically support community involvement, and (3) There is unequal distribution of resources that often occurs between institutional and community partners (Seifer, 2006, p.996-997).

Numerous strategies are identified that can be used by both emerging and established partnerships that will increase the likelihood of successful partnerships (Seifer, 2006). These strategies include: (1) Pay close attention to membership issues, (2) Build on prior history of positive working relationships, (3) Obtain support and involvement of both top leadership and front line staff of partner organizations, (4) Embrace diversity in the partnership, (5) Decide who the community is and who represents the community, (6) Develop rationale, criteria, and procedures for adding new partners, (6a) Develop structures and processes that facilitate the development of trust and the sharing of influence and control among partners, (6b) Jointly develop partnership principles and operating procedures, (6c) Jointly create the mission, vision, and priorities for the partnership, (6d) Use democratic, participatory processes for decision-making, (6e) Be clear about roles and responsibilities at all levels, (6f) Conduct ongoing community assessments and emphasize community strengths, (6g) Plan ahead for the inevitable conflict and tensions that occur in partnerships, (6h) Strive to achieve an equitable distribution of costs, benefits, and resources among the partners, (6i) Conduct ongoing evaluation of the partnership process, (7) Build the capacity of all partners, (7a) Facilitate partner training, technical assistance, and continuing education, (7b) Invest in partnership resources in the local community, (7c) Establish and maintain partnership infrastructure, (8) Plan ahead for sustainability, (8a) Address issues of sustainability, (8b) Engage funding agencies, (9) Pay close attention to the balance of activities within the partnership, (9a) Create a balance between time spent on tasks and process and interventions and research, (9b) Apply methodological flexibility, and (10) Be strategic about dissemination, (10a) Establish and follow dissemination procedures, (10b) Disseminate and translate research findings for policy change, and (10c) Disseminate

partnership “lessons learned” to benefit new and emerging partnerships (Seifer, 2006, p. 997-1000).

Focus Groups in Small Communities

Focus groups are a common qualitative research method technique that researchers frequently use to document people’s various beliefs, opinions, attitudes, and experiences regarding a certain topic (Teufel-Stone & Williams, 2010). Qualitative data are often needed to identify barriers and promoters of health behaviors, guide the development of socially and culturally relevant interventions and programs, and assess the impact of an intervention or program. Focus groups rely on normal everyday ways of communication and do not rely on literacy or familiarity with specific terminology or technology making them an ideal method of data collection to address certain issues or target populations. Typical focus group protocol calls for six to 10 people per group but some guidelines state that groups as small as four and a large as 12 can be productive (Crewell & Clark, 2007; Teufel-Stone & Williams, 2010). The standard recommendation for group formation is to select participants who are homogenous and unfamiliar with both each other and with the facilitator(s). However, this recommendation often proves difficult in small communities because of the likelihood of people in small communities knowing each other. The use of a facilitator who is from the community (insider) or not from the community (outsider) can influence the way information in shared, as well as, the content. The facilitator should be a nonjudgmental listener who is perceived locally as moderate and not too strongly opinionated. Focus groups typically have more honest and higher quality discussion of certain topics if the facilitator has the same ethnic background as the participants if the group is fairly ethnically homogenous. It is recommended that the facilitator(s) ask community members when the most appropriate times for focus groups would be to ensure sufficient participation.

Focus groups should be scheduled to match the availability of the target group. Also, it is important to obtain permission from the focus group participants to record the focus groups.

Teufel-Stone and Williams (2010) found that sometimes modifying questions to allow for a third-person response yielded a less guarded response: “When a person finds that his/her cholesterol is high, he/she might feel…” Rephrasing the statement solicits a different response because asking participants to identify how someone else might feel does not solicit information about a personal experience but respondents do often speak from personal experience. The setting and environment surrounding the focus group is also an important component to consider, as it is important for participants to feel comfortable and safe. Local experts should contribute to a discussion of scheduling and site selection for focus groups. Recommendations for recruitment in small communities include: word of mouth, advertisements in newsletters and newspapers, posting fliers in high traffic areas, and radio public service announcements. Posted notices and advertisements should be easily understood and explain community benefits and participant compensation. Graphics and color paper are recommended and the notice should include eligibility criteria and a local contact person, telephone number, email address, and physical location to accommodate those without telephone or email access.

When focus groups are conducted in small communities assuring participants of confidentiality is challenging. Confidentiality should be addressed at the beginning of the focus group and participants should be reminded that they and the facilitators are entrusted with the information being shared. In order to reinforce the credibility of the focus group process, Teufel-Stone and Williams (2010) recommend that facilitators should explain the following at the beginning of the focus group: (1) The intent of the focus groups is to understand local thoughts and opinions to inform and improve an ongoing service or to propose a new intervention to fit

the needs of the community, (2) A summary of the focus group will be shared with the local community and possibly larger public health and scientific communities, and (3) Names of participants will not be revealed or linked to any particular statements. University institutional review boards typically require most of these recommendations. Dissemination of findings and feedback to the community is an important aspect of the focus group process and local dissemination should be completed in a timely manner. Multiple formats of dissemination should be considered. Possible outlets include: public presentation led by the community investigators and supported by the outside investigators, handouts of a power point presentation or a one-page fact sheet, a brief article in the local newspaper, or a radio narrative.

Focus groups are a very valuable and useful qualitative research method technique that is enhanced by adapting to the socio-cultural setting of the community at hand (Teufel-Stone & Williams, 2010). Using a CBPR approach to conducting focus groups ensures the involvement of community members who can collaborate on the adaptive process and can provide valuable insiders' perspectives and insight on the documentation, analysis, and dissemination of findings.

Key Informant Interviews

A guide to conducting key informant interviews was written by Sherry and Marlow (1999) for The Access Project, a national initiative of the RWJF, in partnership with Brandeis University's Heller Graduate School and the Collaborative for Community Health Development. The mission of The Access Project is to improve the health of the nation by assisting local communities in developing and sustaining efforts that improve healthcare access and promote universal coverage with a focus on people who are without health insurance. The key informant interview guide was designed to help staff or community groups to assess the potential

usefulness of using interviews of key informants to find out information about healthcare issues, the healthcare system, or community organization itself.

The purpose of the key informant interview is to identify and involve different members of the community who are especially knowledgeable about a topic and asking them questions about their experiences working or living within a community or healthcare system (Sherry & Marlow, 1999). It is important to seek out people with more than average knowledge about the community or specific topic of interest to interview in order to ensure that the information gathered is in-depth, information rich, and useful. Therefore, it is important to select people who will be especially informative, as well as, provide a variety of perspectives. It is helpful to interview different types of people as diversity in interviews can provide a way to compare and contrast what is learned. Further, it is important to generate data through the interviews that reflects the diversity of the community and provides an array of experiences to compare. Suggested categories for selecting key informants from the health system to interview include: (1) Safety net providers such as health centers and health departments, (2) Hospital administrators and social service staff, (3) Teachers and school nurses in area schools, (4) Grassroots community groups such as, Head Start, community action agencies, and neighborhood organizations, (5) Local elected officials, and (6) Religious institutions. It is suggested that a minimum of eight to 12 people with particular knowledge or expertise should be interviewed in order to get a sense of the community or environment and to identify themes. Key informant interviews describe an environment or situation with qualitative data and documents the knowledge and experiences of key informants using their own words. The key informant interview technique provides structure and consistency to information gathering and is well suited for obtaining a picture of a particular environment or community, its strengths and

weaknesses, and how it works. Providing a systematic way of describing an environment or community, key informant interviews are particularly beneficial in the following situations: (1) Initial assessment of a new community or issue, (2) Begin relationship building with members of a community, and (3) Determine community or organizational strengths and challenges. It is useful to audio record the interviews and then have them transcribed to ensure all information is obtained and accounted for. If audio recording is not possible or the interviewee does not give permission to be audio-recorded it is imperative to take very thorough and detailed notes recording both verbal and nonverbal communication. It may even be advantageous to have a second person present when conducting the interview to take notes as well. Following the interviews, the findings are analyzed using a process of comparing and contrasting the information obtained from the informants. Common themes are then identified and used to write and report the findings of the interviews. The authors state that key informant interviews are a useful information-gathering tool for community groups.

Key informant interviews and focus groups are qualitative methods often utilized in prevention and health research (Patton, 1987; Patton, 2002). The qualitative nature of key informant interviews and focus groups are useful for exploratory studies designed to better understand culturally-based beliefs and to determine the perceived needs and health priorities within a community and generate hypotheses for future research (Denzin & Lincoln, 2008). The individuals selected as key informants were chosen following the recommendations from current literature to ensure information rich interviews. Focus group categories also reflected recommendations from the literature regarding appropriate and useful categories for gathering information.

CHAPTER 3

METHODOLOGY

Study Design

This study utilized a mixed-methods design using both qualitative and quantitative research methods and data analyses techniques. Regarding the qualitative approach to inquiry used herein, this study is informed by ethnography but is more in line with case study research with the case being the community (Creswell, 2013). The Precede-Proceed model for health program planning developed by Green and Kreuter (2005) was used to guide the development and implementation of this study. This study is a formative evaluation in which a CHNA was conducted in Charleston, MS as the initial and necessary first step to determine the perceived needs of the community and to identify priority health issues. A five-part study design was used that included the following: (1) Key informant interviews (n=11) and informal interviews (n=7), (2) Focus groups (n=8), (3) Assessment of the built environment, (4) Assessment of the nutrition environment, and (5) Assessment of policy.

Reasoning for Study Design

It is estimated that social circumstance (e.g., housing, education, employment, income) and environmental factors account for about 20% of deaths in the US, while behavioral patterns (e.g., diet, exercise, smoking, alcohol consumption) account for 40% of death, and the remaining 40% of death is caused by a combination of genetics and healthcare (e.g., access to care, quality

of care, and insurance) (McGinnis, Williams-Russo, & Knickman, 2002; Barnidge, Baker, Motton, Rose, & Fitzgerald, 2010). Thus, it is important to determine the social circumstances and environmental factors influencing health both positively and negatively in Charleston and to build on the strengths of the community while addressing and improving the areas that need attention. Furthermore, it is especially important to examine the healthcare system and health behaviors of residents to determine the most pressing needs in the community that need to be addressed in order to improve health. Given that the day-to-day behaviors that individuals engage in account for such a large percent of death, it is vital to examine current behaviors of the community residents and to identify the behaviors that need to be changed and are amenable to change through education, improved resources, and health promotion programs. Through the five parts of the CHNA, the aforementioned topics were addressed and findings of the CHNA will allow for a better understanding of the current picture of health and the environment in the community and will identify possible solutions and necessary directions to take to improve the health of the community.

Project Goals and Objectives:

The goals of this study were: (1) To identify the health needs and quality-of-life indicators for Charleston residents, (2) To establish a community-university partnership between Charleston residents, CARE, the UM, the Tallahatchie General Hospital, and other community organizations, (3) To develop a comprehensive document that illustrates health issues, needs, and service gaps to inform health program planning, and (4) Submit competitive grant proposals to funding agencies to implement programs identified through the CHNA.

Measurable objectives were: (1) Development of partnerships, (2) Assessment of the physical environment, (3) Assessment of the nutrition environment, (4) Assessment of policy

(e.g., school policies, joint-use, complete streets, tobacco-free air), (5) 11 key informant interviews, (6) Eight focus groups, and (7) Analysis, synthesis, and evaluation of the findings of this study using both qualitative and quantitative techniques.

Sample

The target population for this study was residents of Charleston, MS. The population of Charleston is 2,193 with 920 housing units (US Census Bureau[1,2], 2012). A total of 84 residents were recruited to participate in focus groups and interviews.

The Five Parts of the Study

1. Key Informant Interviews

Specifically, 11 key informants were recruited via direct telephone call or email invitation to participate in the key informant interviews. Sherry and Marlow (1999) suggest that a minimum of eight to 12 people with particular knowledge or expertise should be interviewed in order to get a sense of the community or environment and to identify themes. Interviews lasted from 20-92 minutes. The key informants were recruited using a purposive sampling and snow-balling technique in which leaders in the community verbally informed the project director of who they recommend be recruited for the interviews based on the degree and type of information and levels of insight, knowledge, and assistance they could provide the project director. Also, key informants from different backgrounds and various business sectors were identified and chosen based on recommendations from current literature to include key informants who represent various community interests and groups (Seifer, 2006). The following key informants were recruited to participate in the key informant interviews: (1) A city government official, (2 and 3) Two county employees, (4 and 5) Two hospital employees, (6) A local business owner,

(7) The Executive Director of a local organization, (8) An administrator in the East Tallahatchie School District, (9) A local Dietician, (10) A Health Department representative, and (11) A local farmer and landowner. Due to funding limitations, the key informants were not compensated for their participation in the study.

In addition to the key informant interviews seven informal meetings were conducted with residents who the researchers felt held valuable information regarding the community and its' needs and priority health issues. As the study evolved, the project director was able to identify these additional residents to talk to through her own observation and networking, as well as, suggestions made by other residents. The informal meetings included: (1) An administrator at the elementary school, (2) The school nurse, (3) The middle school health teacher, (4) A social worker/counselor from Region One Mental Health Center, (5) The executive director of a local foundation, (6) A local corrections officer, and (7) A representative from the MS State Extension Office.

2. Focus Groups

Residents were recruited and invited to participate in the focus groups. A total of eight focus groups were conducted with 67 residents (range = four to 12 participants per group). Six of the focus groups were conducted in the CARE building on the Charleston Square, one was conducted at the Tallahatchie General Hospital, and one was conducted at Sayle Oil Company. As suggested by Teufel-Stone and Williams (2010) the project director conferred with community members in order to identify the most appropriate day and time to conduct the focus groups. The focus groups lasted from 60-120 minutes and included the following: 10 minute introduction, welcome and completion of a demographic questionnaire, 60-90 minutes of discussion, and five minutes of closing remarks.

Focus group eligibility criteria included the following: Potential participants must be at least 18 years old, currently reside in Charleston and have lived in Charleston for at least the last six months, be able to speak and understand English, and be able to provide consent for participation. Key informants were not eligible to participate in focus groups. Focus group participants were recruited purposively through community meetings, as well as, recommendations from community leaders. Following the first four focus groups, an assessment of the demographic make up of participants was conducted. Following the assessment, participants were recruited based on the gaps identified from the initial focus groups. For example, after the demographic assessment, a need was identified for older Black males, and people under 40, both male and female, Black and White. Participants for the last two focus groups were purposively recruited reflecting those demographic gaps. A local farmer helped researchers recruit participants to fill the gap for older Black males and one of the community leaders who helped identify potential participants initially, helped researches identify and recruit participants under 40 years old in order to fill the aforementioned demographic gaps.

Focus Group Participant Recruitment

A few different strategies were used in order to recruit community residents to participate in the focus groups. A purposive sampling procedure was used to recruit participants for the focus groups. First, participants were recruited at two community meetings: A Rotary Club meeting and an open CARE meeting (the CARE meeting was advertised and open to the public). In both of these meetings the study was described and attendants were encouraged to participate in the focus groups. Six individuals signed up to participate in the focus groups at the Rotary Club meeting and 20 individuals signed up at the CARE meeting. Second, participants were recruited within two work sites, Tallahatchie General Hospital and Sayle Oil Company.

Participants in the work sites were recruited via an email from the administrator at the hospital and the payroll administrator at Sayle Oil Company. The administrator at the hospital recruited supervisors and department heads so that they could talk about their employees needs. Eleven individuals from Sayle Oil Company signed up to participate in the focus groups and 10 individuals from the hospital signed up. Third, 19 other individuals were purposefully recruited. The researcher met with two community leaders in June of 2012 to identify individuals and garner recommendations for specific individuals to contact and invite to participate in the study. The community leaders recommended 40 residents. Of the 40 who were identified, 25 were contacted via the telephone and 19 agreed to participate. A number of the individuals who were recommended to contact came to the open CARE meeting and signed up there (n=6), as well as, at the Rotary Club meeting (n=2); therefore, they were not invited via the telephone. Additionally, a local farm owner helped to recruit Black men who worked on the farm and their Black male family members to participate in a focus group. Six Black males were invited and all agreed to participate. In total, 72 individuals signed up to participate in the focus groups.

In order to increase the likelihood that participants who signed up for the focus groups actually attend, email reminders were sent out the day before the focus group was scheduled to occur. The email reminded participants about the focus group and asked them to RSVP either by email or phone to the project director. For individuals without an email address and for individuals who did not respond to the email to RSVP, the project director called those individuals the day before and/or the morning of the focus group to remind them about the focus group. This step was important because many of the people who signed up had forgotten about it and were thankful for the reminder email and/or phone reminder. Focus group participants each received a $20 gift card to a local business or dollar store in return for their participation.

Refreshments (non-alcoholic beverages and healthy snacks) were provided for focus group participants during the focus group sessions.

Following both the focus groups and the key informant interviews, the project director sent out letters thanking individuals for their time, input, and participation in the study. Contact information for the project director was also given to participants in case they had any additional thoughts, comments, or questions following the focus group.

3, 4, and 5. Environmental and Policy Assessment

In addition to conducting key informant interviews and focus groups, audits of the built and nutrition environment, as well as, an assessment of policy(ies) were conducted. The audit of the built environment provided information regarding the quality and status of the built environment surrounding Charleston and shed light onto the available resources within the community available for physical activity and active transportation. The audit of the nutrition environment provided information regarding the nutritional quality of the food served in restaurants and convenient stores and measured the quality of food and availability of fresh foods sold in the local grocery store. Through the policy assessment, information was gained that provided insight into existing policies and identified policies that need to be adopted in Charleston to improve the health and quality of life of Charleston residents.

Community Benefits

Residents of Charleston benefited from this project because one purpose of a CHNA is to involve the community in examining local data and gaining local perspectives about health needs and resources. The residents were also able to provide their expertise and insight and make recommendations for future health planning and programming. The CBPR approach included community members throughout the entire research process and members benefited by actively

participating in the process. Further, following the CHNA and evaluation of findings, findings will be used to direct and inform the development of programs and educational opportunities to address all aspects of health and wellness and residents will benefit from these programs for years to come.

Instrumentation

The completion of a CHNA includes the use of both qualitative and quantitative research methods to collect information (Wright at al., 1998).

Focus Groups and Key Informant Interviews:

Key informant interviews and focus groups are qualitative methods often utilized in prevention and health research (Patton, 1987; Patton, 2002). The qualitative nature of key informant interviews and focus groups are useful for exploratory studies designed to better understand culturally-based, community-specific beliefs and to determine the perceived needs and health priorities, and generate hypotheses for future research (Denzin & Lincoln, 2008). The purpose of the key informant interviews and focus groups were to: (1) Assess the perception of needs, priority health issues, and services available within the community, (2) Build relationships with community members and stakeholders who can provide support and access to the community, and (3) To begin to develop the collaborative structure necessary for the development of programs and resources to improve community health and well-being. Focus groups and interviews are a useful strategy to gather important contextual information and history for program planning and interventions in communities (Craig, 2011). It is especially important and critical to the success of CHNA to build collaborative relationships especially with key stakeholders as these individuals are often in positions to either help or hinder the project and can help access residents in the community.

In order to develop the interview guide, the project director reviewed existing surveys and needs assessments and constructed items proposed by community leaders. The interview guide was revised until all partners agreed on the content. A series of open-ended questions from the interview guide were asked in a semi-structured manner to enable key informants and community residents to share their insight, knowledge, and experiences. Community leaders provided input and offered suggestions for the development of questions that were included in the interview and focus group guides. This ensured community insight and participation were part of the development of the interview and focus group guides and is a suggested strategy when using the CBPR approach (Johnson et al., 2009). Probes were used to encourage additional dialogue and clarification. Each interview lasted from 20 – 92 minutes and focus groups lasted from 60 – 120 minutes. The key informant interviews were conducted prior to the focus groups. This decision was made to allow the focus groups to build upon key informants' perspectives, to deepen relationships with the community residents, and to provide a more thorough understanding of the true needs of the community. In order to evaluate the interviews and focus groups, recordings were transcribed, collated, and content analyzed for themes using coding techniques suggested by Saldaña including Microsoft Word.

Prior to the start of each focus group and interview, participants were given a copy of the study description and a description of their rights as a research subject. Each participant was given time to review the document and ask any questions or provide comments. Prior to the start of each focus group, participants completed a demographic questionnaire. After completing the questionnaire participants put the completed questionnaire into a manila envelope on the center of the table with all of the other participant questionnaires to ensure confidentiality. Please see Appendix H on page 189 to view a copy of the demographic questionnaire. As suggested by

Teufel-Stone and Williams (2010) as a way to reinforce the credibility of the focus group process, at the beginning of each focus group and interview the project director explained the intent of the focus groups and interviews, informed participants that a summary of the findings would be shared with the local community and possibly larger public health and scientific communities, assured participants their names would not be revealed or linked to particular statements, and gained permission from participants to record the focus groups and interviews.

Rural Active Living Assessment (RALA)

The Rural Active Living Assessment (RALA) is a valid and reliable instrument developed, tested, and refined by researchers to collect data on physical environment features and amenities, town characteristics, community programs, and policies that potentially influence levels of physical activity among community residents (Yousefian, Hennessy, Umstattd, Economos, Hallam, Hyatt, & Hartley, 2010). The RALA tools were designed by researchers at the Maine Rural Health Research Center and the University of Southern Maine and was tested and refined by researchers at the University of Southern Maine, Tufts University, the University of Alabama, and the UM. Please see Appendices K, L, and M on pages 198, 202, and 212 respectively to view a copy of each RALA assessment tool.

The RALA is intended for use in rural communities of less than 10,000 people (Yousefian et al., 2010). The instrument is a comprehensive measure that addresses many factors that are important to active living in rural communities. The RALA provides users a resource to assess rural environments for activity-friendliness (i.e., “friendliness” of the community for walking, biking, and playing) and may be used to inform the design of interventions and programs to help rural communities become more active and healthy. The instrument provides a structure for examining the community as a whole, how it is laid out, where people live, work

and go to school, and how they are likely to get from one place to another. It also includes a detailed tool to look at specific "segments" of the community and assess key characteristics of those segments. The instrument also provides a structure for assessing the existence of programs and policies that might help to overcome an "unfriendly" environment, or that might make the environment less activity friendly.

The modules capture specific physical activity amenities, programs and policies, and built environment features (Yousefian et al., 2010). The RALA Tools include three separate components: (1) Town-Wide (18 town characteristic questions and inventory of 15 recreational amenities), (2) Program and Policy (20 questions), and (3) Street Segment (28 questions). The three assessment instruments are designed to be used together and provide a tool to conduct a comprehensive active living audit of the rural community. The observed agreement and k statistic across all items for the Street Segment were 91.9% and 0.78, respectively. Trained project staff completed the audit. Two researchers pre-selected segments of Charleston by using maps printed from GoogleMaps™. In the field necessary adjustments to segment boundaries were made and each researcher completed the Street Segment Assessment. Two researchers conducted the environmental audit using the RALA independently and subsequently discussed ratings and resolved any differences in order to ensure inter-rater reliability. Environmental segment audits took approximately 20 hours.

Nutrition Environment Measurement Survey (NEMS)

The environment surrounding eating and nutrition is believed to contribute to obesity and chronic diseases. Therefore, the Nutrition Environment Measures Survey (NEMS), an observational measure, was developed to better understand the nutrition environment and to assess factors believed to contribute to food choices in restaurants and stores (Honeycutt, Davis,

Clawson, & Glanz, 2010). NEMS measures focus on surveying community and consumer nutrition environments, which include the type and location of food outlets, availability of healthful food choices and information, pricing, signage/promotion, and placement of healthier food products.

The NEMS is comprised of two parts: (1) NEMS-Restaurant (NEMS-R) which can be used in research and practice to characterize restaurant environments (Saelens, Glanz, Sallis, & Frank, 2007) and (2) NEMS-Store (NEMS-S) which can be used in research and practice to characterize store environments (Glanz, Sallis, Saelens, & Frank, 2007). Both the NEMS-R and NEMS-S tools have a high degree of inter-rater reliability and test–retest reliability ranged from 0.73 to 1.00 except for measures of fruit quality (Glanz, et al., 2007; Honeycutt et al., 2010; Saelens et al., 2007). Please see Appendices N, O, and P on pages 217, 231, and 238, respectively, to view a copy of the NEMS-S, the NEMS-R, and the NEMS scoring sheet. Observational measures of nutrition environments can be applied in multilevel studies of community nutrition and can inform new approaches to conducting and evaluating nutrition interventions. Two researchers conducted the nutrition environment audit using the NEMS-S and NEMS-R independently and then discussed ratings and resolved any differences in order to ensure inter-rater reliability. The nutrition environment audits took approximately 20 hours.

The data generated by the NEMS can be used to describe the nutrition environment both qualitatively and quantitatively. Information gathered by the researchers in both stores and restaurants can be qualitative in nature and used in a way that is written to describe the food availability, signage, and pricing in a narrative format. Additionally, the NEMS results for each entity can be scored providing an overall score for each food establishment. The scoring for the

NEMS-R varies from -27 to 63 and the scoring for the NEMS-S varies from -9 to 54. The higher the score is, the better; thus, the more healthy the establishment.

School Physical Activity Policy Assessment (S-PAPA)

The School Physical Activity Policy Assessment (S-PAPA) assesses physical activity policy related to physical education, recess, and other physical activity opportunities in elementary schools (Lounsbery, McKenzie, Morrow & Holt, 2011). The S-PAPA is comprised of open-ended, dichotomous, multi-chotomous, and checklist formatting and includes seven background items and three modules: (1) Physical Education (40 items); (2) Recess (27 items); and (3) Other Before, During and After School Programs (15 items). The total administration time for all three modules is approximately 23 minutes. Test-retest results show that S-PAPA items are reliable and are useful in assessing physical activity policies in elementary schools. The school principal at Charleston Elementary School completed the S-PAPA for the school. Please see Appendix Q on page 241 to view a copy of the S-PAPA.

Timeline for Implementation:

Assessment of policies and the 11 key informant interviews were conducted in June 2012. Key informants were contacted earlier that month to schedule interviews. Focus groups were conducted between June and August of 2012. The environment and nutrition audits took place throughout the three-month data collection period. During the fall 2012 and spring 2013, quantitative and qualitative data analyses were conducted. Following data analyses and synthesis of findings, a document was developed to inform the direction of future program planning and resource allocation in Charleston, MS. Findings were presented on campus at the UM to interested faculty and administrators, as well as, in the community at the CARE building on October 24, 2012. The community reception and presentation of findings was advertised and

open to the public. Over 75 residents attended the results presentation. In order to advertise for the results presentation, an article was written for the local newspaper, flyers were hung up around town, emails were sent to all study participants and CARE members, and word of mouth was also utilized.

Data Management, Analyses, and Evaluation:

Formative and process evaluation techniques were used to measure the implementation of the proposed strategies. Data generated from the key interviews and focus groups were qualitative in nature. Notes were taken during the informal interviews but the informal interviews were not recorded. The interviews and focus groups were audio recorded, recordings were transcribed, and transcriptions were verified for accuracy. The transcriptions were coded and content analyzed using Microsoft Word software to identify themes. According to Sadaña, a theme is an outcome of coding, categorization, and analytic reflection, not something that is, in itself, coded (Sadaña, 2009, p. 139) Attribute coding, In Vivo Coding, Initial coding, and Descriptive Coding techniques were all used in order to appropriately code the data generated by the interviews and focus groups to identify salient and pervasive themes. Each of the coding techniques that were utilized is suggested for use in qualitative data analyses (Sadaña, 2009). In order to ensure inter-rater reliability, two individuals coded each transcript independently to identify key words, phrases, and dominant themes. One coder was the project director and other coders were lifelong community residents, one who coded the key informant interview transcripts and the other who coded the focus group transcripts. Subsequently, the coders discussed and compared each transcript, reviewed discrepancies, and reached consensus on the identified codes. The Statistical Package for the Social Sciences (SPSS) for Windows was used to perform all quantitative data analyses. Descriptive statistics were computed for items included

in the instruments used for the environmental scan (i.e., RALA, NEMS, S/PAPA), including measures of frequency, central tendency, and variation where applicable.

Findings were synthesized and compiled into a comprehensive document that will be used to inform and direct future planning, development, implementation, and evaluation of programs to improve the health and quality of life of residents in Charleston. Findings will also be used to support proposals for external funding. Success was defined and measured by: (1) The successful completion of focus groups, interviews, audits, and assessment of policy, (2) The development and dissemination through written and oral presentations to community groups the findings of the CHNA and, (3) The submission of at least one grant proposal to a funding agency to support the needs identified through the CHNA.

Methodology for Analyzing Data from Focus Group and Key Informant Interview Transcripts

Both the key informant interviews and the focus groups were recorded and recordings were transcribed. During both the key informant interviews and the focus groups, notes were taken and memos were written in order to identify initial items of importance and to document findings in the unexpected event that audio recordings were unsuccessful.

Following the accuracy verification, initial code generation, and final agreement of codes of all transcripts, the project director reread each transcript and created a Microsoft Word document summarizing the findings of each transcript. Summary documents were created separately for the interviews and focus groups. Through word counts of certain key terms and phrases using Microsoft Word's "find" word ability and through hand calculating and tallying the occurrence of words and phrases within the transcripts, the project director was able to obtain information on the frequency of certain words and phrases shedding light onto the most common topics of discussion and the identification of important codes and occurring themes.

After each transcript was reread and summarized, any new findings were added to the summary document. As such, the summary documents expanded as each focus group and interview transcript was reread, tallied, and summarized. The summary documents provided the project director with a more manageable sized document equipped with the answers to all of the questions asked of participants in the interviews and focus groups, as well as, the identified codes, salient themes, and memos.

Institutional Review Board

The University of Mississippi Institutional Review Board approved this study in June 2012, protocol number 12-323.

Funding

The Community Foundation of Northwest Mississippi and the James Cox Kennedy Foundation provided funding for this study.

CHAPTER 4

FINDINGS

Chapter four describes the findings of the comprehensive community health needs assessment (CHNA). First the findings of the key informant interviews and focus groups are presented. Subsequently, results from the built environment assessment are presented, followed by the results of the nutrition environment assessment, and then the findings of the policy assessment. Following the findings of the policy assessment, salient themes are discussed. Lastly, a summary of the findings from the CHNA is provided. The Rural Active Living Assessment (RALA) data are presented in the results of the built environment section. The Nutrition Environment Measures Survey – Restaurant and Store (NEMS-R and NEMS-S) data are presented in the results of the nutrition environment section. The results of the School Physical Activity Policy Assessment (S-PAPA) are presented in the results of the policy assessment section.

1. Key Informant Interview Findings

Eleven key informant interviews were conducted with the following informants: A city government official, two county employees, two hospital employees, a local business owner, the Executive Director of a local organization, an administrator in the East Tallahatchie School District, a local Dietician, a representative from the Health Department, and a local farmer and landowner. Six of the eleven key informants were born and raised in Charleston. As community

health improvement requires engagement and participation from diverse groups and individuals from different parts of the community, we selected a diverse pool of key informants to participate in the key informant interviews. Most of the interviews took place at the worksites of the individuals interviewed (hospital, school, library, health department, CARE building, Diabetic Shoppe, court house, and City Hall). Two of the interviews were conducted in the homes of the interviewees (community doctor and local farmer/land owner). In addition to the key informant interviews, information was gathered from informal meetings conducted with the following individuals: elementary school principal, school nurse, middle school health teacher, executive director of a local foundation, corrections officer, social worker from a local mental health center, and a representative from the MS State Extension Services Office.

The interviews were conducted during June 2012 and lasted between 20 minutes to 92 minutes with most of the interviews lasting approximately 60 minutes. Questions were asked from semi-structured interview guides. Please see Appendix F on page 181 for a complete list of interview questions. Community residents were involved in the development and modification of the interview guide and offered their insight into the questions that should be included.

The project director conducted all of the interviews. The interviews were recorded and recordings were transcribed. The project director then verified the transcriptions for accuracy. Very few errors (less than 20 minor changes) were made to the transcriptions. Following the verification of interview transcripts, two individuals (project director and a male community resident and member of a partner organization) independently coded the transcripts to identify themes and produce codes. This strategy allowed participation of and provided input from a community resident and is suggested as a strategy when using CBPR principles. Following the

independent coding of the transcripts, the two individuals met to review the transcripts and came to agreement on the codes and themes of each interview.

Below, information from the key informant interviews is presented based on the identified codes, memos, and initial interview analysis. The findings from the interviews are summarized below and described in a manner such that each question's responses are based on identified codes providing the reader with an overall understanding of the information obtained in the interviews. Although some questions were general and asked of all key informants, each key informant was asked specific questions based on his or her job, expertise, role, and/or position in the community. The interview findings presented are the opinions and beliefs of the key informants. Thus, the information presented was obtained from the key informant interviews and is not the opinion or belief of the researchers.

Advantages of Living in Charleston

In the opinions of the key informants, the advantages to living in Charleston include that it is home, there is great sense of community, and many lifelong friends reside there. It is a small hometown, has a community atmosphere, is a good size, has quality schools, a good hospital, effective law enforcement, has a reasonable amount of places to shop, people know each other personally, and it is a nice place to live and raise a family. Further, informants feel that living in Charleston provides a slower paced life, relaxing atmosphere, with lower levels of stress and it is a safe community with little crime and is very family oriented. Additionally, most everyone knows each other, and errands are easy to run, as there is little traffic, there is a surplus of land for gardening and farming, and there is some of the best hunting and fishing in the country, especially duck hunting.

Disadvantages of Living in Charleston

The key informants believe that the disadvantages of living in Charleston include that there is nothing for children, youth, or adults to do, there is little activity outside of CARE and the schools, there is only one grocery store and few shops except for the dollar stores, there are transportation issues as there is no public transportation, the population is declining, and there is a high prevalence of reliance on government assistance. It was also noted that Charleston is not located near an interstate and the airport in the community is small. One informant feels that the schools do not cater well to children with learning disabilities while another informant was bothered that there is not much community expectation for children in the community to go to college, or in some cases even graduate from high school as they said, “These kids here are not expected to go to college. They may not even be expected to finish high school.”

Other disadvantages noted include the lack of access to everyday things including an exercise facility, certain types of healthcare, and access to good healthy food choices as one informant said, “You pretty much have to go out of town (to get groceries) and it is a lot harder to get what you need to really try and be as healthy as possible.” Further, there is limited industry for jobs and thus, little job opportunity, the high school drop out rate is high, there are very few after school or after work activities for residents, and there are limited facilities in the community to support health. Limited access to health care is also a disadvantage of living the community as one key informant emphasized that “Any challenge you can think of in health care, we have it right here.” One informant feels that the disadvantages of living in the community are that the education system is substandard and residents are not being exposed to education, as they should, as the informant warned, “If you go to the places with the least education, the least educated people, you will find more poverty, you will find more sickness.”

Health Problems Facing Residents in Charleston

According to the key informants, the greatest health problems facing residents in the community are those that are associated with obesity and metabolic syndrome, including: diabetes, heart disease, hypertension, cancer, and cholesterol problems. Prescription drug use and abuse is also very common. Additionally, lack of health insurance, not accessing routine medical care, and poor medication compliance are health issues for many residents. An additional serious health problem of residents is sleep apnea as it is so closely tied to metabolic syndrome and cardiovascular disease. One key informant informed researchers, "Approximately 75% of residents have sleep apnea and most people (80%) are not aware of their condition and consequently are left untreated." Other general health needs of residents include: access to education about nutrition, increased access to healthy food choices, increased access to health care and preventive screenings, and the need to improve parenting techniques.

Social Problems Facing Residents in Charleston

The key informants believe that the greatest social problems facing residents include poverty, which drives poor health, single parent homes, loss of family structure, marital and family problems, domestic violence, limited industry, limited education, limited healthy eating options, unemployment, limited preventive care (e.g., well check-ups and preventive screenings), teenage pregnancy, racial issues, prescription drug abuse, loss of personal responsibility for oneself, changing norms, children not learning what they should be learning in the homes, lack of motivation among students and parents, and recreational drug use. There is also a high percentage of the population on welfare and disability. Speaking on these matters one informant said,

> "I know that Tallahatchie (County) is number one, pretty much a welfare community and unfortunately 50% of our workforce age is on disability. We are

> at the top of the list, neck and neck with Quitman County in teenage pregnancy, child obesity, and diabetes. So, of course I would say those are our main problems and some of it because our population doesn't know better. Our population is uneducated."

Further, the informant expressed that there is no social life for adolescents without drinking and drugging as they said, "It seems that our teenagers don't know a social life without drinking or drugging."

Health Behaviors of Residents

The key informants observe that the behaviors community members engage in that are harmful to their health include: having unprotected sex, physical inactivity, engaging in too many lethargic or sedentary activities, smoking, eating a poor diet, tobacco use, drug use, alcohol use and abuse, and not getting preventive care and therefore going with untreated and undiagnosed chronic diseases. Regarding behaviors that are conducive to health, the informants voiced that many residents do not smoke, drink alcohol, or use drugs, cook healthy meals, engage in physical labor, exercise, attend social events, and go to church.

Current Efforts and Existing Organizations that Support Health

In the eyes of the key informants, current efforts in the community supporting health include: renovations and improvements at the hospital, CARE's programs, events, and classes, and programs and efforts in the schools (i.e., mandatory sex education and physical activity, school health council, health assessments, and employee wellness program). One informant advised researchers that "CARE is also doing a lot for the community by exposing students to music, art, dance, and other things they have not been exposed to." The Boys and Girls Club provides a place for kids to come after school and has basketball goals and includes exercise and outdoor physical activity as part of their program. The MS State Extension Service Office also

offers various classes and education such as parenting, cooking, gardening, and healthy eating. In the opinion of several informants, community advocacy groups and existing organizations that could be involved in efforts to improve health include: the health department, Mid State, Social Security Office, ministers and local churches, Charleston Day Club, Boys and Girls Club, the county library, the Lions Club, the Rotary Club, the Diabetic Shoppe, The Delta Health Collaborative, Mid-Delta Home Health, North Delta Planning and Development, the community garden, CARE, the schools, and the Tallahatchie General Hospital.

In terms of social programs available, food stamps are available for qualified residents and many local churches offer assistance to those in need. Outside of that though, there are not any other advocacy groups other than just community type people caring about the community. One key informant warned though that, “You don’t just give people a fish forever, you teach them how to catch a fish. A lot of people in the community are accustomed to just getting something handed to them, and they are content with that,” and according to the informant that needs to change.

The local churches are also instrumental assets as pastors have power and influence over their congregations. One possibility suggested by the informants to improve the problems facing community residents is to educate the pastors on specific health and social issues and then the pastors could teach their congregations as one informant said, “There is no telling how we could start transforming if we could get somebody who could educate them (pastors) on all these matters.”

Environmental Concerns in the Community

Environmental concerns in the area mentioned by key informants include the presence of mold in homes, pesticides and chemicals from farming, the lack of recycling available in the

community, and smoking. One key informant believes fluorine and chlorine that are in the water are toxic to health and destroy the thyroid gland, which slows down metabolism and leads to weight gain; chlorine also makes the body system more acidic which causes the body to be in a constant inflammatory state.

Community Needs to Improve Health and Wellness

The informants believe that a community wellness and recreation center, a place to exercise and receive health and wellness education is necessary to improve health in the community, one that caters to all ages and social groups where everyone feels comfortable. One informant warned, “There is not enough market to have two or three different places. It has to be one that is suitable for everybody.” The informants believe that residents need more education regarding health and wellness and more exposure to health messages. One informant also noted that they thought programs and efforts to improve health need to include follow-up, self-monitoring, and reporting and need to show value to the individual taking part and that incentives for the program may also be necessary. The informants also believe that a farmers market is needed in the community and that the grocery store and restaurants could do more to increase the amount of healthy food choices that are available to residents. According to one key informant, the grocery store is just responding to demand and if you changed the way people think about their diet and educate them more, then it would have a direct impact on what you see on the shelves in the grocery store and on restaurant menus.

Many informants also expressed the need for crosswalks, sidewalks, walking trails, and bike lanes, as well as, an outdoor park located in a neutral place where all residents would use it and feel welcome. Many informants also voiced the need for increased education in the community as one informant said, “I think one of the greatest things we need in this community

as well as any other is greater education. If our people don't know how or why to do things, they won't do it."

In order to improve the health and social problems facing the community, one informant believes that residents need information and knowledge about issues pertaining to their health and that education is needed in a way that is going to interest residents and keep them coming back to receive more information. They also feel it is necessary to communicate to residents how they can be proactive about their health and to reach parents and teach them how to have healthier children. One informant feels there is a need to improve the education system in general, as well as, to provide more health education but they noted limited funding and limited resources makes it difficult. This study participant also believes one of the greatest needs is for sex education noting,

> "Over 95% of our children are born out of wedlock and in Tallahatchie County the mothers are getting younger and younger and younger and with that, just that alone, there is no way we can pull out of this (health/social problems) until we can address that problem."

The informant believes it is important to take religion out of the issue of teenage pregnancies and educate about the facts and the implications of teenage and out of wedlock pregnancies.

Another informant feels that there is a need to induce pride in the community and to find things that bring everyone together for the common good as they commented,

> "Rise and tide raises all boats and a boat paddled by one person usually just goes in a circle if you are paddling by yourself. And geese that fly in formation can fly 77% further than when flying alone. In other words, we've got to figure out a way to bring our people together."

As an effort to improve the rates of adult illiteracy in the community, as well as, the reading ability of children, one informant believes one thing that would be helpful is to improve the library, increase the amount of books available, and offer more reading programs. According

to the informants, the library and the school are seen as neutral places for everyone to come and feel welcome. As such, the library or the schools are appropriate places to host reading classes and/or reading programs. Many of the informants feel it would benefit the community greatly to be able to provide free reading and writing classes/programs to children and adults.

The informants agree that health education and programs that teach people about healthy choices are needed, as is a facility such as a gym for people to exercise and recreate. The school was suggested as a good place to offer programs because the school is seen as neutral, where as churches are often not perceived as neutral because of the different religious denominations. Some key informants believe that some residents have a hard time making healthy choices because they lack the support from their family and friends and competition is often a barrier. Several key informants believe that an interest in health is beginning to form in the community.

2. Focus Group Findings

Over 90% (93.05%) of the participants who signed up for the focus groups participated in their designated focus group. Please see Table 1 on page 74 for a complete description of the number of participants who were recruited from each site and/or strategy, as well as, the number of participants who attended the focus groups from each recruitment site and/or strategy. Please See Tables 8 and 9 on page 176 for further information about focus group participant characteristics including the sex, age, and race of focus group participants. Please see Appendix E on page 177 to view the focus group interview guide.

Table 1: Focus Group Attendance		
Recruitment Site	**Number of Participants Recruited from Site**	**Number of Participants Who Attended from Site**
Rotary Club	6	5
CARE Public Meeting	20	21
Sayle Oil Company	11	11
Tallahatchie General Hospital	10	11
Farming Community	6	4
Purposeful Recruitment	19	15
Total	**72**	**67**

The information and findings from the focus groups are summarized below and described in a manner such that each question's responses are based on identified codes providing the reader with an overall understanding of the information obtained in the focus groups. The focus group findings presented below are the opinions and beliefs of the focus group participants. Thus, the information presented was obtained from the focus group participants and is not the opinion or belief of the researchers.

Advantages of living in Charleston

Multiple focus group participants mentioned many common benefits of life in Charleston. There is a small town atmosphere present in the community. Everyone knows each other and everyone helps each other out and looks out for one another and their children. It is family oriented community with a good family atmosphere. There are a lot of good people, friendly neighbors and residents, and strong community relations. Race relations are generally positive and there is a strong sense of community and sense of connectedness. Charleston has a really

strong faith-based Christian community. Many focus group participants expressed that Charleston is a good size; it is not busy and provides a slower paced and easy way of life. It is a quiet, peaceful, laid back, and is a beautiful place to retire with three major reservoirs in the area and great access to hunting and fishing. There is a lot of history there, it seems to be moving forward, and residents have a sense of love for and pride about the community. Furthermore, several residents expressed sincere desire to improve their community. In terms of available technology, computers and Internet access are available at the library free of charge. Residents can access wireless Internet near the courthouse, outside of the hospital, outside of the library, and at McDonald's.

Additionally, focus group participants indicated that traffic and road congestion is rarely a problem in their community and most stores, restaurants, and public establishments are close and centrally located allowing residents without transportation to be able to walk to different community places. There is a large degree of convenience and accessibility. The police system is adequate and has a biracial police force. The community feels safe to residents and there is minimal crime outside of that related to drugs and theft. An added benefit mentioned by participants is the low cost of living with low property taxes. The education system is better than most other Delta towns and the schools are safe. The community is located within close proximity to good-quality healthcare facilities and the local hospital has improved substantially in recent years. Participants perceived CARE is a very positive asset in the community and mentioned the recent establishment of a community garden as a new strong resource.

Disadvantages of living in Charleston

Although mentioned as an advantage by most residents, a few participants feel like the small town atmosphere and the fact that everyone knows each other was a disadvantage. The

community residents have a difficult time accepting new people as one resident voiced, “If you’re an outsider, you’re an outsider. Sometimes that is hard to overcome. It takes time.” Other drawbacks of the community mentioned in the focus group discussions included the limited jobs, limited job opportunities, and little ability for advancement in the work place. In terms of location, Charleston is not located near a major interstate, which negatively impacts business. For some, the travel time and commute to work is a disadvantage as a lot of residents commute to other cities for work. For the jobs that are available, employers have difficulty finding reliable employees in Charleston, as there is a mentality there that people do not want to work as one resident voiced, “I would say there is a lack of work but also lack of will to work. To some degree they go hand in hand because a lot of people who could work don't actively want to work.” Further, most young adults leave the community after high school and so there is little retention of young adults. As such, there is a lack of residents to fill the jobs that are available such as replacing teachers who retire and the community is not producing or training traditional blue-collar positions such as electricians, plumbers, or roofers.

Focus group participants indicated that there is not a college in the community, nor are adult community classes offered so there is lack of opportunity for adults to further their education locally and the public education is not as good as it needs to be. The vocational programs that previously existed are currently closed so students are unable to receive training in vocational skills. The high school eliminated certain classes, such as home economics and civics, and students are not taught the basics about how to take care of themselves mentally or physically.

Public transportation is not provided by the city, which causes transportation issues for many residents hindering their ability to get to places. Focus group participants shared that living

in Charleston presents economic difficulties for some people and a lot of people do not have health insurance. Some residents feel as though the community is not fair to certain races. There is a belief that favoritism is shown to White residents, especially by the police.

Focus group participants shared that there is a sense of pessimism among some community residents, as well as, a welfare mentality and lifestyle. Health problems are prevalent and pervasive among residents. Lack of involvement is an issue for the community and there is a need for more parental involvement in children's education and health. Some residents feel the political leadership in the community is poor and that there is a general lack of strong leadership present in the community.

One of the most commonly expressed concerns by residents in terms of disadvantages is that there is nothing to do, especially for the young people. There is no recreation, entertainment, parks, movie theatre, bowling alley, community center, sports complex, pool, or other social gathering places for young people. Further there are no hotels or overnight accommodations available for out-of-town visitors. Additional disadvantages mentioned by focus group participants included the aging infrastructure that is commonly in need of repair, there is only one grocery store that has high prices, limited selections, and limited hours of operation. Furthermore, focus group participants indicated that there are limited clothing stores or other stores to shop, and the community is not capitalizing on things the way they could. Lastly, although it is not as bad as it used to be, there is a stray dog problem in the community.

Health Problems Facing Residents in Charleston

The health status of residents was commonly described by focus group participants as bad, really poor, and/or terrible. One resident mentioned, "It is really tough to find someone who is healthy and not diabetic and not overweight." According to focus group participants,

hypertension (high blood pressure), diabetes, obesity, and cancer (in that order) are the four greatest health problems facing residents. Additional health problems mentioned include: stroke, depression, stress, mental health problems, asthma, heart problems, and teenage pregnancy. Stress is a huge problem in the community, as one resident commented, “There is a lot of stress. A lot of people here are barely making it.” Very little preventive care takes place, as a lot of people do not go to the doctor until they are sick. As such, there is little early diagnosis or prevention that takes place.

Lack of health information and lack of education are believed to be driving some of the poor health in the community. One resident voiced, “The biggest problem is there is no health education.” While another resident commented, “My folk (Black people) are not educated.” Participants suggested that Charleston residents do not have the knowledge about proper health and do not understand the effect of poor food choice on the body. There is a lack of nutrition knowledge and a pervasive lack of awareness regarding the disease process especially pertaining to obesity and diabetes. Additionally, residents lack access to healthy foods. The nutritional quality of most residents’ diets is very poor and most residents do not exercise, engage in physical activity, or have any outlets for stress.

Another issue driving poor health mentioned by focus group participants is poverty. Financial barriers prevent many residents from supporting their basic needs and receiving appropriate care, as many residents do not have health insurance and/or transportation to access healthcare, and/or lack the ability to afford prescription medications. Further, many residents cannot afford proper nutrition as healthy food choices are often more expensive than processed and fast food. Access to medical care is also a problem for residents in general as the only care available in town is the hospital, the rural health clinic, the health department, and a privately

owned clinic. Residents have to go out of town to receive common preventive services such as, ultrasounds, mammograms, colonoscopies, and MRIs.

Perception of weight status and health status is also an issue among residents shared by focus group participants. When asked if the focus group participants thought people were aware that they were overweight, one participant responded, “Some do. They may think I am a little overweight but I don’t think they think I am obese.” Other participants commented, “People don’t think they are as overweight as they are and they are not aware that their weight leads to health problems” and “No, a lot of people are not (aware) because everyone around them is like them and there is a lack of awareness.”

Social Problems Facing Residents in Charleston

Focus group participants indicated several key social problems challenging community members. The most commonly mentioned social problems facing residents include: poverty, drug use, alcohol abuse, teenage pregnancy, domestic violence, and bullying. Further, there are very few resources for recreation, there is no low-income housing available, housing is poor, and limited jobs are available. Moreover, many focus group participants stated that many residents display a lack of will to want to work. Regarding domestic violence, the chief of police reported they receive 10-15 domestic violence phone calls per week.

Possible Solutions for the Health and Social Problems

Most residents feel that general education and specifically, health education is needed in the community in order to improve the health and social problems present. According to one participant, “There is a real need to educate people and train people on health to teach others. There needs to be a spread of information.” One participant suggested, “Movies and documentaries could be shown in the community as a way to reach people with education about

health." A common belief among a lot of residents is that in order to alleviate the health and social problems in the community, it has to start in the home as participants feel there is a need to educate parents on why it is important to eat healthy, exercise, and engage in healthy behaviors. Children and adolescents also need education as one participant commented, "Kids need to be educated on basic health knowledge and how to take care of themselves and the importance of preventing chronic disease."

Additionally, a place for recreation, a place to exercise, and gather socially was commonly expressed by focus group participants. "We desperately need a recreation center, a wellness facility," as one participate pleaded. Further, residents feel the schools and churches could get involved and offer exercise programs for children and allow the use of buildings and facilities for exercise.

Focus group participants stated that collaboration and leadership are important to finding solutions to the problems facing the community. There is a need to work with representatives from schools, the health department, extension services, and churches on health education and incorporate healthy messages and health education outreach. All of the community organizations need to be involved, as collaboration is perceived as a key element. One participant noted, "It is vital to get leaders involved, then participation will increase." Others offered,

"The mayor needs to be proactive,"

"The sheriff, hospital, schools, churches, all need to be involved," and

"Representation from every business and church is needed."

Encouragement and motivation are also necessary components as there needs to be ways to encourage residents to make changes.

Furthermore, several participants expressed that the community needs a greater number of doctors, employment opportunities, and more businesses. It was suggested that vocational training opportunities, apprenticeships, and mentorship would likely alleviate some of the economic problems faced by community members. In order to improve access to healthy food, stores could be encouraged to carry more produce and a farmers market would be a notable solution to some of the issues surrounding access to fresh quality, locally grown produce. An additional solution is for policy to change as many residents feel that welfare and other forms of government assistance perpetuate the problems.

Efforts Currently Ongoing/Available in Charleston to Support Health

Many participants feel that there was no general concerted effort to improve health in the community and that few programs or services were currently available to support or promote health. However, many focus group participants highlighted the programs and services that are available in the community including: the Diabetic Shoppe provides education about diabetes, the schools conduct health screenings for the students, a chronic disease management class is offered through the Delta Health Collaborative, the hospital conducts health fairs, CARE offers exercise classes, and the Extension Services and the Health Department offer classes on various health topics. There is also a community garden with lessons in gardening available through the Magnolia Garden Club. The city also sprays for mosquitoes during mosquito season.

In addition to the exercise and activity classes CARE offers, one focus group participant mentioned that CARE also sponsors and runs the CARE closet. This program is similar to a thrift or consignment store where residents can purchase clothing, furniture, and other various entities for a discounted price. Community members donate tax-deductible items to the CARE closet. In

the case of need, such as a fire or a family in need of clothing or supplies, the CARE closet will often donate items to individuals and families.

Another focus group participant stated that a six-week chronic disease self-management class offered through the Delta Health Collaborative is available to residents. The class is free of charge and is designed for persons who have a chronic disease themselves or who live or care for somebody who has a chronic disease. The class meets once a week for six weeks and each weekly session is two hours in length. The instructors follow a lesson book and each participant receives a copy of the book, *Living a Healthy Life with Chronic Conditions*. The class involves a lot of small group work, independent study, and large group discussion and interaction. Classes are open to the public and the class can be taught anywhere there is a group of people willing to commit. Thus far in Charleston, the class has been offered at the Region One Mental Health Center, the Anchor Adult Day Center, and in a couple of local churches.

Services, Programs, and Resources Needed/Wanted by Participants to Promote Health

Participants voiced that they would like more health fairs to occur and have more screenings available for cancer and other preventive measures. They mentioned the importance of availability and accessibility of these services. For example, it would be helpful to sponsor health fairs at convenient times in well-known locations because as one resident commented, "When they do have it (health fairs), they have it at the weirdest of times, and it was – where was it? It was in a location, I was like, I don't even know where this is at myself." Participants believed that the community also needs another doctor and another nurse practitioner. Several participants voiced a need for a place to exercise and congregate,

> "We need a family life center or recreation center where people can come exercise and learn to be healthy,"

> "We need something for adult recreation, we need more activities and social events," and
>
> "There is a need for a place for younger people to socialize, a community center with access to computers, faxing, and Internet."

Participants also suggested mentoring and tutoring programs for children and after school programs such as Big Brothers and Big Sisters. Also, the school could offer more education to students regarding healthy lifestyles and disease prevention. Participants also feel that programs specific to prenatal care are needed, as there is a need for improved prenatal care and education about breastfeeding. Smoking cessation programs are also needed and in terms of environmental improvements to promote health, bike lanes, sidewalks, and walking trails were offered as beneficial additions to the community. Additionally, a farmers market and more restaurants and eating establishments that offer healthy or healthier options would benefit the community residents.

Availability of Healthy of Food in the Community – Nutrition Environment

Focus group participants highlighted recent changes in the schools that have impacted healthy food choices for students. For example, the elementary school now uses a piece of equipment that bakes food, preparing lower fat foods and no longer offers fried food. Since a significant proportion of students eat meals at school, this change in equipment provides healthier food options for students. Additionally, focus group participants mentioned that some residents have their own gardens to grow their own food and Charleston now has a community garden where residents can purchase plots of land to grow fruit, vegetables, and herbs. One focus group participant mentioned that the sheriff also travels occasionally to Pontotoc, MS and brings fresh produce back that he sells in his store. Regarding restaurants, focus group participants stated that there are healthy options in some of the restaurants but consumers have to be aware of

what healthy choices are and which substitutions need to be made when ordering. Most residents feel that healthy options at the restaurants were limited and that these establishments could increase the number of healthy options available.

Many focus group participants mentioned that with only one grocery store in town, there are limited healthy food options available and that most available food is processed. According to one resident, “There is not a lot of healthy food, not here.” Fresh and frozen produce are available in the grocery store but residents feel it is often of poor quality with limited selection. Residents also voiced concerned about the high cost of groceries and “price gauging” as one resident put it because there is only one grocery store in town so prices are not competitive.

Health Behaviors of Residents

Several harmful health behaviors were mentioned by focus group participants including the following: unhealthy eating (e.g., eating too much processed food, eating junk food and fast food, cooking unhealthy, overeating, high caloric intake), using and abusing drugs and alcohol, smoking, having unprotected sexual intercourse, having poor dental health, engaging in lethargic activities (i.e., watching television, using the computer, and playing video games), and not exercising or engaging in physical activity. Many residents also have anger issues and violence in relationships (i.e., partner violence and domestic violence). Focus group participants stated that very little preventive health care takes place and most residents wait until they get sick or get a disease to make changes.

In terms of healthy behaviors, many residents have gardens and grow and prepare their own food, many residents eat wild game, and some residents engage in exercise (e.g., walk, bicycle, do yard work, garden, ride horses, play ball, and attend group fitness). Focus group participants also perceived that smoking prevalence in their community has decreased. Many

jobs involve physical and manual labor enabling some residents to engage in physical activity as part of their daily work. Additionally, many residents attend sporting events and/or community events, are involved socially, and/or go to church.

Environmental Concerns in the Community

Residents voiced concern about exposure to chemicals from farming including Arial applicators on farms, pesticide use, Round-Up use, and chemical drift. Many residents have asthma and allergies that participants feel may be influenced and increased by the chemicals in the air. There is a belief among residents that the city water needs improvement and may not be safe to drink. Comments from residents regarding the water system ranged from,

> "Paynes water system concerns me," and
>
> "All I've got to say is if you run some water in a clear glass – It's cloudy now," to
>
> "When you first run it, it doesn't run clear. Give it a few minutes to clear. It doesn't taste bad."

Most residents agreed that the water is of poor quality and filters are needed on home faucets. Smoking is an additional environmental concern as there is not currently a city or countywide smoking ban in place for inside buildings and thus, smoking is allowed in a couple of the local restaurants, as well as, other buildings. Residents also mentioned the need for recycling in the community as this service is currently not available, which negatively impacts the environment.

Community Resources Available for Recreation, Physical Activity and Exercise

Residents voiced that are limited opportunities in the community for recreation, exercise, and activity saying things such as,

> "We have nowhere to exercise,"
>
> "Ain't no recreation or nothing,"

"Nothing. That's why all the folks so big,"

"I think that's the biggest thing, nothing to do for activity," and

> "I think there's a park and it's probably due for some upgrading. But other than that I think generally people that find the recreation either go walking or biking or go out to the high school some place. It's not like there's a place where you can go play tennis, you can go work out or swim. There's nothing like that around here to do."

While some residents believe there were few opportunities for physical activity, exercise, and recreation in the community, others provided insight into existing local resources. Two local churches have basketball courts (the Presbyterian Church and the Church of God). The Church of God also sponsors an Upward Basketball League for youth in the winter and also has an exercise facility for church members equipped with strength training machines, free weights, and cardiovascular equipment. The Methodist Church has tennis courts but they are not well maintained. Though there are a few existing church facilities in the community, they are locked most of the time and not available for community use.

Focus group participants discussed available sports leagues for young people. Specifically, there are two youth sports leagues in the community: the Tallahatchie Youth League and the Robert Hill Youth League. The Tallahatchie Youth League offers baseball, football, cheerleading, softball, and adult softball. Most of the participants in the Tallahatchie Youth League are White. The Robert Hill Youth League offers football and cheerleading and most of the participants are Black. Both leagues cater to children seven to 12 years old. There is another baseball league in the Rosebloom facility, which is about 25 minutes outside of Charleston. A track league called the Mississippi Road Runners is also available for youth during the summer.

Additionally, focus group participants mentioned that CARE offers exercise classes during the week for children and adults. Zumba and yoga classes are available twice a week for adults for a small fee. Gymnastics and dance classes are available for children at various times throughout the year and are usually ten dollars per group of eight to 10 classes. For children and adults who cannot afford the fee, scholarships are available. The high school track is available for residents to use after school hours (informal joint use agreement between the community and the school). The only other exercise facility in the community is a small privately owned gym with minimal equipment in fairly poor condition. There is also a small park (Charleston City Park) with a swing set and basketball goals but the swings are rusted and broken and the basketball court is in poor condition. The park is located in a low-income neighborhood and does not have public lighting.

Community Resource Needs for Recreation, Physical Activity, and Improved Wellness

Regarding the needs for recreation, physical activity, and exercise in the community, residents said one of the greatest needs is for a place to exercise and engage in activity and recreation such as a community wellness center, a gym, or exercise facility. Further, there is a need for outdoor recreation facilities such as a public park with amenities such as picnic tables, grills, walking trails, a swimming pool, and basketball goals. More than just a place to exercise, there is a great desire among residents to have a place to go for gathering and for social interaction among the community members. Residents would like to have access to classes and programs such as karate, ballroom dancing, physical activity programs, walking groups, swimming, and group exercise. Further, there is a need to improve the walkability and safety of the community by building new and repairing old sidewalks, installing bike lanes, and repairing the roads.

Additionally, residents voiced a desire for a farmers market to increase access to fresh, quality, and affordable produce and other foods. A need was also expressed for a more active Boys and Girls Club. Finally, many residents mentioned the need for a reading program and reading classes for adults and children, as well as, other community classes, such and sociology and history. In response to whether residents would like access to reading classes, one resident said,

> "I would like that very much" and others said,
>
> "Oh, definitely," and
>
> "Yeah, I would yeah."

In regards to other general community classes, residents voiced a strong desire for classes with comments such as,

> "You never get too old to learn. I would like to learn something new,"
>
> "I would like to go back to the classes – to go further because back then I didn't learn a lot you know and I still would like to go back and do some more," and
>
> "Have some history classes, teach me what I'm missing in not going to school."

One of the greatest needs vocalized by residents in terms of education though was the need for health education in the community and the need to inform residents of their health status. Many residents voiced the need for increased health education with comments such as,

> "We do not have health education. That's a major disadvantage. If you're not getting health education from the adult level or from the kids' level, then you just repeat unhealthy generations you know, fundamentally, physical, and social,"
>
> "I just think the biggest thing is health education, because, you know, if you can give people knowledge, like what they need to do to take care of themselves and give them tools about health, that's key,"
>
> "But right now there's a lack of health education across the board, so we have to find ways to educate about health," and

> "And that's the one reason why (residents are so unhealthy), because they don't have health education to teach them and understand the type of stuff they put into their body or how it's all connected and how one problem can lead to another problem, you know, stuff like that."

Residents' Perceptions of what Influences Teenage Pregnancy

Residents feel the lack of sex education available influences the high teenage pregnancy rates in the community, as well as, the fact that there is nothing to do, little recreation, and peer pressure from other adolescents, as it seems to be a trend. Residents' beliefs and comments on the factors influencing teenage pregnancy ranged from,

> "Mostly, yeah, it's the lack of education and nothing to do," and
>
> "You get 14, 15 years old, so I don't think that's a good idea but a lot of them, is just doing it because they friend is,"
>
> "Peer pressure, that's right," to
>
> "It's a trend. It is."

Residents' Perceptions of what Influences Dropping out of High School

"A lot of things," and "Quite a few things," were comments given by residents in response to the question concerning influences on the high school dropout rate. Poverty, drugs, no field trips, state testing, bullying, teenage pregnancy, peer pressure, lack of after-school services, and students getting behind were all reasons offered by residents. Comments included,

> "State testing. State testing has got a lot of kids,"
>
> "Peer pressure,"
>
> "Car with big rims, wanna be a dope boy,"
>
> "That's one of the things that happens a lot with teenage pregnancy, they tend to drop out of school,"

> "I think lack of the after-school services that could be made available to children for those that may fall behind plays a big part in regular school. They may not be able to catch up and they feel like that's the only option (to drop out). I work with the GED program with dropouts and I see a lot of that,"
>
> "Some of it is social. Some of them feel threatened or uneasy with being threatened or bullied at school,"
>
> "There are a number of issues that could be addressed or affects the high school dropout rate, and that's something I've seen, lack of access to children's services that are available that could help them like access to a reading center. Kids that are poor in reading and math, those are the biggest problems we have I see, with the students not being able to read and work out math problems. They feel like they're somewhat behind their other peers or classmates, so they think that's the only option they have; 'I'll never get finished with school.' GED is an option, but, you know, high school diploma is always the first choice, but sometimes they don't feel like they have that choice," and
>
> "We don't have enough people, I think, in the community that can reach out as far as volunteer for services that may be available to our children. I mean I see it every day with children; the reasons, social, not having access to people that can help them and understand at a level where they are is a huge problem."

Additionally, residents feel another influence is the lack of parental involvement and poor parenting prevalent in the community, as well as, students not being pushed, under-qualified teachers, and teachers not teaching. Comments on these influences included,

> "Parents. And you've got to talk to teachers as well. They are not – We have some (teachers) that is totally committed to their students and there are some (teachers) that just never teach. That's the bottom line. They're not pushing our children the way that they should. That's just the bottom line,"
>
> "It's lack of parenting to blame,"
>
> "And some of it's poor parenting," and
>
> "At the same time the teacher might not be as well-qualified. And frankly a lot of times they're not as well-qualified as they should be. And neither is the parent."

The majority of health problems facing residents in the community are preventable and there is a lack of awareness among community residents surrounding prevention. An overarching theme identified is that many residents believed that a lot of the chronic diseases, namely

obesity, hypertension, and diabetes are hereditary and there is not much an individual can do about them. Comments given by residents included,

> "I think it (obesity) come from they family, though. When they bloodline – they big people, yeah,"
>
> " I'm just saying it's genetic, though,"
>
> "It's on the bloodline, basically,"
>
> "And that's a big thing in the Black community because we not educated on certain stuff that we should be done to avoid but you know if it's hereditary it gonna come to you naturally, anyway," and
>
> "Well I'm going to have high blood pressure anyway because my mom and dad had it and my grandfather had it."

Many residents believe that diseases such as obesity and diabetes are inevitable and do not understand they can engage in different behaviors and prevention strategies to prevent these diseases from occurring. Additionally, a lot of residents do not seem to understand the health risks associated with obesity as one resident noted,

> "And people don't know they're obese in Mississippi a lot of the times, or don't know that if they are 20 pounds overweight they're more apt to have diabetes or more apt to have heart problems. Somebody's got to tell them. It's just not happening."

Further, a number of residents believe there is an issue in the community with perception of poor health as some residents are unhealthy but consider themselves healthy, as one resident stated,

> "Because in Mississippi health is can I get around? Can I do whatever function that I do throughout the day? And our general thought of health happens when we get sick. But before, as long as we're able to do the things that we want or our daily life calls for us to do then we are okay. So even though we see all the commercials and all the national studies on obesity and all those types of things we generally believe they're not talking about us. And so we don't take any effort unless we have a health crisis of our own to alleviate any of those other things."

Although some of the key informants and focus group participants held different opinions on matters such as the quality of the education system, the presence of racism in the community, resources in the community available to support health, and the social determinants of health, most key informants and focus group participants agreed on the priority health issues, environmental concerns in the community, resources available for physical activity, the nutrition environment, and advantages and disadvantages of living in the community. Findings and feedback from the participants in the focus groups were similar to the key informants in terms of what residents agreed and disagreed about. This conceptual finding is discussed further within the discussion section in Chapter Five.

Findings from the Worksite Focus Groups Regarding Employee Wellness Programs

Two of the focus groups were conducted in two local worksites, the Tallahatchie General Hospital and Sayle Oil Company. Both companies expressed a need for and interest in the development of a worksite employee wellness program. Thus, focus groups were conducted with employees of each worksite in order to discuss the design and necessary components of a worksite wellness program. In addition to questions specifically regarding the worksite wellness program, employees were also asked questions regarding the community in general, as were the participants in the six other community focus groups.

Health Issues of Employees Needed to be Addressed Through a Worksite Wellness Program

Participants voiced that there were a variety of health issues experienced by employees including: overweight, obesity, high blood pressure, anxiety, grief (hospital), stress, depression, lack of energy, insomnia, diabetes, asthma, and employee burnout (hospital). Health behaviors of concern mentioned by participants were poor nutrition habits and poor diet, lack of physical activity and exercise, smoking, and overconsumption of alcohol. Participants expressed they had

limited access to healthy food options and limited access to exercise facilities. An additional concern mentioned by participants regarding their coworkers was they feel a lot of employees were comfortable being overweight and/or obese and that they did not understand the health risks associated with overweight and obesity.

At the hospital specifically, the staff members witness disease and death firsthand on a regular basis, which can be emotionally difficult to manage and takes a toll on employees causing grief and depression. Further, the hospital in general is a stressful environment, which causes a lot of stress for employees. Focus group participants expressed that there is a need especially at the hospital for grief counseling and to address the mental health status of employees.

Needs to Improve Health and Appropriate Strategies to Address the Health Issues

Participants said they need comprehensive health education in the form of classes, seminars, and various programs. Specifically, they need education regarding what to cook and how to cook healthy, how to eat healthier, healthy meals to bring to work for lunch, how to grocery shop, eating in moderation, weight loss, weight management, stress reduction and stress management, time management skills, benefits of exercise, how to start exercising, current health state and how overweight and obesity negatively impact health, development of behavioral skills, disease prevention, healthy living, and health promotion. For Sayle Oil Company employees, the lunch hour was suggested as the best time for on-site health seminars to take place while at the hospital, seminars should be offered after the different shifts, as most employees are shift workers.

A need to conduct health risk assessments on all employees was expressed by participants at both worksites. Participants expressed a need for an exercise facility that offers

group fitness classes as the group setting provides motivation and social support. They recommended that group fitness classes be offered before and after shifts in order to accommodate employees' schedules. Walking groups were also mentioned as a program that employees would like to have offered. In terms of healthy food options, participants voiced that they would like to have access to more options, especially during the lunch hour. There is a need to increase the availability of nutritious, healthy food that is accessible to employees during the workday when there is not a lot time to spend cooking and preparing meals. Periodic or ongoing company-wide wellness challenges and/or weight loss challenges were also mentioned by participants as ways to motivate and encourage employees to engage in healthier lifestyle behaviors and improve their overall health status.

Most Effective Way to Reach Employees

Participants at both worksites said the best way for them to be reached is through email. At the hospital, participants also mentioned that information could be distributed with their paychecks and/or near the time clock. At Sayle Oil Company, participants said information could be posted in the communal kitchen, on the company website, and/or with pay stubs.

Possible Incentives for Improved Wellness

For employees at Sayle Oil Company, participants expressed that potential incentives for weight loss and/or improved wellness could be a free day off work or the ability to leave early one day. For employees at the hospital, participants said that a free parking space would be a good incentive as parking at the hospital is limited.

Employees at each worksite, as well as, the CEO and owner of Sayle Oil Company and the hospital administrator expressed deep interest, excitement, and enthusiasm about the potential for the development of a worksite wellness program.

3. Built Environment: Rural Active Living Assessment (RALA) Results

I. Town-Wide Assessment Tool

Town Demographics and Characteristics

The city of Charleston is located in Tallahatchie County, MS. The population of the Charleston is 2,198. The total city area is 1.4 square miles (896 acres) and the population density is 1,612.7 per square mile. The population of Tallahatchie County is approximately 13,000. The total county area is 652.08 square miles (417,331 acres) and the population density is 23 persons per square mile. The general city topography is flat. There is one distinct town center and the general city street pattern is a grid pattern. The city school district is the East Tallahatchie School District. Within the school district, there is one high school, one middle school, and one elementary school and all are located within one mile of the town center. There is also one private school (Stryder Academy) located more than five miles from the town center.

Town Recreational Amenities

There are not any formal hiking, walking trails, or biking paths within 15 miles of the town center. There is one public park within one mile of the town center, the Charleston City Park. The park has a swing set and basketball goals but no public lighting and the amenities are in poor condition. There is not a swimming public access beach or a swimming pool within 15 miles of the town center. The only swimming pool in Charleston is located at the member-only Tallahatchie County Country Club. There is a river with canoe/kayak/boat/water sport access between five and 15 miles of the town center. There is not a skate park, ice-skating rink, or roller skating rink within 15 miles of the town center.

Other than the Boys and Girls Club, which provides limited recreational opportunities, there is not a town recreational facility. There are two private gyms, the Charleston Fitness

Center and the Church of God Exercise Facility, within one mile of the town center. The Charleston Fitness Center is in poor/fair condition and the Church of God Exercise Facility is in good/excellent condition. The middle school also has a small exercise facility for employees, which is in good/excellent condition. CARE offers weekly yoga classes on Monday nights for $8.00 per class and Zumba classes twice a week on Monday and Wednesday nights for $5.00 per class in the CARE building. The CARE facility includes a dance studio and group fitness room and it is in good/excellent condition. There are two playgrounds located within one mile of town center at the elementary school and a daycare center and they are in poor/fair condition. Other than the playgrounds located at the schools and daycares, there are not any public playgrounds in the community. Outside of the playing fields and courts at the schools, there is one baseball field located within five miles of the town center and they are in poor/fair condition. Two churches (The Presbyterian Church and The Church of God) have gyms with basketball facilities but they are not open to the public.

II. Program and Policy Assessment Tool

Town Programs and Policies

The town does not have a policy that requires bikeways or pedestrian walkways in new public infrastructure projects (e.g., complete streets policy). The town does not regularly clear snow from sidewalks but if it does snow, the snow would be cleared from the roads. The town does not have a public recreation department that offers physical activity programming. However, the town does have two public recreational leagues that offer physical activity programming. The Tallahatchie Youth League offers baseball, softball, football, and cheerleading programs for youth ages seven -12 years old. Tallahatchie Youth League also offers adult softball in the summer. The Robert Hill Youth League offers football and

cheerleading for youth ages seven-12 years old. Additionally, the Church of God sponsors Upward Basketball in the winter for youth ages seven-12 years old. Also, a local resident serves as the coach for a youth track team in the summer called the Mississippi Road Runners. There are no membership requirements to participate in the aforementioned programs. There are not any formal shared-use or joint-use agreements in place to allow local residents to use the facilities outside of programming. The town does not offer any local public transportation options such as, public buses or vans. There are not any long-distance public transportation options available in the town such as, a commuter train service or Greyhound Bus.

School Programs and Policies

The town does not have a "Walk to School" program or any other program that encourages children to walk or bike to school. The town does not participate in the National "Safe Routes to School" program. Outside of organized sports, the public school does not offer other sponsored physical activity initiatives for students. The public schools do allow public access to their recreation facilities (i.e., the high school track and playgrounds) after school hours but this is an informal "hand shake" agreement and there is not a formal joint-use agreement in place. The public schools do not have a late bus option for students who stay after school for sponsored activities.

III. RALA Segment Assessment Tool

Thirty-two segments within a one-mile radius of the town center were strategically chosen for assessment. The segments were strategically chosen based on certain entities the researchers were interested in assessing for the walkability and safety of the surrounding areas (e.g., segments surrounding the schools, hospital, library, town square, health center). Please see Appendix I on page 193 for a complete list of the selected street segments. Please see Appendix J

on page 196 to view a map of the selected segments. During the summer of 2012, two researchers simultaneously completed each street segment audit independently. Following the assessment of each segment, the researchers discussed their findings and reached a consensus regarding any disagreement in the segment assessment. Note that initial agreement was 96.9% of all items. The street segment audits took place on two separate weekdays, Thursday June 21, 2012 and Friday June 30, 2012.

Primary Land Use and Terrain, Segment Zone Type

- 14 segments (43.8% of segments) were in areas of residential land use only.
- 16 segments (50% of segments) were in areas with some combination of mixed-land use (residential, commercial, public/civic, open space, industrial).
- 1 segment (3.1%) was commercial land use only.
- 1 segment (3.1%) was public/civic land use only.
- 30 segments (93.8% of segments) were in areas of flat terrain.
- 2 segments (6.2% of segments) were in areas in the hills.
- 24 segments (75% of segments) were located within the town center.
- 8 segments (25% of segments) were located within the town center and within a neighborhood.

Land Use: Residential Density and Type of Residence

Of the 32 street segments assessed, three (9.4%) were not located near residences, 16 segments (50.0%) were located in densely settled areas, eight segments (25.0%) were located in moderately settled areas, and five segments (15.6%) were located in not densely settled areas. Three segments (9.4%) did not have any residences, 17 segments (53.1%) had single-family detached homes only, one segment (3.1%) had mobile homes only, 10 segments (31.3%) had a combination of single-family detached homes and mobile homes, and one segment (3.1%) had a combination of single-family detached homes, mobile homes, and multi-family

homes/apartments. Approximately half of the residences were in good/excellent condition and the remainders were in poor/fair condition. Table 2 on pages 100-101 further illustrates the walkability assessment.

Land Use: Public and Civic Land Use

- 14 segments (43.8%) were not located in areas with civic or public land use.
- 3 segments (9.4%) had a church located within the segments.
- 2 segments (6.3%) had athletic fields/courts located within the segments.
- 4 segments (12.5%) had a playground located within the segments.
- 1 segment (3.1%) had an athletic field and a playground located within the segment.
- 1 segment (3.1%) had a funeral home and a hospital located within the segment.
- 1 segment (3.1%) had a community center (CARE Building) and town offices.
- 1 segment (3.1%) had a coroner's office located within the segment.
- 1 segment (3.1%) had the health department, the CARE closet, and the Lion's Club.
- 1 segment (3.1%) had a school bus parking lot located within the segment.
- 1 segment (3.1%) had the Boys and Girls Club, an athletic field, a playground, a school, and a cemetery located within the segment.
- 2 segments (6.3%) had a cemetery located within the segments.
- Of the 18 segments with public/civic land use, 11 segment's (61.1%) amenities were in good/ excellent condition and 7 segment's (38.8%) amenities were in poor/fair condition.

Walkability Assessment

Table 2. Walkability Assessment Results		
WALKABILITY		
Presence of Sidewalks		
	Frequency	Percent
No Sidewalk	19 segments	59.4
Both Sides of Street	3 segments	9.4
One Side of Street	6 segments	18.8
Intermittent	4 segments	12.4
Condition of Sidewalks		
Good/Excellent Condition	5 segments	38.5
Poor/Fair Condition	8 segments	61.5
Presence of Buffers and Shoulders		
None	23 segments	71.9
Sidewalk Buffer	9 segments	28.1
Condition of Buffers and Shoulders		
Good/Excellent Condition	3 segments	33.3
Poor/Fair Condition	6 segments	66.7
Cross Walks, Pedestrian Signage and Other Safety Features		
Pedestrian Signals	1 segment	3.1
Children at Play Signs	9 segments	28.1
Cross Walks	1 segment	3.1
Stop Signs	29 segments	90.7
Public Lighting	26 segments	81.3
School Light	1 segment	3.1
Road Traffic Characteristics		
Road Type		

Table 2 Continued. Walkability Assessment Results		
Road Type		
Paved Multi Lane Road	1 segment	3.1
Paved Single Lane Road	31 segments	96.9
Road Condition		
Good/Excellent Condition	22 segments	68.8
Poor/Fair Condition	10 segments	31.2
Posted Speed Limit		
None Posted	23 segments	71.9
15 Miles Per Hour	8 segments	25.0
20 Miles Per Hour	1 segment	3.1
Traffic Volume		
High	2 segments	6.3
Medium	5 segments	15.6
Low	25 segments	78.1
Barriers		
None	27 segments	84.4
Highway	3 segments	9.4
Industrial Zone	1 segment	3.1
Private Property	1 segment	3.1
Connectivity		
Presence of Connectivity to Surrounding Areas		
Yes	9 segments	28.1
No	23 segments	71.9
Condition of Connectors		
Good/Excellent Condition	2 segments	22.2
Poor/Fair Condition	7 segments	77.8

Land Use: Commercial

- 24 segments (75.0%) were not located in areas with commercial land use.
- 1 segment (3.1%) had a private office located within the segment.
- 2 segments (6.3%) had a gas station, a car wash, a convenience store, a hardware store, and a plant nursery located within the segments.
- 1 segment (3.1%) had a private medical office, a dentist office, and an accounting firm (private office) located within the segment.
- 1 segment (3.1%) had a funeral home and a pharmacy located within the segment.
- 1 segment (3.1%) had a restaurant and a small retail store located within the segment.
- 1 segment (3.1%) had a closed day care located within the segment.
- 1 segment (3.1%) had a restaurant, a gas station, a convenience store, a small retail store, and a used car lot located within the segment.
- Of the 8 segments with commercial land use, 6 segment's (75.0%) amenities were in good/ excellent condition and 2 segment's (25.0%) amenities were in poor/fair condition.

Land Use: Schools

- 24 segments (75.0%) were not located in areas with schools present.
- 2 segments (6.3%) had a public elementary school located within the segments.
- The elementary school has sidewalks on two sides but little to no connectivity to the areas surrounding the school.
- 2 segments (6.3%) had a public middle school located within the segments.
- The middle school does not have any sidewalks surrounding it.
- 4 segments (12.5%) had a public high school located within the segments.
- The high school has a sidewalk on one side.
- None of the schools have sidewalks with connectivity to the surrounding areas.
- The condition of all three schools was poor/fair.

Land Use: Industrial/ Agricultural

- 30 segments (93.8%) were not located in industrial or agricultural areas.
- 2 segments (6.3%) were located in a light industrial area.

- The condition of the industrial areas was poor/fair.
- While none of the segments were located in agricultural areas, the land area surrounding the city limits of Charleston is 80% rural and agricultural.

Subjective Assessment: Walkability and Aesthetics

Walkability

For the subjective assessment for walkability, the following question was asked: How strongly do you agree with the following statement? "This segment is walkable." The answer choices were strongly agree, agree, disagree, and strongly disagree.

- For 11 segments (34.4%), the researchers agreed that the segment was walkable.
- For 18 segments (56.3%), the researchers disagreed that the segment was walkable.
- For 3 segments (9.3%), the researcher strongly disagreed that the segment was walkable.

The researchers did not "strongly agree" that any of the segments were walkable.

Aesthetics

For the subjective assessment for aesthetics, the following question was asked: How strongly do you agree with the following statement? "This segment is aesthetically pleasing." The answer choices were strongly agree, agree, disagree, and strongly disagree.

- For 11 segments (34.4%), the researchers agreed that the segment was aesthetically pleasing.
- For 16 segments (50.0%), the researchers disagreed that the segment was aesthetically pleasing.
- For 5 segments (15.6%), the researchers strongly disagreed that the segment was aesthetically pleasing.

The researchers did not "strongly agree" that any of the segments were aesthetically pleasing.

Area Surrounding Schools

The Elementary School has sidewalks on two sides. There is little to no connectivity to the areas and neighborhoods surrounding the school. The Middle School does not have any sidewalks surrounding the school. The High School has a sidewalk on one side but there is little to no connectivity to the areas and neighborhoods surrounding the school. In sum, none of the schools have sidewalks with adequate connectivity to surrounding areas and neighborhoods.

4. Nutrition Environment Assessment

Restaurants in the area include:

Fast Food/Chain Restaurants

- Bumper's (similar to Sonic)
- McDonald's (adjoined to a Shell Gas Station)
- Subway

Local Restaurants

- Snack Bar
- Just Lunch – China Cabinet
- Three Way Restaurant
- Mi Casa Su Casa Mexican Restaurant
- Little's Express (located within a convenient store)
- Mr. Jiffy (located within a convenient store)
- Oriental Express Chinese Restaurant

Stores selling food

- Super Value Grocery Store
- Dollar General Store
- Fred's Dollar Store
- Family Dollar Store

Nutrition Environment Measure Survey (NEMS) Results

All food establishments except for chain fast food restaurants (i.e., McDonald's, Subway, and Bumper's) were assessed. In total, 10 local food establishments were assessed using the NEMS tool to evaluate the nutrition environment and food availability in the community. Of the 10 establishments: Four were sit-down restaurants (China Cabinet, Mi Casa Su Casa, Oriental Express, and 3-Way Restaurant), one was a fast-casual restaurant (Snack Bar), two were fast-casual restaurants housed within a convenience store (Mr. Jiffy and Little's Express), one was a grocery store (Super Value), and two were dollar stores (Dollar General and Fred's Dollar Store). None of the restaurant establishments had nutrition information available for the foods served there and none of the establishments had an online menu or online nutrition information. Further, none of the establishments had table tents, menu markings, or other forms of media available to promote and/or identify healthy menu options and choices and none of the establishments encouraged healthy choices.

To ensure inter-rater reliability, two individuals completed each site assessment independently, at the same time, with the exception of the grocery store. Only one researcher assessed the grocery store. After completing the NEMS on all the food establishments, the researchers reviewed their NEMS site assessment for each establishment and compared responses. There were 13 minor changes made after comparing responses and discussing the differences found. The two independent researchers had identical responses to the NEMS for each site with the exception of 13 items. Inter-rater reliability was high. There are over 100 items per site assessment and the NEMS was completed at 10 establishments; thus, over 1,000 items were completed.

Qualitative results and descriptions of the food establishments are provided below followed by the quantitative scores for each food establishment. For the stores, the possible scores range between -9 and 54 with higher scores indicating more healthy ratings. For the restaurants, the possible scores range between -27 and 63 with higher scores indicating more healthy ratings. The lowest score received by a store was six (Fred's Dollar Store) and the highest was 23 (Super Value Grocery). The lowest score for a restaurant was one (Oriental Express) and the highest score was 10 (China Cabinet). The mean score for restaurants was 5.28 and the mean score for stores was 14. For a complete list of the scores for each establishment please see Table 3 on page 113.

Restaurants

The China Cabinet "Just Lunch"

The China Cabinet "Just Lunch" is open for lunch Monday through Friday from 11:00 AM to 2:00 PM. It is a non-smoking restaurant. The restaurant is housed within a gift store called the China Cabinet. Regular menu items include sandwiches, soups, and salads. There are seven main dish entrée items and six main dish salads. There are not any healthy items for the entrées; there are three healthy options for the salads, provided the individual makes substitutions. There are no non-fried vegetable items without added sauce available. White bread is the only available bread option. The options for light salad dressings include Fat-free Ranch and Fat-free Italian. Sandwiches are served with pasta salad, potato salad, fruit cup, or side salad, potato chips, and a pickle. Baked or light options for chips are not available. In addition to the regular menu items, there is a different daily special each day of the week. The daily specials for the week are emailed out to individuals on the mailing list at the beginning of each week. Daily specials include meals such as: spaghetti and meatballs, loaded baked potato with ham, bacon,

and cheese, shrimp remoulade salad, smoked sausage and red beans over rice, beef nachos supreme, corn, rice, and smoked sausage soup, Swiss turkey bacon melt, roast beef slider melts, and Philly cheese steak sandwiches. There is not a children's menu available. Drink options include Coca Cola products, water, and sweet and unsweetened tea. There is seating for about 30 people inside the restaurant and store. The China Cabinet scored a 10.

Three-Way Restaurant

The Three-Way Restaurant is a steak and seafood food establishment with separate smoking and non-smoking sections. The hours of operation are from 5:00 PM to 10:30 PM (or until the last customer leaves) Thursday, Friday, and Saturday and there is a lunch buffet served on Sunday from 11:00 AM-2:00 PM. The restaurant is closed from Monday to Wednesday and is only open for lunch on Sunday. There are 21 tables with seating capacity for around 75 people, as well as, a bar that seats six people. There are 29 main dish entrée items, none of which are healthy items without substitutions. There are not any main dish salads but there is a side salad that is an option to come with entrées. There are no light salad dressing options available. There are not any non-fried vegetables available without added sauce however, an individual can request vegetables without added sauces but this option is not on the menu. Bread options include white choices only. Vegetable oil is used for cooking. There is not a children's menu available. Beverage options include Coca Cola products, water, sweet and unsweetened tea, beer, wine, and liquor. The Three Way Restaurant scored a 9.

Mr. Jiffy and Little's Express (Convenience Store and Restaurant)

Both Mr. Jiffy and Little's Express are gas stations that also sell what is traditionally found in convenience stores such as beverages, chips, candy, and other food items. In addition to offering items such as these, both of these stores have breakfast, daily plate lunches, and other

daily cooked foods available. The selection of items at Mr. Jiffy is much greater than Little's Express and includes famous fried chicken made almost around the clock. Mr. Jiffy also sells bakery items that are placed near the register and the counter. Neither establishment has healthy food options available. At both locations food choices include items such as, ribs, pork, catfish, French fries, pizza, hamburger patties, macaroni and cheese, mashed potatoes, green beans, rolls, and corn bread. An example of a plate lunch that was available at Little's Express the day of the assessment is Rotel spaghetti, fried chicken liver, beef tips, and mashed potatoes. The vegetable selections that are available are cooked in butter and/or vegetable oil and usually bacon is added while the meat selections available are not lean cuts and are mostly fried.

Mr. Jiffy has a permanent menu with food choices that are always available, as well as, plate lunch options that change daily. Little's Express has pizza that is always available, as well as, plate lunch and breakfast items that change daily. Neither store has signage posted nor other information promoting healthy eating and healthy food choices. Nutrition information is not available for the cooked food at either location. Mr. Jiffy has a catering menu and is able to take large orders for meals.

Mr. Jiffy is open 5:00 AM to 10:00 PM Sunday through Thursday and 5:00 AM to 11:00 PM Friday and Saturday. There are three tables with seating for six people. Little's Express is open 5:00 AM to 8:00 PM Monday through Saturday and 6:00 AM to 6:00 PM on Sunday. Little's has seating for 26 people with seven tables. Mr. Jiffy's food items are available for breakfast, lunch, and dinner while, Little's Express only has breakfast and lunch available daily; although, pizza is available at Little's all day.

Little's Express has deli meat available for purchase by the pound or for sandwiches. Only white bread is available for sandwiches and only white bread was sold in the store. Bananas

are available for purchase at Little's Express, but on the day of the assessment the bananas did not appear of good quality. As for milk, 2% milk was available in a half gallon and whole milk was available in a pint. Low or no-calorie beverages such as Vitamin Water Zero and Diet soda products were available. Baked chip options were not available. Similar to Little's Express, Mr. Jiffy had white bread available for purchase and no wheat bread, no baked chip options, half gallons of 2% milk and pints of whole milk, and low calorie beverages such as Vitamin Water Zero. Mr. Jiffy did not have any fresh produce available for purchase.

The convenience stores and gas stations that were chosen for assessment using the NEMS tool were those that had a plate lunch and/or prepared food options available. Although all of the convenience stores and gas stations in the community were not evaluated as part of this assessment using the NEMS tool, they each provide access to an array of processed foods and canned and bottled beverages. With the exception of one store that sells bananas (Little's Express), none of the convenience stores or gas stations has fresh produce or healthy food options available for purchase. Mr. Jiffy and Little's Express both scored a six.

Snack Bar

Snack Bar is an establishment serving hamburgers, pizza, chicken fingers, chicken wings, French fries, and other similar items. You cannot sit down at the snack bar. It is a call-in and pick up or order at the window process. There is a walk-up menu board for ordering. The hours of operation are Monday to Thursdays 8:30 AM to 10:00 PM, Friday and Saturday 8:30 AM to Midnight, and Sundays from 10:30 AM to 10:00 PM. There are 34 main dish entrée options and seven main dish salads. There are not any healthy options available for the entrée's or for the salads. Bread options include white bread. There is not an option for light salad dressings. Non-

fried vegetables without added sauce are not available. There is not a children's menu available. Beverage options include Coca Cola products and water. The Snack Bar scored a three.

Mi Casa Su Casa

Mi Casa Su Casa is a Mexican restaurant. It is a non-smoking restaurant. The hours of operation are from 11:00 AM to 10:00 PM on Friday and Saturday and from 11:00 AM to 9:00 PM Sunday, Tuesday, Wednesday, and Thursday. It is closed on Mondays. There are 32 tables with total seating capacity for about 100 people. There is a salad bar as part of the all-you-can-eat buffet. The buffet is available at lunch from 11:00 AM to 2:00 PM. There are 73 main dish entrée options none of which are healthy options. There are four main dish salad options, none of which are healthy salads. Salad dressing options include: Ranch, Light Ranch, Thousand Island, and Oil and Vinegar. Bread and chip options include Tostito chips, corn tacos, and flour tortillas. Non-fried vegetables without added sauce are not available a la carte but are included with entrées such as the fajitas and tacos. Canola oil is used for most all items with the exception of the grilled fish, in which olive oil is used. There is a children's menu available for children under 10 years old that includes three healthy options. Beverage options include Coca Cola products, 2% milk, water, sweet and unsweetened tea, beer, wine, and liquor. Mi Casa Su Casa received a score of two.

Oriental Express

Oriental Express is a Chinese restaurant. It is a non-smoking restaurant. The hours of operation are from 9:00 AM to 9:00 PM Monday to Thursday, 9:00 AM to 10:00 PM Friday and Saturday, and 11:00 AM to 2:00 PM Sunday. Only the buffet is available on Sundays. There are 15 tables in the restaurant with seating capacity for about 45 people. Although the menu does not have indicators for healthy options, it does indicate spicy items. There are a total of 64 main dish

entrées. There are not any salad items. There are not any healthy options on the menu but an individual can order steamed vegetables without added sauce or ask for entrées without sauces but this option is not on the menu. There is an all you can eat buffet with “unlimited trips” available all day. Vegetable oil is used for cooking. There is not a children’s menu available. Beverage options include Coca Cola products, water, and sweet and unsweetened tea. The Oriental Express scored a one.

Stores

Super Value (Grocery Store)

The researchers were not able to complete the full NEMS assessment in the grocery store. Therefore, modifications were made to the protocol. The grocery store assessment was completed by only one of the team members, the project director. The grocery store hours are 7:00 AM until 8:00 PM Sunday through Thursday and 7:00 AM until 9:00 PM Friday and Saturday.

Most of the produce available were prepackaged, wrapped in cellophane and placed on Styrofoam trays. Of the fruit and vegetable items listed on the NEMS, seven of the produce items were of unacceptable quality (oranges, cantaloupe, strawberries, watermelon slices, tomatoes, corn, and cabbage), eight of the produce items were of acceptable quality (bananas, apples, grapes, peaches, carrots, broccoli, lettuce, and cucumbers), and six items included on the NEMS were not available at the grocery store (honeydew, sweet peppers (bell peppers), pears, celery, spinach, and cauliflower.

There is not a deli or a bakery in the grocery store. Only pre-packaged lunchmeat and bakery items are available. The leanest cut of ground beef available was 27% fat, 73% lean for $2.99 per pound; 80% fat, 20% lean was available for $2.99 per pound. No fat free hot dogs were

available. There were not any types of higher quality, hearty breads available. There was one type of 100% whole wheat bread and one type of 100% honey wheat bread both available for $2.99. There were several choices available for white bread ranging from $1.19 per loaf – $2.29 per loaf. Both of these are examples of healthier food in this grocery store being more expensive than the less healthy options.

There were not any gallons of skim milk available, only half gallons. There was not any 1% milk available. Gallons and half gallons were available for 2% milk and whole milk. There was not any organic milk or almond milk available. Two half gallons of soymilk were available. One type of wheat pasta and one type of brown rice were available, while four or more types of white pasta and white rice were available.

The grocery did not have any signage posted or promotional material available encouraging healthy choices and selecting healthier food items. During the focus groups the community residents expressed that they believe the price of produce and other groceries in town was high, however, the prices at the Super Value in Charleston are comparable to a grocery store in Oxford, MS a community located approximately 45 minutes away. Prices were similar especially for produce items. Super Value Grocery Store scored a 23.

Dollar Convenience Stores: Dollar General and Fred's Dollar Store

The researchers were not given permission to conduct the full NEMS assessment in the Family Dollar Store. Therefore, it was not assessed using the NEMS. After a walking tour of the Family Dollar Store, the researchers concluded that similar items were available at the Family Dollar Store as were available at the other dollar stores in the community for comparable pricing.

Fred's Dollar Store and Dollar General have dairy items available for purchase such as milk, cheese, and ice cream. In both stores, there was more availability of whole milk than skim

or 1% milk. There was not any 2% milk available at either store. The stores have a variety of frozen foods and frozen dinners such as, Lean Cuisine's, Stouffer's, corn dogs, hot pockets, pizza, and sausage and biscuits. The meat selection includes packaged lunchmeat, hot dogs, and beef with the leanest cut available at each store being 27% fat, 73% lean. Both stores have boxed foods, canned foods, and processed foods such as rice, cereal, chips, breads, and pasta. Both stores have white bread options but Fred's did not have 100% whole wheat bread available, only bread that was made with whole grains. Neither store has baked chip options available for purchase, nor are any fresh bakery items available. Further, neither store has fresh or frozen produce available. Fred's Dollar Store scored a six. Dollar General scored an eight.

Table 3: NEMS Scores

NEMS Scores for the Stores and Restaurants			
Restaurants	Possible Score Range = -27 to 63	**Stores**	Possible Score Range = -9 to 54
The China Cabinet	10	Super Value Grocery Store	23
Three Way Restaurant	9	Dollar General	8
Mr. Jiffy	6	Fred's Dollar Store	6
Little's Express	6	Store Mean Score	14
Snack Bar	3		
Mi Casa Su Casa	2		
Oriental Express	1		
Restaurant Mean Score	5.28		

Additional information on the Nutritional Environment in the Community

In addition to the aforementioned food establishments, there is a Women, Infants, and Children (WIC) Food Distribution Center available for residents, as well as, one food pantry that is located inside of Faith Baptist Church. During the summer months, it is common for trucks to park along the road selling produce to community residents.

In the spring of 2012, a community garden was started in Charleston. The Charleston Magnolia Garden Club partnered with CARE to plan, design, and plant a garden to be utilized by the residents of Charleston. The vision is for the community garden to be an aesthetic addition to the community, which offers health benefits through physical activity and nutritious eating. The mission statement for the garden is: CARE and the Charleston Magnolia Garden Club will partner with other civic organizations to lead the way in helping citizens “Get a Life” in the fight against childhood obesity by enhancing the well-being of Charleston: encouraging people in the growing of fresh produce, providing locally grown nutritious food, increasing social interaction, and creating an opportunity for recreation, exercise, and education in an attractive setting. The design of the garden includes 8 x 8 plots to be leased for $25.00 annually by interested persons and families and used to grow garden vegetables, fruits, flowers, and/or herbs. Future plans for the garden include a walking trail, a gazebo, a play area for children, a tool shed, and a compost area. To date, the property has been leased, liability insurance is in place, a source for water/irrigation has been installed, and sponsors of the garden donated an entrance arbor and signs. Members of the garden club are available to teach classes at no cost on how to garden, how to cook foods grown in the garden, and on the benefits of including fresh produce in the diet.

5. Policy Assessment Results

As part of the needs assessment, the researchers examined the existence of policies in the community influencing health. Specifically, the researchers were interested in the existence of a citywide tobacco-free air ordinance, Complete Streets policy, joint-use agreements, housing policy, and zoning regulations. Using the results from the RALA, the key informant interviews, the focus groups, the SPAPA, and the school wellness policy, the researchers identified the presence and absence of the aforementioned policies influencing health.

In April 2012, the city passed a smoke-free air ordinance for city-owned buildings. Currently, there is no city or countywide smoke-free or tobacco-free air ordinance. The city does not have a Complete Streets policy, which is intended to increase safety for all users of the road. No formal joint-use or shared-use agreements exist between the city and the schools, the city and the local churches, nor the local churches and the schools. There is an informal joint-use agreement in place between Charleston High School and the city in that community residents are allowed to use the high school track during after school hours. The Charleston Elementary School playground is also available for community use through an informal joint-use agreement on condition that an adult accompanies the children using the playground. The city does not have housing policies or zoning policies and regulations. The Charleston School District has a school wellness policy that is updated annually.

School Physical Activity Policy Assessment (S-PAPA)

Background and General Questions

The School Physical Activity Policy Assessment (S-PAPA) assesses physical activity policy related to physical education, recess, and other physical activity opportunities at elementary schools. The S-PAPA was completed for the Charleston Elementary School, which

houses grades kindergarten through 5th grade and enrolls over 600 students. For physical education and physical activity programs the elementary school has a gymnasium, a playground, and regular classroom space as available facilities.

Module 1: Physical Education

The school (s) and/or school district (sd) have the following: A written policy that requires schools to follow specific physical education standards (sd), a written policy that requires the school's physical education program to follow specific physical education standards (s), a written policy that requires a specific number of minutes per week or a specific number of days per week that students will have physical education (sd and s), a written policy that specifies the maximum student-to-teacher ratio for physical education (sd and s), and a written policy that requires elementary school physical education programs to test students' fitness levels (sd and s). The school (s) and/or school district (sd) does not have the following: A written policy that teachers must assign student grades for physical education (sd and s) and excluding teacher evaluations, a written policy that requires the physical education program to be evaluated annually (sd and s).

All elementary students receive 60 minutes per week of physical education classes. Each class lasts 30 minutes and students are typically engaged in moderate to vigorous activity for 20 minutes and lying down, sitting, or standing for 10 minutes. The average class size for physical education is 25 students. The student-to-licensed teacher ratio in physical education class is 33:1. Relative to other subject matter areas, the number of students in physical education class is typically similar. The physical education teacher is required to attend staff development sessions at least once per year. The average time of staff development is two hours per year. The school provides financial support for physical education teacher's professional development. The

physical education teachers are required to use a specific curriculum and are provided with the following: Goals, objectives, and expected outcomes for their classes, a physical education curriculum, specific lesson plans or learning activities, and plans on how to assess or evaluate students. Physical education teachers are not provided with a chart describing the scope and sequences of instruction.

Often the physical education that students receive addresses physical/motor skill development and responsible personal and social behavior development, as well as, promotes active participation in physical activity. Sometimes the instruction addresses understanding movement concepts, principles, strategies, and tactics, physical fitness development, and valuing physical activity for health benefits. Rarely does the curriculum address expressive movement patterns (e.g., dance and creativity).

During physical education students rarely (as opposed to sometimes or often) are required to do extra physical activity for disciplinary reasons. Classroom teachers/counselors rarely withhold students from physical education to fulfill other academic requirements. Classroom teachers rarely withhold individual students from physical education for disciplinary reasons. The delivery of physical education is rarely compromised because of competing demands for physical education space. On average, physical education classes are cancelled (e.g., for inclement weather, gym not available, assemblies) for four days per semester. During inclement weather there is a space for students to be physically active during physical education class time.

The school has a budget allocation for physical education equipment and supplies. The school spends approximately $200 per year on physical education equipment. There is no separate annual budget for recess and equipment and supplies.

Module 2: Recess

Students in grades 1-5 are provided with the opportunity for daily recess lasting from 15 to 20 minutes per session (kindergarteners have recess twice daily). Sometimes, as opposed to rarely or very often, classroom teachers/counselors withhold individual students from recess to fulfill academic requirements. The school has a written policy requiring that students be provided with organized activities during recess and a written policy requiring recess supervisors to receive formalized training on playground supervision. The student-to-supervisor ratio during recess is 25:1. Recess supervisors include classroom teachers and paraprofessionals who provide organized activities and are asked to encourage students to be physically active during recess. Rules for how to behave at recess are posted for students and adults to see and are taught to the students by the administration and the classroom teachers.

During favorable weather conditions, students are not allowed to stay indoors during recess. During inclement weather, students are not able to be physically active during recess. Teachers are permitted to withhold scheduled recess from students for academic and disciplinary reasons. Loose equipment (e.g., balls, jump ropes) is available for students to play with during recess and is provided by the classroom teachers.

Module 3: Before, During, and After School Physical Activity Programs

Neither the school district nor school has a written policy that encourages students to walk or bike to school or a written policy that requires all school personnel to receive professional development on the promotion of physical activity. The school does not have intramural sports, interscholastic sports, or physical activity clubs (e.g., running, dance) or special activity events (e.g., field days, Jump Rope for Heart). In addition to physical education

classes and recess periods, individual classroom teachers provide regular physical activity breaks during the school day for kindergarten, first, and second grade students.

As stated previously, the school does not formally encourage walking or biking to school. There are not any bike racks or safe places for students to store bikes or other equipment related to active commuting to school. There are not any crossing guards available for students to actively commute to school.

The school encourages classroom teachers to promote physical activity with their students. However, the school does not recruit volunteers to help in physical education, recess, or before and after school activity programs. The school has a written wellness policy addressing physical activity that is somewhat followed (as opposed to, not followed or mostly followed) by the school. The school has a wellness coordinator. The opportunities for students to participate in the school's physical activity program are communicated to parents and/or guardians through materials that are distributed to families, as well as, in the student handbook.

Themes

Chronic Disease

When asked about the priority health concerns and health problems facing the community, residents overwhelmingly vocalized their concern regarding the high prevalence of various chronic diseases in the community. This overarching theme was not surprising as existing secondary data describing this community supports this finding (RWJF County Health Rankings[1,2], 2012). The high prevalence of chronic disease in the community is directly related to poor health outcomes and contributes to the poor health status of residents, as well as, to reduced quality of life. As mentioned previously in this document, this county was ranked 81st of 82 counties in MS in terms of overall health status (RWJF County Health Rankings[1,2], 2012).

Although numerous chronic diseases were mentioned as concerns, residents believe the most prevalent and problematic chronic diseases facing community residents were obesity, high blood pressure, and diabetes, followed closely by cancer, heart disease, and stroke. Regarding chronic disease prevention and chronic disease management, residents feel that very little, if any, education and information was available to them, which hinders disease prevention efforts from taking place. It was mentioned within certain focus groups and interviews that residents had very little understanding of the disease process, the relationship between overweight and obesity with chronic disease, and chronic disease prevention strategies, as many residents believe there was nothing they could do to prevent certain diseases as they were "in the bloodline." Further, according to the community doctor, many chronic disease cases in the community are poorly managed and there is a need for information to be available to residents in order for residents to learn how to better manage their diseases, specifically asthma, diabetes, obesity, and hypertension. Residents strongly voiced the need for the implementation of health education and disease prevention efforts in the community.

Community Needs to Improve Health and Wellness

Another emergent theme was found regarding what is needed in the community in order to improve the health and wellness of residents. Residents were in agreement regarding their opinions and perceptions of what the community needs to occur in order to improve health in the community. The most common response to the needs of the community to improve health was the need for a place to exercise and engage in physical activity such as, a wellness center, community center, or traditional exercise facility. A close second was the need for health education, health promotion, and/or disease prevention information, efforts and/or programs to

be available to community residents. In every focus group and in most of the interviews participants voiced both of the aforementioned needs.

Additional needs identified by participants included the following: the need for new and/or repaired sidewalks, a walking trail, a nice park, more education in the schools regarding health issues, community classes, more opportunity for recreation and social interaction, increased access to healthy foods, worksite health programs, recycling programs, improved political leadership, and increased community involvement.

East Tallahatchie School District

The East Tallahatchie School District has over 1,300 students enrolled in kindergarten through 12th grade in three different schools (the elementary school with K-5th grade, the middle school with 6th-8th grade, and the high school with 9th-12th grade). About 85% of students qualify for free or reduced lunch. The district has approximately 240 employees and it recently began an employee wellness program. Currently, the staff has access to a small fitness facility housed in the middle school with various pieces of exercise equipment.

School Health and Wellness

The school district and each individual school have school wellness policies that are updated annually. There is also a physical activity policy at each school requiring a certain number of minutes of physical activity per week. State guidelines require that all students receive at least 150 minutes of physical activity per week and the school policies are in accordance with that requirement. There is one physical education teacher on each school campus. High school students are required to get one unit of physical education in order to graduate. Students in grades 6-8 have health class once per week and the 9th grade students have health class everyday.

In terms of after school programs for students, the only school sponsored programs involve the sports teams at the middle and high schools. High school sports include: Football (boys), boys and girls basketball, boys and girls track, boys and girls power lifting, baseball (boys), slow pitch and fast pitch softball (girls), and cheerleading. Junior high sports include boys and girls basketball, boys and girls track, and football (boys). Junior high girls are able to participate with the high school slow pitch or fast pitch softball team.

Fitness assessments are conducted for students in the 5th grade. Hearing and vision screenings are also conducted with students. Each school has a health and wellness council with both parent and student representatives. According to the school nurse, the students serving on the health council are looked up to by their peers and could serve as Peer Health Educators.

The schools have vending machines but students cannot buy Coke products and all of the items in the vending machines are on the list state approved items. Breakfast and lunch are served daily at all district schools and the district hired a new food service director who does taste testing with the students and teaches nutrition in the classroom as part of new efforts. The school district complies with all federal and state laws about nutrition requirements and menu guidelines. The elementary school recently received a nutrition integrity grant and removed the fryers from the school. In the other schools items are occasionally fried but most of the food is baked.

Sex Education Curriculum

The East Tallahatchie School District recently adopted an abstinence plus comprehensive sex education curriculum, which was implemented starting in the 2012-2013 school year with students in the 6th-9th grades taught by science teachers trained to deliver the curriculum. For 6th, 7th, and 8th grade students the curriculum is called ‘Draw the Line,’ and the 6th grade students

receive five lessons, while the 7th and 8th grade students receive seven lessons. The curriculum for 9th grade students is called, 'Reducing the Risk,' and they receive 16 lessons.

High School Graduation and Drop Outs

According to the superintendent, the high school graduation rate for the district is 71%. The highest proportion of students dropping out of high school is found among White males in 10th grade. The superintendent feels some of the reason driving the low graduation rate is partially driven by high poverty in the area and the sense that students often feel hopeless and quit attending school when they get behind in their academic progress. State testing also keeps some students from graduating because they have difficulty passing the six required state tests so they drop out. An additional circumstance influencing the graduation rate is that if students have 15 credits they can begin attending a community college without graduating. Therefore, some of the students categorized as dropouts are actually attending community colleges and continuing their education but on paper are showing up as dropouts. Three to four students a year do that which gets to be a significant percentage over time when you only have 80 seniors.

Collaboration, Involvement, and Leadership

A commonality among all focus groups and some of the interviews was the belief that there is need for increased collaboration among existing organizations, improved political, as well as, general leadership, and increased involvement from community residents. Participants voiced beliefs and perceptions such as,

> "People aren't involved in things that go on. We could do a lot more if we had people that would get involved. That's the main thing. We would have better schools if the parent would get involved you know? We'd have better health if people would just get involved. Nobody wants to get involved,"
>
> "I think you have to work with other communities and schools have to work together, churches, religious organizations all have to be involved,"

> "We need more leadership within our community,"
>
> "I think it's vital to get leaders in our school system, churches, and different organizations more involved. If they become more involved, you know, I think it will make a difference, but you have to get them involved," and
>
> "So, if you can get the leaders of the town, from the mayor to the sheriff's department, to the director of the county to the hospital to the school, if you can get any and everybody, churches, if you can get them all involved I think it makes a difference."

Community and Culture

Many participants expressed a great sense of pride for their community sharing detailed knowledge and insight regarding their history and culture. Residents expressed a strong sense of community and shared sense of hope; hope for a better future, for increased opportunities, and improved health for their community. Various lifestyles are present in the community as some residents are employed and some are not, some residents are involved in the community, attend social events, and are engaged while others are not.

Poverty: A Social Determinant of Poor Health

One of the driving forces behind the poor health in this community discussed by focus group participants and key informants is the high prevalence of poverty. Specifically, focus group participants discussed the influencing role of poverty as a factor in unhealthy behavior choices of Charleston community members. Poverty influences poor health as it is associated with unhealthy behaviors and outcomes such as: Drug use, alcohol abuse, poor diet, lack of exercise, and smoking, single parent homes, inability to afford prescription medicines and/or medical care, lack of health insurance, lack of transportation, high levels of stress, low-control jobs, teenage pregnancy, and domestic violence. Thus, findings show there are a number of social concerns that need to be addressed in order to improve community health and wellness.

Health Concerns of Adolescents

Student mental health needs are a concern and the school nurse voiced a need for social workers or counselors to be available for students during the school day. According to the RN, mental health problems and negative circumstances facing students include poor conduct, defiance, emotional and family stressors, inability to focus at school because of circumstances at home, drugs in the home, living with grandparents, absent parents, abuse, Oppositional Defiance Disorder (ODD), Impulse Disorder, Attention Deficit Disorder (ADD), Attention Deficit Hyperactive Disorder (ADHD), depression, mood disorders, anxiety, and Post Traumatic Stress Disorder (PTSD). An additional student health concern is obesity as district prevalence is higher than the national average. Currently 36% of students at the middle and high schools are obese. Diabetes is also a health concern among students and often it goes undiagnosed for long periods of time. Additionally, asthma, which is more common in Black students relative to their White counterparts, is another health concern, as it is the number one cause of school absence. The school is currently creating asthma action plans to improve asthma control and reduce the harmful outcomes associated with this common condition. Sexually transmitted diseases (STD) are also a health concern among students as is teenage pregnancy.

The health teacher feels that the number one health problem for youth is nutrition and lack of knowledge about nutrition. Substance and drug use, specifically tobacco, are also reported problems among Charleston youth. According to the community doctor, the greatest health issues among children and adolescents include: Trauma and accident related issues (e.g., un-helmeted ATV accidents), poor dental health, obesity, and nutritional related issues (i.e., anemia, constipation).

The County Library

The library is open Monday through Wednesday from 9:00 AM to 5:00 PM, Friday from 10:00 AM to 4:00 PM, and it is closed on Thursday, Saturday, and Sunday. According to the librarian, there is a need for the library to extend the hours operation to include Thursday and the weekends but lack of funding has prevented this from occurring. The library serves as a community center providing book rentals, Internet access, computer use, meeting rooms, and classroom space to residents. The meeting rooms are often used for tutoring. Three tutors are available; one tutor specializes in learning disabilities. While the library allows free use of the space, individuals using tutors must pay for the service. The library also has a 'Books by Mail' program, which enables residents to receive books in the mail. Audio books are also available. The library also offers adult and children's computer programs and depending on funding, reading programs are offered in the summer. According the librarian, the library tries to offer other programming in the summer but is often limited due to funding restraints. The library staff also helps residents create and revise their resumes and complete job applications.

Resources and Events Provided by Charleston Arts and Revitalization Effort (CARE)

CARE is a community organization that was started in 2003 in effort to revitalize the community and wrap the community around the arts. CARE provides after school programs for children on Monday and Wednesday such as art classes, dance, gymnastics, and hip-hop. Anywhere from 10-25 children participate in the programs. CARE also hosts a weeklong summer art camp for children and adolescents. Additionally, CARE provides classes for adults twice a week (e.g., yoga and Zumba). Small fees ($5 - $10) are required for the classes and programs but scholarships are available for children and adults who cannot afford to pay. The funding for the aforementioned programs is provided by individual and organizational donors, as

well as, through external grants. CARE also hosts artists, authors, and musicians throughout the year in effort to bring social and cultural events to the community. Further, in conjunction with the Magnolia Garden Club, CARE established a community garden in the spring of 2012. Community residents can purchase a plot of land in the garden for $25 per year.

Available Resources for Health Care

1. Tallahatchie General Hospital and Rural Health Clinic

The hospital has been open for 57 years and currently offers inpatient, acute care, and swing bed (step down care) services with 18 beds. Seven percent of the care provided at the hospital is free care. The hospital is one of the largest employers in town, employing over 250 people. The hospital has a kitchen and provides meals to patients and nursing home residents but is not able to provide food to hospital employees because of space limitations. A registered dietician comes in once a week and assists the kitchen staff with menu and meal planning.

The hospital has an adjoining Rural Health Clinic that offers outpatient care services. The Rural Health Clinic is open seven days a week with extended hours on Friday, Saturday, and Sunday. The Rural Health Clinic is open from 8:00 AM to 5:00 PM Monday through Thursday and from 8:00 AM to 8:00 PM Friday, Saturday, and Sunday. Lab services and radiology services including X-ray and CT scans are available through the Rural Health Clinic. A mobile MRI unit is available once a week. The hospital does not have mammogram machines, bone densitometers, or the ability to do colonoscopies, and transportation is an issue to get residents to those services. The hospital offers inpatient and outpatient Physical Therapy, Occupational Therapy, Respiratory Therapy, and Speech Therapy. The hospital also has a 98-bed nursing home with a wing for standard care, as well as, a more secure wing for patients with dementia and Alzheimer's. Intensive outpatient and psychotherapy is available for seniors. The

psychotherapy program is offered during the weekdays from 9:00 AM to after lunch. On average, 16-20 seniors participate in the program daily.

The hospital is involved in improving the health of the community in several ways: Hospital staff members have provided education on certain occasions regarding nutrition, diabetes education, and smoking cessation programs. Hospital staff members have also conducted health fairs at local events with glucose screenings, blood pressure screenings, and wellness check ups. Usually three events per year take place. According to the administrator, the hospital would like to do more to address the lack of health education available in the community. In the future the hospital staff will ideally provide more opportunities to the community for health education and health promoting programs and activities, as there is a need for more diabetes education, smoking cessation, and preventive care.

2. Wolfe Family Clinic

The Wolfe Family Clinic is a private clinic in the community that staffs one nurse practitioner. The Wolfe Family Clinic does not provide free care.

3. The Health Department

There are two health departments in the county, one in Charleston and one in Sumner. The health department is open Monday, Thursday, and Friday from 8:00 AM to 5:00 PM in Charleston and Tuesday and Wednesday from 8:00 AM to 5:00 PM in Sumner. Seven years ago the health departments started sharing staff and having limited hours in each of the two locations. There is a need for the health department to be open every day but this option is not possible due to limited funding, which adversely affects community residents. In Charleston, Monday and Friday are child health days and Thursday is a family planning day. Approximately 50 patients

are scheduled per day but on average, 30 are seen, as many people do not show up for their appointments.

The staff at the health department includes: Four registered nurses, two social workers, two clerks, two medical aides, an environmentalist, and one office manager. Services are provided to an array of community residents but mainly include children and teenagers. The health department is a well-care facility for preventive health and does not provide sick-care. In addition to well-care, the health department staff conducts environmental inspections as it relates to restaurants and also does water sanitation. Further, the health department provides family planning services, child immunizations, STD diagnosis and treatment, PAP smears, and Medicaid eligibility screening. Colonoscopies are also available once a month. The health department provides free care, as well as, care based on income.

The health department also provides case management to high-risk pregnant women and high-risk infants through the prenatal high-risk management program offered through Medicaid. Home visits are often provided for these high-risk patients. The WIC program is also offered through the health department providing food for families based on income. The health department also provides nutritional education about healthy food choices and guidance for proper diets in classes, as well as, one-on-one sessions with individuals.

4. Region One Mental Health Center

There are two counselors at the Region One Mental Health Center who provide mental health care for students both after school and during the summer. Approximately 80 students in grades K-12th are seen at the center and counseling is provided for free for those who cannot afford to pay. The center sponsors an Adolescent Opportunity Program every afternoon after school and in the summer. Students attend the center on Mondays and Thursdays from 3:00 PM

to 5:00 PM and on Tuesdays and Wednesdays from 3:00 PM to 6:00 PM. Most of the students who receive counseling at the clinic (cases) participate in the program. According to the director of the program, students in the program display any one or more of the following: Lack of social skills, disruptive behavior in the classroom, ODD, ADD, ADHD, PTSD, impulse disorder, depression, mood disorders, and drug problems.

5. Diabetes Education

A pharmacist comes to Charleston twice a week and provides one-on-one diabetes education out of one of the local pharmacies. She is effective but she is only one person and is only able to see two or three patients each time she comes. Similarly, a dietician (who is also a certified Diabetes Educator) provides group-level diabetes education periodically through the Diabetic Shoppe. According to the key informants and focus group participants, given the prevalence of diabetes in the community, Charleston has almost nothing in terms of education, prevention, and management of the disease.

Summary of Findings

Information regarding the findings of the needs assessment was obtained through a variety of measures which included: The NEMS, The RALA, The S-PAPA, 11 key informant interviews, seven informal meetings, and eight focus groups. Through the assessment, community needs, strengths, assets, weaknesses, existing resources, needed resources, priority health issues, social concerns, and environmental concerns were identified. The identified priority health concerns included: Obesity, diabetes, high blood pressure, asthma, stroke, cancer, teen pregnancy, stress, depression, prescription drug non-compliance, heart disease, no insurance, limited access to health care, limited access to healthy foods, poverty, and limited health and nutrition knowledge. The greatest social concerns identified were students dropping

out of high school, teenage pregnancy, poverty, domestic violence, poor housing, lack of low-income housing, alcohol abuse, drugs, smoking, bullying, limited jobs, limited education, illiteracy, and limited recreation. Environmental concerns included the chemicals in the environment from farming, smoking (lack of citywide smoke-free air ordinance), the water supply system, and the lack of recycling available.

The assessment of the nutrition environment using the NEMS and findings from the focus groups and interviews revealed that residents have limited options available when it comes to purchasing and having access to fresh, affordable, quality produce and healthy food options. There are a limited number of restaurants in town with a limited number of healthy options available. There is not a farmers market. There is one grocery store, a WIC food distribution center, and one food pantry. Findings demonstrate there is a significant need to increase the availability and affordability of healthy food options for community residents.

The assessment of the built environment using the RALA in combination with the findings from the focus groups and key informant interviews revealed that the majority of streets do not have sidewalks and for those that do, most sidewalks are in poor condition with little connectivity to surrounding areas. Most street segments do have public lighting and stop signs; children at play signs were also common. In most places, there are no cross walks and where there were, the cross walks are often faded and in poor condition. There is also a need for crosswalks and more signage for pedestrian and bicycle safety. There is a need for the community to adopt a complete streets policy to increase the safety of people walking and biking and to increase things such as, the number of sidewalks, signage, and bike lanes. In terms of recreation, there are two youth leagues for baseball and football, as well as, a church that sponsors the Upward basketball league in the winter. The middle and high schools offer

extracurricular sports programs for students. Outside of the schools and churches, a small private gym, CARE's group fitness room, one park, and one set of baseball fields, there are no opportunities available to residents for recreation and exercise. There is not a large public park, a public gym, or community recreation center. Findings revealed the need for a community recreation, exercise, and wellness center, as well as, the need for outdoor recreation such as, a park, walking trails, bike lanes, and more sidewalks.

The assessment of policies influencing health revealed that there is not a citywide smoke-free clean air ordinance, there are no formal joint-use agreements between the community and the schools, or the community and local churches to share use of facilities, there is not a complete streets policy in place, there is not a housing policy or design policy, and there are no zoning regulations.

The resources and screenings available in the schools include: One LPN at the Elementary School, one RN at the Middle School, a Speech and Hearing Counselor at the Elementary School, a guidance counselor at the High School, a health council with both student and parent representatives, fitness assessments in the 5th grade, sex education in the 6th through 9th grades, vision and hearing screenings, BMI and weight screenings (one class per grade), and an employee wellness program. The needs of the East Tallahatchie School District include the need for: Comprehensive health education at all ages, peer mentoring programs, after school programs, one or more social workers and/or counselors in each school, more vocational classes, supplies for the Allied Health Program at the high school, well-child medical check-ups for all students (assessment of BMI, WC, WtHR, blood pressure, and asthma), the need to address mental health concerns of students, and to improve the high school graduation rate.

Assets, resources, and organizations in the community contributing to health and wellness include: Medical facilities (Tallahatchie General Hospital, Rural Health Clinic, Health Department, Region One Mental Health Center, and Wolfe Family Clinic), Diabetic Shoppe, SonEdna Foundation, Rotary Club, Charleston Day Club, Lions Club, CARE, CARE closet, Sun-Sentinel News Paper, community garden, Charleston Magnolia Garden Club, local churches, Tallahatchie Youth League, Robert Hill Youth League, the library, Boy Scouts, Boys and Girls Club, Tallahatchie County Health Council, Adolescent Opportunity Program, day cares, School Health/Wellness Council, East Tallahatchie School District, Mississippi State Extension Services, chronic disease self-management class, and the sex-education curriculum for 6th through 9th grade students.

Overall, the needs identified in order to improve health and wellness in the community include the need for: A community recreation, exercise, and wellness facility, worksite (employee) wellness (health) programs, community wellness programs, health education, health seminars, sex-education, efforts to reduce domestic violence, community classes, reading classes, after school programs (programs to increase high school graduation rate, reduce unintended teenage pregnancy, and improve mental health of students), community walking groups, group fitness classes, gathering place, farmers market, more sidewalks, repair existing sidewalks, outdoor recreation facilities, increased opportunity for jobs, recycling, and policy changes.

The findings illustrate health, social, policy, and environmental concerns, needs and service gaps and will be used to inform future planning and development of programs to improve health and quality of life. The findings will also be used to obtain funding to implement programs, policies, and environmental changes to improve the health and wellness of the

community. It has been said that anything you do to improve the well-being of a community will improve the health in the community. Thus, it is the researchers hope that the findings of this needs assessment will be used in ways to improve well-being and enrich the health and quality of lives of community residents.

CHAPTER 5

DISCUSSION

The discussion section includes a description of the scholarly contributions this study offers to the field of public health, as well as, to the growing body of literature regarding Community Based Participatory Research (CBPR) and health research specific to the Mississippi Delta. The scholarly contributions made herein include both conceptual and methodological concepts and findings. As part of the discussion regarding the methodological contributions, a comparison of the data and information obtained by the objective measures used in this assessment, the Rural Active Living Assessment (RALA) and the Nutrition Environment Measures Survey (NEMS) in addition to the qualitative data collection is provided. This section also provides information regarding the use of CBPR principles as part of this study design, as well as, a description of the processes and outlets utilized for the dissemination of the needs assessment findings. Finally, study limitations and recommendations for future research are provided at the conclusion of the section.

Green and Kreuter (2005) recommend conducting a formative assessment prior to the initiation of program development or any other efforts to improve or promote health in communities. The formative assessment discussed herein confirms their recommendation as it allowed for thorough evaluation of the community including the identification of community needs, existing assets, organizations, and resources, priority health issues, environmental

concerns, and the identification of community attitudes, perceptions, and beliefs that could potentially hinder or help program development and efforts to improve health in the community.

Within this study, conducting a CHNA using CBPR principles allowed for the identification of partners with diverse skills, engaged community residents, improved the quality and validity of our research efforts, and provided resources to the researchers during the data collection and analysis process. Israel et al., (2001) suggest using CBPR for these reasons while others suggest its use as it leads to richer interpretations of data, greater knowledge of high priority intervention areas, and improvements in assessment and evaluation, as was the case in this study (Srinivasan & Collman, 2005; Walker et al., 2011; Williams et al., 2009).

Regarding this CHNA, the use of CBPR and its focus on community member involvement allowed for a rich and thorough formative evaluation as residents involvement led to the identification of observable resources, behaviors, and attitudes, as well as, revealed intangible resources such as, social cohesion, race relations, education, and social capital. The outcomes and benefits of using CBPR found in this study are well documented in existing literature (Israel et al., 1998; Israel et al., 2001; Minkler et al., 2003; Teufel-Stone et al., 2006). Thus, this study further supports the use of CBPR principles when conducting community research, as well as, supports the notion that work in communities should begin with a CHNA.

Methodological Scholarly Contributions

This study offers three specific methodological contributions including: (1) The comprehensive approach of the overall needs assessment methodology and the utilization of various assessments, (2) The recruitment techniques used for identifying and enrolling focus group participants, and (3) The utilization of multiple measures to assess various aspects of the community and its social and physical environment.

1. Needs Assessment Methodology, a Comprehensive Approach

The methodology chosen for this study, which included evaluations of the built environment and the nutrition environment, an environmental scan, evaluation of policies influencing health, in depth key informant interviews, and multiple focus groups resulted in substantial useful information and allowed for a comprehensive assessment. Both objective and subjective measures were used and the mixed methods study design allowed for the use of both qualitative and quantitative research methods thereby increasing the richness of the data and the depth of information.

To my knowledge, this is the first time that each of these particular assessments, methods, and instruments have been used in conjunction as part of a single comprehensive CHNA. It is my belief that the use of the chosen measures in combination provides significant methodological rigor and resulted in the collection of rich data. Each individual assessment and method allowed for the triangulation of findings, provided different types of information, and allowed for a thorough assessment of the community and the environment. I do not recommend the elimination of any one tool or measure that was used due to the contribution and uniqueness of information that was provided by each of the chosen assessments, methods, and instruments included in this study.

2. Recruitment Techniques for Focus Group Participants

With regards to the chosen methodology for recruitment, discussion is warranted regarding the sampling techniques utilized for recruiting focus group participants. Specifically, three different sampling techniques were used: (1) A purposive sampling recruitment method, in which names of potential participants were recommended by community leaders and were contacted by the project director and invited to participate, (2) Recruitment at community

meetings (a Rotary Club Meeting and an Open CARE meeting) (Note: an Open meeting means it was advertised and open to the public), and (3) Recruitment through two local worksites. The purposive sampling technique is an informant selection tool suggested for use by Dolores and Tongco (2007). In our case, the purposive sampling technique was used for both focus group participant recruitment and key informant identification and selection. Purposive sampling was exemplified in this study through recruiting individuals to act as guides into the community.

Key informants and focus group participants were deliberately selected due to the qualities, characteristics, expertise, job position, and/or the demographic representation the informant possessed and/or provided. This technique allowed for purposeful recruitment and helped ensure the residents who participated in the focus groups were familiar with the community (e.g., maintained a residence in Charleston six months or longer) and would participate actively and have meaningful information to offer. Our recruitment techniques allowed for the identification of community residents and leaders who provided valuable sources of information as their knowledge, skills, and expertise helped guide the scope of investigation and in some cases helped to determine data collection protocols. As noted by Carney et al., (2009) such guidance and insight are vital to developing and implementing an assessment protocol that portrays the resources, attitude, beliefs, and behaviors of the community.

Additionally, this recruitment technique was useful when the need came to select specific participants based on broad demographic representation to reflect the community population. Specifically, after the first four focus groups were conducted the project director analyzed the demographic data and found there was a need for increased representation from Black and White males and females under 40 years old and Black men over 40 years old. Through purposive

sampling, residents who fit those characteristics were recruited ensuring participants were reflective of the demographic distribution of the community.

Not only did the techniques used result in diverse participants representing all demographic groups in the community, they also allowed for the building of trust between the researcher and the community, gaining participation from the community, involving community leaders, and also provided a way to inform the public about the health needs assessment, as well as, to encourage residents to begin thinking about health. The open CARE meeting was advertised in the local paper, on a marquis on the town square, and through word of mouth. The meeting was advertised to residents as a way to come learn about the study's goals, understand its importance, have the opportunity to participate, and be involved in improving community and individual health. During the open CARE meeting, residents were informed about the study and given the opportunity to sign up to participate in the focus groups. It is necessary to note that another individual discussed the potential for an Excel by Five Program during the open CARE meeting. The meeting likely drew residents who were concerned about the health of the community and who wanted to be involved in efforts to improve health. Thus, an additional strength of this technique was that the residents who signed up to participate in the focus groups offered insight and in-depth responses and were interested and concerned about the community's health.

Attending the Rotary Club meeting allowed the researchers the opportunity to meet many of the local business leaders and business owners. During the Rotary Club meeting, researchers were also able to meet several of the key informants and make introductions. Over the lunch meeting, the project director spoke to the Rotary Club members about the study including the importance of the assessment and how members could be involved in the assessment. In closing,

the researcher explained the necessity and importance of participation and buy-in from leaders from the community. Representation from Rotary Club members in the focus groups was a strength of the study as Rotary members offered meaningful insight and expertise into the community.

Recruitment through local worksites was another recruitment technique employed in this study. This recruitment technique allowed for employees of two large worksites to be involved in the study and discuss the community in general, but also to provide specific insight into their worksites and the needs of employees. Both worksites are interested in implementing a worksite wellness program. Thus, the focus groups were timely and allowed for the discussion of employee health and the types of services and programs preferred by employees as part of a worksite wellness program. The information obtained in those two focus groups will be used to design and implement a worksite wellness program(s) in the these worksites, as well as, potentially for the community.

Each of the recruitment techniques used were beneficial and offered different strengths to the study and to the participant recruitment process. The researchers recommend each of these sampling and recruitment techniques for use in community-based research, especially in small (less that 10,000 people), rural populations wherein there is a large degree of familiarity among residents.

3. The Utilization of Numerous Measures to Assess Each Aspect of the Community and the Environment: Triangulation

For each aspect of the community and environment that was assessed, the researchers utilized more than one measure in order to obtain information. This provided multiple measures and allowed for the triangulation of the findings. In most cases, the measures included an

objective assessment (i.e., using the NEMS tools to evaluate the nutrition environment, using the RALA tools to evaluate the built environment, and using the S-PAPA to evaluate School Physical Activity Policy) in addition to a subjective assessment in the form of asking specific questions reflecting the topics of interest to key informants in their interviews and to the participants of the focus groups. This methodology allowed for more than one source of information to assess each aspect of the community and the environment in which researchers were interested rather than impose an external point of view from the perspective of the researcher. In doing so, researchers were able to triangulate the findings and gain more knowledge and information about each aspect of interest through visual representation of the community, as well as, to verify whether the information obtained from the various measures was similar.

Another study strength is that the information obtained through the objective measures reflected the information and findings obtained from focus group participants and key informants. For example, the results obtained from the NEMS regarding the nutrition environment were similar to the information obtained from key informants and focus group participants regarding the nutrition environment and quality of food available to residents. The photographs taken during the assessment also showed consistent findings. Additionally, the results of the RALA regarding the built environment, resources available for physical activity, and policy supporting activity in the community were also the same as the information obtained from key informants and focus group participants. Utilizing both objective and subjective measures to assess each aspect of the community and environment of interest was a great strength as it provided more than one measure to obtain necessary information. Further, it allowed the researchers to compare findings across different measures and to triangulate the

findings between each of the measures used. The uniqueness of the qualitative data collected provides a lens by which to further understand and complement findings from the quantitative data collected in this study.

Further, secondary data utilized describing the community also supports the findings of the needs assessment in terms of information obtained regarding residents' health status, priority health issues, social concerns, and resources available in the community (RWJF[1,2], 2012; US Census Bureau[1,2], 2012). The findings herein support the scope and depth of poor health evident in existing secondary data available for this particular community. This conclusion represents another important finding and strength of this study's methodology.

Conceptual Scholarly Contributions

This study offers several conceptual scholarly contributions including: (1) Differences in residents' beliefs and opinions regarding the quality of the education system, (2) Differences in residents' beliefs and opinions about the presence and prevalence of racism, (3) Residents' beliefs regarding chronic disease prevention and the influence of overweight and obesity on morbidity and mortality, (4) The importance of programs and efforts to improve health coming from within the community, (5) Paralleling the needs assessment and results analyses with additional or existing community programs and/or events, and (6) The validation of the social gradient of health phenomenon, as well as, the validation of the influence of social determinants, namely poverty, on health.

1. Residents' Beliefs Regarding the Education System

One of the conceptual findings of this study was the disagreement found among key informants and focus group participants regarding their perceptions of the local education system in terms of the quality and caliber of education received by students. While some residents held

the belief and perception that the schools are strong and that students are exposed to high quality education, others disagreed stating that the schools are not adequate and that students are receiving a deficient education. The underlying difference in the beliefs and perceptions held among residents regarding the school system seemed to depend on whether the resident was originally from Charleston or not. For lifelong residents, the widely held belief was that the school system was sufficient and that students were receiving a high quality education but for those who are not from Charleston, the belief was that school system was not. The discrepancy is also related to different reference points. For example, it is likely that for those transplanted residents who hold a negative perception of the school system, their comparison of the Charleston schools was to their home town or other schools systems they were exposed to and in that case, the East Tallahatchie School District may seem inadequate and of poor quality but for those from Charleston, comparing the district to other Delta schools or simply having only known their home district, the system may seem fine and of adequate caliber.

For those who believe the school system was good or adequate, comments were provided such as,

> "I think Charleston is probably one of the two Delta towns where anybody can put their child in school, in kindergarten, and let them go through the 12th grade and they'll get a good education,"
>
> "Here you can get both a safe school and a good education, while schools go down and communities go down in places like Cleveland, and elsewhere in the Delta,"
>
> "So the school system is good. It's not great but it's good," "We have good schools," and
>
> "The education is not what it should be but it's better than other places."

Thus, in comparison to surrounding Delta towns, residents who were from Charleston feel their school system was better than the surrounding Delta towns.

For residents who did not feel the school system was providing students a quality education, comments were voiced such as,

> "I think they (school district) have done a good job with the resources that they have but it's just not an uncommon problem. They are doing better than some but it is still not what families are looking for in terms of education. It is not the ideal,"
>
> "We do not have here the services we need for our children. When I lived in Baton Rouge, he (her son) was in the public school and he was in a gifted program with a supplement of a teacher that specialized in learning disabilities. He had a much better quality education than he got here," and
>
> "You've got a whole new type of teachers in the school system now. They're just as young as the students. Some are only a couple of years older than the students and they're teaching. They're not given respect. When kids come down and see the teacher at the club partying, it's a whole new grade of teachers now."

It seemed apparent that residents who did not grow up in Charleston or compared the schools to non-Delta school districts they believe that the education system in Charleston was substandard and not of good quality. On the other hand, many of the residents from Charleston believe their school system was good and provided an adequate education for students. This finding could also be related to a sense of pride among those residents who they themselves are a product of the East Tallahatchie School District.

2. Differing Beliefs and Opinions about Racism

Another conceptual finding of this study was the disagreement found among key informants and focus groups participants regarding race relations and the degree of racism (specifically Black-White racism) present in the community. Similar to the findings regarding the education system, the majority of disagreement came between residents who were originally from Charleston compared to those residents who were not from Charleston. Perhaps for those residents from Charleston, race relations have improved so much over the years that they feel

race relations were good among residents while those residents who have had exposure to other cities' and communities' race relations feel that the race relations in Charleston were poor and that racism maintained a strong presence in the community. As supported in existing literature, community involvement allowed for the identification of subtle cultural and social issues reflected in social interaction, specifically race relations, as well as, for the identification of local issues or controversies that could possibly hinder intervention plans, program development, and overall efforts to improve health (Israel et al., 1998; Shalowitz et al., 2009).

Regarding racism and race relations, comments were heard such as,

"We have good race relations,"

> "Well of course it (racism) is always present but it's always going to be an issue everywhere you go. It may be still a little bit more so here in the South and the Delta than it is everywhere else in the world but it was just the way you were raised. Not that one race can do better than the other in any field, be it education or sports or whatever, it's just that maybe we don't think so much on mixing the two races together,"

> "If you look and compare to the Delta, we have good race relations; everybody tries to work together. Oh, I wouldn't say everybody, but I think 98-percent of us do, and I think that's how we've gotten along as peacefully as we have,"

"I do, personally (think racism is an issue),"

"We've got a ways to go, you know? It's (racism) gettin' better though," and

> "The racial issues (are social problems). Don't let anyone you talk to try to fool you into thinking that we don't have huge race issues in this community."

Historically, Tallahatchie County has been known for deeply-rooted racism and poor race relations due to several historical factors including the 1955 murder of Emit Till taking place there and the school district having had segregated proms until four years ago. It is understandable for lifelong residents who were exposed to racial tension growing up that they feel race relations have improved and that people of different races get along well now compared

to previous decades. On the other hand, new Charleston residents who were not exposed to that degree of racial tension have a different perspective and may be more inclined to believe that racial tension is still strong and that racism is still very present. The topic of racism is particularly critical for the Charleston community in the context of health as race-associated differences in a wide variety of infectious and chronic disease health outcomes have been documented.

Regarding the important topic of race relations, CARE recently invited representatives from the William Winter Institute for Racial Reconciliation at the UM to speak to CARE board members, CARE members, and other community residents on racial relationships and racial reconciliation. The community, regardless of beliefs on how prevalent racism actually is perceived and experienced in the community, is actively trying to improve relations among races. The potential partnership and work specifically with the William Winter Institute is an example of the community-university partnership that is forming between the community of Charleston and the UM.

3. Residents' Beliefs Regarding Chronic Disease Prevention and the Influence of Overweight and Obesity on Morbidity

Formative assessment allowed for the identification of attitudes and beliefs held by residents that could both hinder and help program development and efforts to improve health. Two findings regarding residents' beliefs that could potentially hinder efforts to improve health are discussed below. A common finding was the belief among numerous focus group participants that chronic diseases (i.e., obesity, hypertension, and diabetes) were not preventable and that they were genetic and could not be averted by behavioral choices. The belief was more common among Black participants in general, as well as, White participants under 40 years old.

This is an important issue to address among residents in helping individuals to understand personal behavior modification to reduce their risk of chronic disease and improve their health and quality of life through lifestyle changes. If an individual believes disease risk is un-modifiable and is directly related to genetics, they are not likely to engage in health promoting behaviors and participate in risk-reduction activities or programs. The saying, 'genetics loads the gun but our environment and lifestyle pulls the trigger,' stated by Judith Stern at the University of California, Davis comes to mind when thinking about the lack of understanding residents seem to have regarding prevention of disease. There needs to be a greater understanding among residents of how they can take individual responsibility for their health and engage in activities and behaviors that are conducive to health and health promoting versus health destructing.

Further, it seems that many residents do not understand the relationship between overweight and obesity and health problems. Residents voiced comments such as,

> "I know I'm overweight but I'm comfortable with my overweight. I'm happy,"
>
> "And people don't know they're obese in Mississippi a lot of the times, or don't know that if they are 20 pounds overweight they're more apt to have diabetes or more apt to have heart problems. Somebody's got to tell them. It's just not happening," and
>
> "The biggest issue is that we don't have any health problems (due to obesity). So for us if I had high blood pressure or my weight was causing me to have significant internal organ issues or something then I might do something about it but the reason I don't just kill myself to do something about it is because it is really the only thing that's wrong. I don't have high blood pressure. I don't smoke. I just don't exercise and my metabolism doesn't move as fast as it used to. People with health problems are motivated to do something about it (obesity) but I don't have any."

The latter comment above was from a woman in her early 30's who expressed that she did not have any health problems from her obesity and so therefore she was not motivated to do anything about it. For people like her, it is important to explain that as she ages and becomes

older, health problems due to her weight will occur and it is important for her to get control of her weight now in order to prevent health problems from occurring later in life. She is only one example of this phenomenon and belief that was present among many other focus group participants. Thus, there is a need for education and for residents to be made aware of their weight status, as well as, how it is negatively impacting or will negatively impact their long-term health.

Additionally, from a cultural standpoint, Black women tend to desire a thicker body shape and one key informant said it was not uncommon for Black women who were already overweight to request appetite stimulants so they could be curvier. He would have to explain to them why they did not need appetite stimulants to make them thicker as they were already overweight and putting themselves at risk for disease. There is an apparent need to address the cultural beliefs surrounding weight and inform residents of the long-term health impact of overweight and obesity.

4. Necessity of Programs and Efforts to Improve Health to Come from Within the Community

In addition to the conceptual findings, another important finding brought to the project director's attention was provided by a life-long community resident as he discussed the importance of programs and other efforts to improve health being community driven and coming from within the community rather than being pushed upon the community from the outside. He said that anything that residents perceive to come from the outside would not be readily accepted or acted upon by community residents. His comments on this matter were as follows,

> "As a community in general, we tend to not accept outside help or change or influence if we feel it is coming from the outside. It would be better accepted and more easily accepted if it felt like it was coming, that this was community started or community ran, or community influenced, whatever it is, whether it is a program or a wellness program or whatever it is. And I don't know if that's that inclusiveness mentality of the community, not wanting anybody from the outside.

> I don't know if anybody ever told you but there is this mentality of a free state of Tallahatchie County. I don't know if you heard that and that mentality does kind of run and it doesn't really matter what it is. It could be financial or social or whatever it is but don't push it on me from the outside. It may be great but hey if it is from the outside, don't push it on me. But if it is coming from the inside kind of pushing out to everybody, it is a lot more accepted. So, that is something to keep in mind down the road if a program is created or started or introduced. It is more easily accepted or more readily accepted if it appears to be something that starts in the center and kind of works out whether than coming from all directions from the outside pushing in. This community pushes back on outside influence but readily supports inside influence," and
>
> " Like I said, the one thing is the level of which it appears to be pushed on the community is key. When you have anything that you want, you have to push it some but it almost has to be, it almost has to be like you are instead of pushing it into the community, it almost has to be like you have kind of come around from behind and the community is kind of pushing it out. I don't know how that is done and or the best way to do it is but I like I said, I have seen it so many times (the community does not accept outside help)."

This is likely true of other small communities as well and may partially explain reasons traditional "outsider perspective" forms of research are often not useful or appropriate when trying to improve community health and wellness. This finding also highlights the importance of utilizing CBPR principles to encourage community engagement and ensure participation, as well as, the importance of the formation of partnerships among organizations and individuals within the community who can work together using the findings of the needs assessment to improve health and wellness in the community. It is important for future efforts to improve health in the community to be community led and driven from within the community to ensure the residents do not feel that outside help is being pushed upon them. Another benefit of partnership is that people and experts from outside of the community can collaborate and work with those from within the community to ensure residents feel ownership of efforts to improve health and do not feel they are being imposed upon by solely outside influence.

5. Paralleling Assessment and Results Analyses with Community Events

An additional contribution and recommendation of this study is to conduct the needs assessment in conjunction with existing community events, which served to bring the community residents together following the data collection period, maintained interest levels of residents, involved members of the community who were not actual participants in the needs assessment, allowed the researchers to remain present in the community, and provided activities for the lag time during data analyses and evaluation. In this study, researchers partnered with various community organizations, (i.e., The Tallahatchie General Hospital and CARE) to hold health seminars and community walks when data were being analyzed. Four walks and four seminars were held between August and September 2012.

In this particular community, there was already a music and arts festival, The Gateway to the Delta Festival, planned for the fall of 2012 (September 29, 2012). As discussion for the health needs assessment began in the spring of 2012, community residents involved with festival planning learned of the current study and collaborated with the project director to incorporate a healthy living theme into the festival. With this theme, the project director helped to plan an eight-week Wellness Challenge for community residents as part of the festival. Part of the requirement for residents to be eligible to win the Wellness Challenge was attendance at the health seminars every other week. Participants were also encouraged to attend the community walks. During one of the community walks, the researcher met informally with about 25 participants to discuss their health issues and needs to improve health and wellness. This provided the researcher with additional information from community residents regarding their needs for improved health.

Working with the existing community organizations during the festival planning and Wellness Challenge also allowed for relationship building, collaboration between the university and the community, and for the development of partnerships, all of which are important outcomes of using CBPR and are important for the development of successful programs and overall efforts to engage the community effectively and to improve health and wellness (Israel et al., 2001; and Minkler et al., 2003). This collaboration also helped community members and key stakeholders partner in all phases of the research process with a shared goal and vision to empower the community to develop effective and sustainable programs that improve health and quality of life.

6. Social Determinants of Poor Health

An additional conceptual contribution of this study is that these findings support existing research regarding social determinants of poor health and the phenomenon of the social gradient. In accordance with existing literature, results and findings herein revealed that one of the driving forces behind poor health status in this community is the high prevalence of poverty, as poverty influences poor health in a myriad of ways (Berkman & Kawachi, 2000; Link & Phelan, 1995; Mirvis et al., 2009; and Yen & Syme, 1999). Specifically, our findings revealed that poverty influences poor health as it is associated with unhealthy behaviors such as drug use, alcohol abuse, poor diet, lack of exercise, smoking, single parent homes, inability to afford prescription medicines and/or medical care, lack of insurance, lack of transportation, high levels of stress, teenage pregnancy, and domestic violence. Further, the high prevalence of poverty in this community and reliance of many residents on government assistance results in limited availability of public funding for the construction of public parks, community centers, and sidewalks, as well as, limits the funds available for improvements in the education system and

for the implementation of community-wide programs and resources to support and promote health.

The majority of studies documenting this finding regarding social determinants of health and the influence of poverty on poor health as described by the social gradient phenomenon are largely based on survey research and are mostly quantitative in nature. Another strength of this study is that the findings not only support existing literature regarding those findings but also provides support for the findings in a more qualitative manner answering the questions of 'how' and 'why' social determinants influence poor health, a question that has been difficult to answer by traditional research methods. One might say that a black box exists in the understanding of exactly how and why the social gradient exists and the influence of poverty on poor health, as well as, how and why social determinants influence health. By utilizing a CBPR approach, heavily engaging with the community, utilizing numerous methods of data collection, and taking local contexts into consideration, researchers were able to determine some of the reasons for why and how social determinants, namely poverty, influence poor health in this community. This study also supports the findings in existing literature that poor health status leads to lower educational attainment and reduced economic development both of which are associated with poor health outcomes and reduced quality of life (Mirvis et al., 2009). This study also illustrated the reverse of that relationship in that, poor health has also contributed to lower educational attainment and reduced economic opportunity in the community.

Dissemination of Findings

Consistent with CBPR principles and as suggested by Teufel-Stone and Williams (2010), findings were presented to the community via a public reception and presentation. In order to promote widespread community member attendance, an article was published in the local

newspaper inviting residents to attend, 30 flyers were distributed around town in prominent places, emails were sent to all study participants and CARE members, and word of mouth was also utilized to inform residents of the results presentation. The presentation occurred in October 2012 in the CARE building and a local restaurant catered the event. The presentation took place roughly five months following the start of data collection. Over 75 community residents attended the reception and results presentation with representation from the schools, the hospital, city council, and county supervisors.

On the same day the results presentation was held in Charleston, a presentation was held that morning on the university's campus for faculty and administrators who were interested in being part of the community-university partnership. Representatives from the two foundations who funded the study were also in attendance. Others in attendance were the Chancellor of the UM, three UM school deans (i.e., journalism, pharmacy, and applied sciences), three UM department chairs (i.e., nutrition, communicative disorders, and health, exercise science, and recreation management), and representatives from the School of Nursing, the School of Pharmacy, and the University Medical Center in Jackson, MS. A document describing the findings of the study was created by the project director and distributed to all individuals who attended the results presentation both in the community and on campus. Additionally, a document of possible future efforts to improve health in the community was provided to attendants. The document of possible future efforts can be found in Appendix S on page 260. The pamphlets and document were also made available at the CARE building in order for residents who were not able to attend the results presentation to obtain a copy of the findings.

In addition to the results presentation, a newspaper article was written for the local newspaper briefly describing the findings of the assessment published in November 2012. Please

see Appendix R on page 256 to view the full article. A conference presentation of the methodology and findings was also given at the American Academy of Health Behavior meeting in March 2013. The project director was also invited to give two presentations regarding the methodology of the needs assessment by an individual from the MS Health Policy Institute. The presentations were made to the MS Department of Health Office of Planning and Evaluation and to the graduate students in the Clinical Sciences PhD program in the Qualitative Research Methods course at the UM Medical Center in January 2013.

Utilization of CBPR Principles

Throughout this CHNA the researchers utilized principles of CBPR as recommended in existing literature (Israel et al., 2001; and Minkler et al., 2003; Srinivasan & Collman, 2005; Walker, et al., 2011; and Williams et al., 2009). From the study's inception, community members were involved in most all phases of the research process and study methodology. Community leaders provided their input and insight in the development and modification of questions for the interview and focus groups guides, which helped to formulate research questions in culturally sensitive ways and to ensure that all topics of importance to community members were addressed. Community leaders were also instrumental in the recruitment process of focus group participants, as was discussed in detail previously in the discussion section. Along with the project director, two life-long community residents were involved in the reading, interpreting, and coding of interview and focus group transcripts. This led to rich interpretations of the data generated by the focus groups and interviews. Further, the chosen methods for the dissemination of findings reflects the use of CBPR principles in that community residents were informed of the findings of the needs assessment through the reception and results presentation

and by the article written for the newspaper. Additionally, many community members, namely CARE members, were involved in the planning of the reception and also hosted the event.

Collaboration among community members, organizations within the community, and the university took place in all phases of the research process. A health outreach committee was developed through CARE following the conclusion of the study and members will utilize the findings of the needs assessment in the planning and development of future efforts to improve health in the community. A partnership between the university and the community is in the process of being formed, as are partnerships among existing community organizations namely, the Tallahatchie General Hospital, CARE, and the School District. A current effort and example of the community-university partnership at work is that the hospital administrator at Tallahatchie General Hospital and the project director collaborated to write a grant proposal to a foundation in order to obtain funding for a Wellness and Health Education Outreach Center for the community. Through this facility residents would have access not only to a traditional gym and exercise facility but also to outdoor recreation, health education, health promotion, and disease prevention seminars, personal health counseling, and fitness assessments.

Study Limitations

Studies of this nature are not without limitations. First, adolescents were not initially included in the focus group recruitment and therefore no information was obtained from children and adolescents regarding their perceptions, beliefs, needs, and opinions of the community and community health during the initial data collection process. However, although not a part of this dissertation, but as a continuation of the needs assessment, researchers conducted focus groups with students in the schools with 6^{th}-12^{th} grade students in the spring of 2013. Second, there were a small number of people responsible for data collection, data analysis, and presentation of study

findings. Although one researcher helped the project director with data collection for certain parts of the RALA and the NEMS, one researcher assisted the project director with focus groups, and two community residents coded and helped evaluate the transcripts, the majority of data collection and analyses was completed by the project director. This was a limitation because of the length of time it took one person to analyze and prepare the findings of the study. Furthermore, qualitative data analysis statistical software programs were not used to enhance the project directors' efficiency at data storage/retrieval and at systematically applying the derived themes and codes to the multiple forms of qualitative data collected during the study.

Recommendations for Future Studies

As recommendations for future studies and needs assessments conducted in small rural communities I endorse the use of CBPR principles and overall methodology, as well as, the use of the participant recruitment techniques utilized herein. I also recommend the utilization of multiple sources of data collection, subjective and objective, qualitative and quantitative in nature, to allow for the triangulation of findings. Also, it is important to include diverse participants who reflect the socio-demographic makeup of the community who can provide evidence of multiple realities and differing perceptions as found here regarding beliefs about the education system, health care, racism, and chronic diseases. Further, a diverse participant pool is recommended, as community health improvement requires engagement and participation of diverse groups and individuals from different parts of the community (Israel et al., 1998; Israel et al., 2001; and Minkler et al., 2003).

As a way to reduce the impatience often experienced and expressed by community members when waiting on the findings of the study, I recommend holding additional community events during the data analysis period. Data analysis is time consuming, especially in the eyes of

community members who may not be familiar with research protocols and data analyses. During this time, the community residents may begin to wonder what happened and whether anything is going to happen with the findings of the assessment. Therefore, it is important for the researchers to maintain presence in the community during this time. It is also suggested at the start of the study the community members are informed about the total expected duration for data collection and analysis. I suggest the researchers participate in community events, plan community walks, and/or conduct general health seminars in order to maintain presence in the community, as well as, to sustain the residents' interest in health and wellness and community improvements. Participating in or conducting an event or seminar once a week leading up to the community wide results presentation and reception seemed to be sufficient in our case.

If a graduate student is the project director and conducting the study, it is recommended that they attempt to find funding for a stipend and work solely on this project. When data collection was taking place during the summer, the project director did not receive funding for a stipend and worked pro-bono. Following data collection though, the project director was a graduate assistant for her department and it often proved extremely difficult to examine findings, formulate the findings of the needs assessment, and write while teaching for her university at the same time. An additional recommendation for researchers working in communities is to be mindful of the scheduling of study events and activities and to make sincere efforts to prevent interference with existing community events.

Following the needs assessment and the identified need for increased community involvement and leadership, CARE created a health and wellness committee whose members will serve to work with existing community organizations and interested individuals on an action plan to improve health in the community. The committee will use the findings of the needs

assessment in order to guide their planning and decision-making. Committee members will also likely serve on the community side of the community-university partnership that is currently being formed. I recommend the development of one such committee, if one does not already exist in the community following the needs assessment to ensure that plans to move forward and address the identified needs are made and efforts to improve health come to fruition.

I also recommend the use of photographic documentation throughout the needs assessment. Photographs were taken during the NEMS assessment, as well as, during the RALA assessment. Photographs of various buildings, businesses, and other important places were also taken providing individuals not familiar with the community with an idea of the aesthetics, resources, organizations, and design of the community.

Lastly, I recommend the use of the local newspaper as a way to reach and communicate with residents regarding anything from advertising the study, disseminating findings, promoting programs, and/or organizing, and recruiting for community events. I heard many comments from participants such as,

"Advertise in the newspaper,"

"Put it in the newspaper," and

"Everybody reads the newspaper or at least talks to someone who does."

The newspaper editor in our case was very involved with the community, bought into and supported what we were doing, and allowed us free space in the paper for our needs. The newspaper proved to be an effective way of reaching people in a small rural community.

Long-term strategies for funding following CHNA

Conducting a CHNA is the necessary initial step for program planning, implementation, and evaluation. Often grant agencies and funders require a needs assessment prior to funding a

proposal in order to ensure community-participation, sustainability and long-term success of the program(s). Findings of the CHNA will be used to identify and develop grant proposals in order to obtain funding for future work in Charleston, MS. The UM has committed to being involved with Charleston and partnering with the community to work with organizations and individuals to bring sustainable change and improvements to both the environment and the health of the community. Currently, potential partners from the UM include: The School of Applied Sciences, The Center for Health Behavior Research, The Center for Population Studies, The School of Journalism, The William Winter Institute, and The University Medical Center in Jackson, MS.

Conclusion

In this mixed methods study using CBPR principles, results from the needs assessment corroborate findings in previous literature regarding the ability to achieve the beneficial outcomes that are generated when using a CBPR approach to community health improvement. Throughout this study community participants shared their knowledge, expertise, and experiences with researchers while working together to identify the needs of the community. Intended outcomes of this study were achieved and findings will be used to inform and direct future planning, development, implementation, and evaluation of programs to improve the health and quality of life in Charleston. The findings will also be compiled into a comprehensive document illustrating the findings of this study and several copies will be provided to the community and other interested persons. Future research articles will discuss the methodological and conceptual contributions made by the study discussed herein, as well as, the development of future programs, stages of program implementation, and the evaluation of those programs and their intended outcomes.

In closing, I would like to leave the reader with a quotation by Margaret Mead and a poem by Lao Tsu.

“Never doubt that a small group of thoughtful, committed, citizens can change the world. Indeed, it is the only thing that ever has.” - Margaret Mead

Go to the People;
Live among them;
Love them;
Learn from them;
Start from where they are;
Work with them;
Build on what they have.

But of the best leaders,
When the task is accomplished,
The work completed,
The people all remark:
'We have done it ourselves'

– Lao Tsu

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LIST OF APPENDICES

APPENDIX A: TABLE 4

DEMOGRAPHIC CHARACTERISTICS, HEALTH OUTCOMES, HEALTH FACTORS, AND SOCIAL AND ECONOMIC FACTORS FOR TALLAHATCHIE COUNTY

Table 4: Demographic Characteristics, Health Outcomes, Health Factors and Social and Economic Factors for Tallahatchie County. Data are from the County Health Rankings (RWJF[1,2], 2012)

	Tallahatchie County	Mississippi
Demographic Characteristics		
Population	12,638	2,951,996
Rural	80%	51%
Ethnicity		
Black	61 %	37%
White	39%	59%
Other	<1%	4%
Sex		
Female	54%	51%
Male	46%	49%
Health Outcomes		
Diabetes	14%	13%
HIV Prevalence Rate	217 per 100,000	325 per 100,000
Poor or Fair Health	32%	22%
Low Birth Weight	14.3%	11.8%
Obesity	37%	36%
Health Factors		
Adult Smoking	23%	24%
Physical Inactivity	34%	33%
Excessive Drinking	11%	11%
Teen Birth Rate	86 per 1,000	65 per 1,000
Uninsured	30%	25%
Social & Economic Factors		
High School Graduate	51%	71%
Some College	33%	54%
Unemployment	11.6%	10.4%
Median Household Income	$27,352	$36,992
Children Living in Poverty	44%	32%
Single-Parent Households	60%	44%
Illiteracy	24.9%	16%

APPENDIX B: TABLE 5

DESCRIPTION OF STUDIES THAT CONDUCTED COMMUNITY HEALTH NEEDS ASSESSMENTS USING CBPR

Table 5: Description of Studies that Conducted Community Health Needs Assessments Using CBPR

Citation	Participant Description	Sample Size and Description	Methodology	Outcomes
1. Craig, 2011	Gay, Lesbian, Bisexual, Transgender, Questioning (GLBTQ) Youth in Miami, Florida	• 45 KI (Community Leaders/ Agency Personnel) • 180 youth participated in FG • 273 youth completed survey	• Mixed Methods Study Design • Environmental Scan 45 KII • 10 FG • Survey of the target population using venue based sampling N=273	• Community received feedback about the results • Results were used to identify particular services for implementation. • Partnership developed
2. Islam et al., 2005	South Asian and Korean Americans in New York City	• Surveys were administered to 175 Taxi Drivers in Airport holding lots • Over 500 drivers participates in health fair	• Outreach to communities was initiated through series of round table discussions with community-based organizations. • Identified a need for data documenting health needs • Developed and administered survey	• Partnership Developed between New York Taxi Workers Alliance and New York Asian American Network for Cancer Awareness, Research and Training. • Health Fair for drivers (N=500 plus drivers attended fair)
3. Teufel-Stone et al., 2006	Hualapai Youth in Arizona	• 48 KII with community leaders and representatives from school	• Mixed Methods Study Design • Open-ended Semi-structured interviews with KI (N=48) • School self-assessment using School Health Index • Interviews were not audio-recorded	• Results provided insight into the community and show that local and university perspectives and abilities can be combined to yield a culturally relevant assessment that is useful to health planning.
4. Doyle et al., 2006	Migrant and Seasonal Farm Workers (MSFW) in East Texas	• 9 Health Care Providers served as KI • 11 Social Service Providers served as KI • 20 MSFW participated in FG	• Series of preliminary community meetings • KII conducted with 3 stakeholder groups: health care providers N=9, social service providers N=11 and MSFW N=20	• Developed a partnership • Results were used to guide health program development for MSFW • Health needs of MSFW were identified and addressed through the needs assessment

Table 5 Continued Citation	Participant Description	Sample Size and Description	Methodology	Outcomes
5. Corona et al., 2009	Latino Youth in Richmond, Virginia	• 212 Latino Adults completed surveys • 15 Community Leaders served as KI • 23 Latino parents & 6 Latino boys participates in FG	• Mixed Methods Study Design • Administered Survey to 212 Latino Adults • KII with 15 community leaders • FG with 23 Latino Parents and 6 Latino boys	• The information from the findings was used to respond to the identified needs and concerns and informed the direction of program planning, development and implementation efforts.
6. Struthers, 2008	Residents of Pike County Illinois	• N=24 residents participated in FG • N=47 Health and Social Service providers participated in telephone interviews	• Mixed Methods Study Design • Examination of demographic, business/ economic, environmental and health indicator data. • Telephone Interviews (N=47) with local health and social service providers. • Conducted 3 FG (convenience samples)	• Development of a comprehensive document illustrating health needs and service gaps and identified the most pressing health needs in Pike County and the rationale for choosing health needs. • Results were used to inform the direction of health program planning and resource allocation in the community.
7. Dong et al., 2010	Chinese Older Adults in Chicago's Chinatown	• N=78 Chinese Older Adults age 60 years and older participated in FG • Community leaders formed a Community Advisory Board (CAB)	• Precede-Proceed Model Used • 8 FG conducted with 78 participants • Community Advisory Board developed interview questions for the FG.	• CAB developed • Results informed efforts to improve health. • This study contributes to the emerging literature of the complex nature of aging among immigrant older adults and carries important policy implications
8. Johnson et al., 2009	Urban American Indians in Tulsa, Oklahoma	N=650 American Indians completed surveys (550 adults, 100 youth)	• Mixed Methods Study Design • CAB developed survey to administer to American Indians • Surveys conducted either via telephone or in-person at area events	• CAB developed • Survey results used to inform program development, support proposals for external funding, and develop a service system
Abbreviations in Table: KI- Key Informants KII- Key Informant Interview FG- Focus Groups				

APPENDIX C: TABLES 6 AND 7

TABLE 6: TWELVE COMMON CHARACTERISTICS OF SUCCESSFUL COMMUNITY-INSTITUTIONAL PARTNERSHIPS

TABLE 7: NINE KEY PRINCIPLES OF CBPR

Table 6: Twelve (12) Common Characteristics of Successful Community-Institutional Partnerships (Seifer, 2006, p.992)

1.	Trusting relationships
2.	Equitable processes and procedures
3.	Diverse membership
4.	Tangible benefits to all partners
5.	Balance between partnership processes, activities and outcomes
6.	Significant community involvement in scientifically sound research
7.	Supportive organizational policies and reward structures
8.	Leadership at multiple levels
9.	Culturally competent and appropriately skilled staff and researchers
10.	Collaborative dissemination
11.	Ongoing partnership assessment, improvement and celebration
12.	Sustainable impact

Table 7: Nine (9) Key Principles of Community-Based Participatory Research (CBPR) (Israel et al., 1998; Minkler & Wallerstein, 2008).

1.	CBPR recognizes the community as a social entity with an identity rather than as a setting or location.
2.	CBPR involves systems development and sustainability and builds on strengths and weaknesses within the community.
3.	CBPR is participatory and facilitates collaborative, equitable partnership in all phases of the research and involves an empowering and power-sharing process that attends to social inequalities.
4.	CBPR integrates knowledge and achieves a balance research and action for the mutual benefit of all partners.
5.	CBPR promotes a co-learning and capacity building among all partners.
6.	CBPR involves systems development through a cyclical and iterative process.
7.	CBPR emphasizes public health problems of local relevance and also ecological perspectives that recognize and attend to the multiple determinants of health and disease. CBPR addresses health from both positive and ecological perspectives.
8.	CBPR disseminates findings and knowledge gained to all partners and involves all partners in the dissemination process.
9.	CBPR requires a long-term process and commitment to sustainability.

APPENDIX D: TABLES 8 AND 9

TABLE 8: DEMOGRAPHIC CHARACTERISTICS OF FOCUS GROUP PARTICIPANTS: RACE AND SEX

TABLE 9: DEMOGRAPHIC CHARACTERISTICS OF FOCUS GROUP PARTICIPANTS: AGE

Table 8: Demographic Characteristics of Focus Group Participants: Race and Sex

	Needs Assessment		Without Worksites		Charleston, Mississippi	
	Number	Percent	Number	Percent	Number	Percent
Race						
Black	29	43.3	26	57.8	1,593	72.6
White	37	55.2	18	40.0	575	26.2
Other	1	1.5	1	2.2	25	1.2
Sex						
Male	30	44.8	21	46.7	978	44.6
Female	37	55.2	24	53.3	1,215	55.4
Total	67		45		2,193	

Table 9: Demographic Characteristics of Focus Group Participants: Age

Age (years)	**20's**	**30's**	**40's**	**50's**	**60's**	**70's**	**80's**
Male	3	8	7	4	7	0	1
Female	3	5	10	9	7	3	1
Total	**6**	**13**	**17**	**13**	**14**	**3**	**2**

APPENDIX E:

FOCUS GROUP QUESTIONS

Focus Group Interview Guide - Introduction

Welcome! My name is Catherine Woodyard and I am a graduate student at the University of Mississippi. I work in the Center for Health Behavior Research. T Davis is also a graduate student and works in the Office of Student Health as the Health Educator. She will be my assistant today.

We are working on a project with your community to strengthen community involvement and improve the health of the community and residents here in Charleston. An important first step in this effort is to better understand the community, its strengths and needs, the priority health issues, and existing resources and services. To do that, we are conducting focus groups with community members of different ages and gender and from various backgrounds.

You are present today so we could hear your thoughts and opinions about Charleston and to hear about your experiences living in Charleston. Over the next 90-120 minutes, we'll be asking you to share your thoughts and opinions about various topics related to the community and health. The information that comes from the focus groups will be used in the planning process to improve health and quality of life in Charleston. While we will use the information from the focus groups to develop programs, the focus groups themselves will remain confidential. Your information is very valuable and we appreciate your willingness to participate.

Orientation to the Focus Group

Before we begin, here are some tips that will help make our discussion run smoothly. First, there are no right or wrong answers, only different points of view. We hope you will feel free to share your thoughts and opinions, even if they are different from what others have said. This also means that one of the main ground rules for today is that all opinions are valued, no opinions are wrong and that everyone has a right to their own opinion.

We would like to use everyone's first name in talking, but we promise that no names will be attached to any comments used in any future reports about this project. If you have a nickname you'd like to use, that is fine, too. We also encourage everyone in the group to keep what is said here private and not discuss other people's comments outside of this group.

T Davis will be taking notes, but we also will be audio-recording today's discussion with everyone's permission. This will help us to be sure we don't miss anyone's comments. The notes and recordings are only for us. We do not share them with anyone outside of the research team. When we write reports, we won't quote anyone in a way that would allow them to be identified.

Finally, before we begin, I need to review your rights as participants in the discussion. What is most important for you to know is that you can choose whether or not to answer to any of the questions in the discussion. When you arrived, each of you was asked to read and sign a consent form saying that you agree to take part in the study. By signing the form, you are telling us that you understand why you are here and agree to participate. Before we start, does anyone have any questions about any part of the study?

Procedure

Let's start with some introductions. We'll go around the table. Please tell us your first name, how long you have lived in Charleston and one reason you decided to participate in the focus group today.

Thanks everyone. Okay, now let's move into the discussion questions:

Focus Group General Questions

1. What do you like about living in Charleston?
    - What are the advantages about living in Charleston?
    - Probe: What things are there for you to do in Charleston?
2. What do you not like about living in Charleston?
    - What are the disadvantages about living in Charleston?
3. How connected do you feel to your community?
    - Probe: Why do you feel connected or why do you not feel connected?
4. How safe do you feel in your community?
    - Probe: What makes you feel safe? Unsafe? Why do you feel safe? Unsafe?
5. Please describe how you define health. And wellness.
6. Describe the general health status of residents in Charleston.
7. Describe the general health needs of residents in Charleston.
    - Probe: From the things listed, what do you perceive as the greatest social/ health problems facing residents of Charleston?
    - Probe: What do you think can be done about these problems or can be done to improve the health of residents in Charleston?
8. What do you believe affects the health of residents in Charleston?
    - Probe: specifically, children, teenagers, young adults, older adults
9. What is currently available or being done in Charleston to support health?
    - Probe: What should be done about resolving needs that are not currently being addressed?
    - Probe: What health programs (services) are available to you as residents of Charleston?
    - Probe: What social programs (services) are available to you as residents of Charleston?
10. What services or programs would you like to have available to you?
    - Probe: What would these services or programs provide you?

- Probe: What services or programs would enhance good health in Charleston (for children, adults, older adults)

11. What resources are available in your community for recreation, physical activity and exercise?
    - Probe: What other resources would you like to have available to you for recreation, physical activity and exercise?
    - Probe: If more resources were available to you for recreation, physical activity and exercise would you use them and if so, how often?
12. Describe the presence or absence of healthy food options available in the community at the grocery store and at restaurants.
13. Discuss your knowledge of nutrition guidelines and the preparation of healthy meals.
    - Probe: What does healthy eating mean to you? (look like to you)
    - Probe: Please describe your level of interest in community cooking classes or nutrition education classes
14. Discuss your knowledge about the importance of and benefits of physical activity.
    - Probe: Please describe your level of interest in community physical activity programs, walking groups or physical activity education classes
15. What things do you do that are good for your health? Bad for you health?
16. How do people behave in Charleston that hurts their health? Helps their health?
    - Probe: What factors influence wellness in your community?
    - Probe: What behaviors do you find community members engaging in that are harmful to their health? Good for their health?
17. Please describe any environmental issues in the area that concern you.
    - Probe: Describe things in your environment in Charleston that you wish were different?
    - Probe: What things about the environment in Charleston would you like to see change?
18. Is there anything else that you would like to say or discuss that we have not covered today?

Close: Thank you very much for your time. Your insights will be very helpful to us. We expect to complete this phase of our work by the end of the summer. This fall we will hold a community meeting and issue a report with the findings from the interviews. Would you like to become involved, receive a copy of the report or hear about our plan for moving forward? Thank you again.

APPENDIX F:

KEY INFORMANT INTERVIEW GUIDE

Key Informant Interview Guide - Introduction

Welcome! My name is Catherine Woodyard and I am a graduate student at the University of Mississippi. I work in the Center for Health Behavior Research.

We are working on a project with your community to strengthen community involvement and improve the health of the community and residents here in Charleston. An important first step in this effort is to better understand the community, its strengths and needs, the priority health issues, and existing resources and services. To do that, we are conducting interviews with key community leaders.

The information that comes from the interviews will be used in the planning process to improve health and quality of life in Charleston. While we will use the information from the interviews to develop programs, the interviews themselves will remain confidential. If it is okay with you, we would like to publish the titles of the people we interview in the final report. If you would rather your title not be published that is okay. Please let us know whether you agree to have your title published.

You are present today so we could hear your thoughts and opinions about Charleston and to hear about your experiences living in Charleston. Over the next 90-120 minutes, we'll be asking you to share your thoughts and opinions about various topics related to the community and health. Your information is very valuable and we appreciate your willingness to participate.

Orientation to the Interview

Before we begin, here are some tips that will help make our discussion run smoothly. First, there are no right or wrong answers, only different points of view. I hope you will feel free to share your thoughts and opinion. I will be taking notes during the interview. I will also be audio-recording today's discussion with your permission. This will help me to be sure I don't miss any of your comments. The notes and recordings are only for me. I will not share them with anyone outside of the research team.

Finally, before we begin, I need to review your rights as participants in the discussion. What is most important for you to know is that you can choose whether or not to answer to any of the questions in the discussion. You were asked to read and sign a consent form saying that you agree to take part in the study. By signing the form, you are telling me that you understand why you are here and agree to participate. Before we start, do you have any questions about any part of the study?

Key Informant Interview Questions

The following general questions will be asked of all key informants.

1. Tell me about yourself and your organization
    a. How long the organization has existed?
    b. What types of services are provided?
    c. How long you've worked there?

2. What are the advantages about living in Charleston for the residents here?
3. What are the disadvantages about living in Charleston for the residents here?
    - Probe: What challenges are present in the community?
4. Please define health for me.
5. How do you think the community members define health?
6. Describe the general health needs of residents in Charleston.
    - Probe: What are the greatest health problems facing residents of Charleston?
    - Probe: What are the greatest social problems facing residents of Charleston?
    - Probe: What do you think can be done about these problems or can be done to improve the health of residents in Charleston?
7. What is currently being done (available) in Charleston (to support health) that helps you to be healthy?
    - Probe: What could? Or should? be done about resolving needs that are not currently being addressed?
    - Probe: What services or programs are currently available to residents that enhance good health in Charleston (for children, adults, older adults)
    - Probe: What services or programs could be implemented that would enhance good health in Charleston (for children, adults, older adults)
8. What do people do in Charleston that hurts their health? Helps their health?
    - Probe: What factors influence wellness in your community?
    - Probe: What behaviors do you find community members engaging in that are harmful to their health? Conducive to their health?
9. What do you think could encourage and support more community involvement/ advocacy around health issues? (What are barriers to involvement – complexity of issue, lack of information, inadequate staffing?)
10. Please describe any environmental issues in the area.
    - Probe: Describe things in the environment that could be changed or improved that would influence health positively?
11. Are there other people who you recommend that we talk to in Charleston?
12. Have we covered everything that you think is important? Is there anything else that you would like to say or discuss that we have not covered today?

Specific Key Informant Interview Questions

In addition to the general key informant interview questions that all of the key informants will be asked, each interviewee will also be asked specific questions pertaining to their area of expertise or position in the community. The questions that will be asked of each person individually are listed below.

1. **City Government Official**

We are interested in learning about some of the policies of the town of Charleston. Does Charleston have any of the following policies?

Does Charleston have any of the following policies:

a) Formal joint-use agreement between schools
b) Formal joint-use agreement between the community and churches
c) Complete streets policy
d) Tobacco-Free air ordinance
e) housing policy

2. Hospital Employee

Please describe your thoughts about and interest in the possibility of starting a work-site employee health promotion program for employees at the hospital?

What do you think about the possibility of building a gym/ fitness center at the hospital for patients and employees?

Probe: has this ever been considered before? If so, why did the idea fail?

How do you think the hospital can be involved to improve the health of the community? Please describe your level of interest in being involved with a community health fair or educational classes regarding health topics?

3. **Local Business Owner**

What is your vision for how you (and your businesses) can be involved to improve community and individual health?

Please describe your thoughts about the possibility of starting a work-site employee health promotion program for employees.

What do you think about the possibility of renovating some of the extra space in your building for a gym/fitness center for employees and families of employees?

Probe: What do you see as the barriers that serve as obstacles to this facility concept? What do you see as the advantages of such a facility?

4. **Executive Director of local organization**

What is your vision for how CARE can be involved to improve community health?

What is your vision for how we can create a community-university partnership (CUP) with CARE and other community groups? What would this partnership look like (What other organizations/ individuals do you think should be a part of the CUP and why)?

5. **Community Doctor**

Do you currently discuss disease prevention or health promotion with your patients? And if so, please describe in what capacity, and if not, please describe your reasons.

What is your vision for how you as the community doctor can work together with health educators or community health advocates to improve individual and community health?

Describe your experience with Black patients. Probe: do you feel Black patients feel comfortable coming to you for service? In what ways do you try to improve the experience for Black patients seeing a White doctor?

6. **East Tallahatchie School District Administrator**

Does the East Tallahatchie school district have a school wellness policy? If so, can you provide it to me?

Does the East Tallahatchie school district have a physical activity policy? If so, please describe it.

Ask to obtain a copy of both policies

Is a health course required for students in the East Tallahatchie school district? If so, at what grade level is it offered? Is there more than one course? If not, please describe your level of interest in incorporating a course that discusses topics pertaining to health and empowering students to have individual responsibility and take control of their health.

Does the East Tallahatchie school district teach sex education to students? If so, what is the curriculum and in what grade is it taught? How many lessons do the students receive?

What do you think are some of the biggest health issues and concerns for children in the school district?

Please describe any programs or activities that are offered through the schools that address health topics or provide health education to students.

What is your vision or level of interest in starting programs through the schools that focus on health education and teach about health and taking care of one's health such as nutrition education, physical activity education, stress, safe sex etc. Or Peer mentoring programs.

Do the athletes receive any type of nutrition counseling? Do the general students?

Describe any joint-use policy that is in place with the community? If there is not one, describe your level of interest in establishing such a policy.

7. **Dietician**

What are your thoughts about how we can educate the residents of Charleston on nutrition and enable them to improve the quality of their diet?

Describe your level of interest in providing nutrition education classes and healthy cooking classes for the residents of Charleston. What do you feel would be an appropriate outlet for this? Churches? CARE? The schools? Partnering with hospital?

What barriers do you think Charleston residents face when trying to make healthy food choices and eat a healthy diet?

Close: Thank you very much for taking the time to speak with me today. Your insights and knowledge will be very helpful to us as we conduct this community needs assessment. We expect to complete this phase of our work by the end of the summer. This fall we will hold a community meeting and issue a report with the findings from the interviews. Would you like to become involved, receive a copy of the report or hear about our plan for moving forward? Thank you again.

APPENDIX G:

FOCUS GROUP REMINDER EMAIL

Focus Group Reminder Email

Hi,

I hope this email finds you doing well. I just wanted to send you an email to remind you about the focus group you signed up for tomorrow night (_____) at 6:00 pm in the CARE building on the square. This focus group is part of the health needs assessment we are conducting in the community and we are thrilled to have you participate.

Please email me back and confirm whether or not you will be able to attend. Refreshments (light meal) will be served and $20 gift cards will be given as incentives. Thank you for your willingness to participate.

If possible, please arrive a few minutes early to sign in and get your food and drinks. Please let me know if you have any questions.

Thank you,

Catherine Woodyard

APPENDIX H:

DEMOGRAPHIC QUESTIONNAIRE FOR FOCUS GROUP PARTICIPANTS

Demographic Characteristics - Adult

Please complete the following information about yourself. The information you provide will be used for research purposes only and will be held in strictest confidence.

1. Gender (Circle one)
   Female
   Male

2. What is your current Marital Status (circle one)
   Married
   Partnered/Significant Other
   Single
   Divorced/Separated
   Widowed

3. What is your Date of Birth? ___ ___ / ___ ___ / ___ ___ ___ ___
   Month *Day* *Year*

4. What was your age on your last birthday? _____

5. Number of Children _____

6. What is your current Employment Status? (please select only one)
   _____ Full time – working at least 35 hours/week
   _____ Part time – working less than 35 hours/week
   _____ Retired, working part-time
   _____ Retired, not working at all
   _____ Laid off or unemployed
   _____ Full time homemaker
   _____ Other, Specify: _____

7. If you are working, what is your Present Occupation (the one you work most hours per week)?
_____

8. Years in present occupation _____ years

9. What is your current weight without shoes in pounds? _____ or don't know

10. What is your current height in feet and inches? _____ Feet _____ Inches

11. Race (circle one)

American Indian or Alaskan Native
Asian
Black or African American
Native Hawaiian or Other Pacific Islander
White

13. Education (Circle highest level attained)

1. Less than 7th grade
2. 9th grade (Jr. High)
3. Partial High School
4. High School Graduate
5. 1-3 years of College or 2 yr College/Vocational/Technical school graduate
6. College/University Graduate
7. Masters Degree
8. PhD or Equivalent

14. Annual Household Income (circle one)

1. Less than $10,000
2. $10,001 – 20,000
3. $20,001 – 30,000
4. $30,001 – 40,000
5. $40,001 – 50,000
6. $50,001 – 60,000
7. $60,001 – 70,000
8. $70,001 or greater

15. Do you exercise or participate in physical activity regularly? Please Circle: Yes No

If yes, how many days per week? 1 2 3 4 5 6 7

If no, would you like to start? Yes No Maybe

How many minutes per day do you typically exercise or engage in physical activity? _____

16. Do you smoke cigarettes? Please Circle: Yes No

If yes, how many cigarettes per day do you smoke? _____

If yes, would like to quit? Yes No

If yes, have you ever tried to quit? Yes No

17. If a farmer's market were to open in Charleston would you purchase food from it? Please Circle:

Yes No

18. Do you currently have any chronic diseases? Please Circle: Yes No

19. Do you currently take any prescription medications? Please Circle: Yes No

20. How long have you lived in Charleston? _____

_____

21. Where do you normally shop for groceries? _____

22. On average, how many meals per week do you “eat out” or consume meals prepared outside of the home?

_____

APPENDIX I:

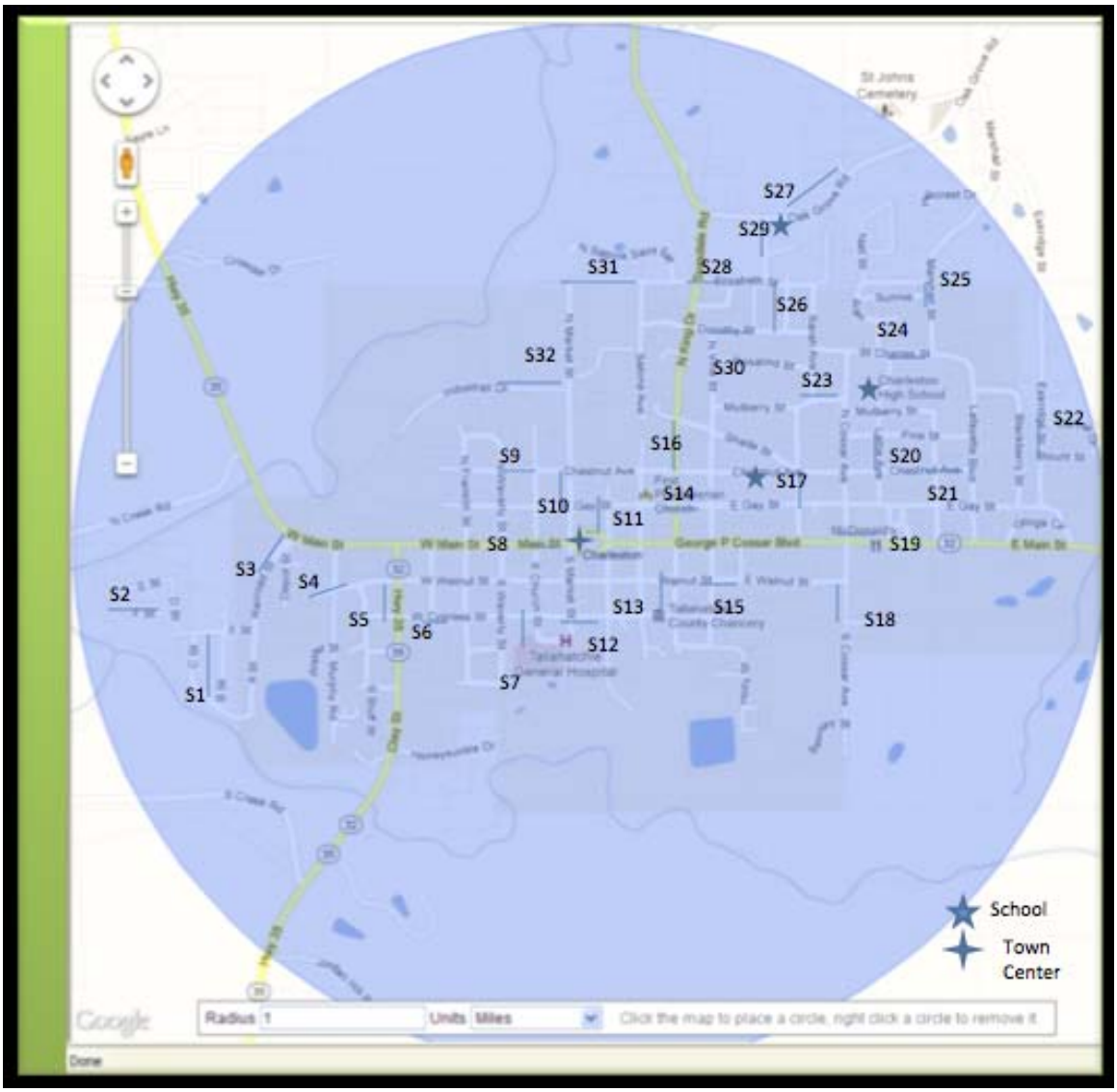
CHARLESTON TOWN CENTER SEGMENTS

Segment	Endpoints	Notes
S1 Birch St	Cedar St and F St	Isolated neighborhood southwest of town center
S2 F St	D St and private drive in the curve	Alternate area in the neighborhood from seg. 1
S3 Railroad St	Nelson Dr and Depot St	Only exit/entry point for neighborhood from segment 1 and 2
S4 Walnut St	S Bluff St and Murphy Rd	The area is one block from an industrial zone. I would like to view the possibility of walking to work.
S5 Clay St	Main St and Cypress St	Partial neighborhood and industrial area, interesting to see how the two mix.
S6 W Cypress St	S Franklin St and Calhoun St	Residential area in the southwest quadrant of town.
S7 W Church St	Walnut St and hospital parking	Help determine if walking to the hospital is a possibility
S8 Main St	S Church St and Market St	See how Main street compares to the rest of the town
S9 Chestnut Ave	Church St and N Waverly St	Assess the walkability of this segment located near the local employment agency
S10 N Market St	Chestnut Ave and E Gay St	See the difference in main st and this street one block away
S11 Panola St	E Gay St and Main St	One of the side roads exiting the town square.
S12 Cypress St	S Market St and S Panola St	Residential street that provides access to the hospital.
S13 S Pleasant St	Walnut St and Cypress St	This street provides access to the county Chancery.
S14 E Gay St	Sarah St and N Vine St	Residential area with church on one side and school on the other
S15 E Walnut St	S Vine St and South Cossar	Segment in front of the town library.
S16 N King Dr	Shade St and Chestnut Ave	This is a main road entering the town and traffic should be greater than most streets, investigate to see if this fact changes it's walkability
S17 Sarah Ave	Chestnut Ave and E Gay St	Assess walkability near elementary school
S18 S Cossar Ave	George Cossar and end of road	This road is the only access to national guard building and an isolated housing area
S19 E Main St	N Cossar Ave and Lallie St	See how Main St changes farther away from the town center

S20 Lallie Ave	Mulberry St and Chestnut Ave	Assessment of walkability near high school
S21 Chestnut Ave	Marshall Ave and Lafayette Blvd	Residential area one block from high school ball fields
S22 Eskridge St	Gay St to the 1 mile radius.	East most housing area in the town center zone, also near high school
S23 Mulberry St	Sarah Ave and N Cossar Ave	This segment leads into the high school.
S24 St. Charles St	Marshall St and Cossar	Segment borders the high school parking lot
S25 Marshall St	St. Charles and Hillcrest Dr.	Only access point to homes and apt. complex
S26 Sanders Dr	Elizabeth St and Dorothy St	Residential area between the 3 schools
S27 Oak Grove Rd	Marshall ext. to Hamilton	Segment connects the middle school to the cemetery on the edge of town.
S28 Elizabeth St	Teasdale Rd and Boclair Dr	Segment separates residences from a cemetery.
S29 Hamilton Dr	Oak Grove Rd and Hamilton Dr	School area walkability assessment
S30 Dorothy St	N Vine St and Sarah Ave	This segment is central to the housing area in the northeast quadrant of the town
S31 Elizabeth St	N Market St and Sabine Ave	Segment is on the edge of town with houses on one side and fields on the other.
S32 Industrial Dr	North Market and private drive on right	Investigate if the factory workers are able to walk to work if they desire

APPENDIX J:

SEGMENT MAP – ONE-MILE RADIUS OF TOWN CENTER


S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
S28
S29
S30
S31
S32
School
Town Center
Radius 1
Units Miles
Click the map to place a circle, right click a circle to remove it
Google
Done

APPENDIX K:

RURAL ACTIVE LIVING ASSESSMENT (RALA)

SEGMENT TOOL

SEGMENT ID#: _____ **AUDITOR ID:** _____

RALA Segment Assessment	Primary land use & terrain	
Town Name: _____ **1. Primary streets:** _____ **2. Segment Boundaries:** _____ **3. Date** _____ **4. Start Time:** _____	**5. Land Use:** ☐ Residential ☐ Commercial ☐ Industrial ☐ Public / civic ☐ Open space ☐ Other _____	**6. Terrain:** ☐ Flat ☐ Hills ☐ Wooded / undeveloped ☐ Winding roads ☐ Water body ☐ Other _____
7. Segment Zone Type: ☐ Town center ☐ Neighborhood ☐ Thoroughfare ☐ Isolated school zone	**Comments:**	

Walkability	Types *(check all that apply)*	Condition *(check one for each type)* 1 =poor/fair; 2 = good/excellent
8. Sidewalks	☐ Both sides of street ☐ One side of street ☐ Intermittent ☐ Footpath only ☐ None	☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ 1 ☐ 2
9. Buffers and shoulders	☐ Sidewalk buffer ☐ Defined shoulder ☐ None	☐ 1 ☐ 2 ☐ 1 ☐ 2
10. Cross walks and pedestrian signage	☐ Crosswalks ☐ Crossing signals ☐ Pedestrian signs ☐ Children at play signs ☐ None	☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ 1 ☐ 2
11. Other safety features	☐ Traffic lights ☐ Stop signs ☐ School flashing lights ☐ Speed bumps ☐ Public lighting ☐ None	**Comments:**
12. Road/Traffic characteristics	**Road Type:** ☐ Paved multi-lane roads ☐ Paved single lane roads ☐ Unpaved roads **Road Condition:** ☐ Poor/fair ☐ Good/excellent	**Posted speed limit:**_____ ☐ None posted **Traffic Volume:** ☐ High ☐ Medium ☐ Low
13. Barriers	☐ Highway ☐ Train tracks ☐ Private property—no trespassing ☐ Industrial zone ☐ Natural features ☐ Other_____ ☐ None	**Comments:**
14. Connectivity: Do sidewalks, a bikepath or other trail link this segment to other parts of town / attractions or to another segment or road? ☐ Yes ☐ No		**Condition of connectors:** ☐ 1 ☐ 2

SEGMENT # : _____ **AUDITOR ID: _____**

Land Use	Types *(check all that apply)*	Condition *(check one for each type)*: 1 = poor/fair; 2 = good/excellent	
15. Residential **Density:** ☐ Densely settled ☐ Moderately densely settled ☐ Not densely settled (dispersed) ☐ None	☐ Single family detached homes	☐ 1	☐ 2
	☐ Multi-family homes / apartments	☐ 1	☐ 2
	☐ Mobile homes	☐ 1	☐ 2
	☐ Other _____	☐ 1	☐ 2
	☐ None		
16. Public/civic	☐ Library	☐ 1	☐ 2
	☐ Museum	☐ 1	☐ 2
	☐ Community center	☐ 1	☐ 2
	☐ Post office	☐ 1	☐ 2
	☐ Town offices	☐ 1	☐ 2
	☐ Courthouse	☐ 1	☐ 2
	☐ Police station	☐ 1	☐ 2
	☐ Fire station	☐ 1	☐ 2
	☐ Church / religious	☐ 1	☐ 2
	☐ Hospital/health center	☐ 1	☐ 2
	☐ Athletic fields/courts	☐ 1	☐ 2
	☐ Playground	☐ 1	☐ 2
	☐ Other	☐ 1	☐ 2
	☐ None		
17. Commercial	☐ Restaurant / café	☐ 1	☐ 2
	☐ Bar	☐ 1	☐ 2
	☐ Food market	☐ 1	☐ 2
	☐ Theater	☐ 1	☐ 2
	☐ Gas station	☐ 1	☐ 2
	☐ Convenience store	☐ 1	☐ 2
	☐ Small retail	☐ 1	☐ 2
	☐ Big box retail	☐ 1	☐ 2
	☐ Fitness center	☐ 1	☐ 2
	☐ Private medical office	☐ 1	☐ 2
	☐ Private other office	☐ 1	☐ 2
	☐ Other_____	☐ 1	☐ 2
	☐ None		
18. Schools	☐ Elementary (public)	☐ 1	☐ 2
	☐ Middle (public)	☐ 1	☐ 2
	☐ High (public)	☐ 1	☐ 2
	☐ Private school	☐ 1	☐ 2
	☐ Other	☐ 1	☐ 2
	☐ None		
19. Industrial/agricultural	☐ Light industrial area	☐ 1	☐ 2
	☐ Heavy industrial area	☐ 1	☐ 2
	☐ Farmland area	☐ 1	☐ 2
	☐ Other _____	☐ 1	☐ 2
	☐ None		
Comments:			

SEGMENT # : _____ AUDITOR ID: _____

Subjective Assessment – please answer the following questions last (once the rest of the assessment tool has been fully completed)

21. Subjective Assessment - Walkability

How strongly do you agree with the following statement?

"This segment is walkable."

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly disagree

Comments:

22. Subjective Assessment - Aesthetics

How strongly do you agree with the following statement?

"This segment is aesthetically pleasing."

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly disagree

Comments:

General Conditions – please document the following current conditions:

23. Current weather conditions:

- ☐ Sunny/clear
- ☐ Partly cloudy
- ☐ Overcast
- ☐ Rain
- ☐ Snow
- ☐ Other _____

24. Season:

- ☐ Winter
- ☐ Spring
- ☐ Summer
- ☐ Fall

25. Day of week:

- ☐ Weekday
- ☐ Weekend
- ☐ Holiday

APPENDIX L:

RURAL ACTIVE LIVING ASSESSMENT (RALA)

TOWN WIDE ASSESSMENT TOOL

Town name: _____

Auditor name: _____

Rural Active Living Assessment (RALA)
TOWN-WIDE ASSESSMENT Tool

I. Town demographics and characteristics:

Please complete the following table to summarize town-wide demographics and characteristics for your community.

Q#	Demographic/Characteristic	
1.	**Town Name:**	
2.	**County Name:**	
3.	**Town Population:**	
4.	**Total Town Area:**	*square miles*
5.	**Town Population Density:**	*per square mile*
6.	**County Population:**	
7.	**Total County Area:**	*square miles*
8.	**County Population Density:**	*per square mile*
9.	**General Town Topography:** *(check one)*	◻ flat ◻ hilly ◻ mountainous ◻ Other: _____
10.	**Presence of "Town Center?":** *(check one)*	◻ Yes – one distinct town center ◻ Yes – multiple town centers ◻ No town center ◻ Other: _____
11.	**General Town Street Pattern:** *(check one)*	◻ Grid ◻ Radial ◻ No distinguishable pattern ◻ Other: _____
12.	**Location of Public High School** School Name:_____	◻ within 1 mile of town center ◻ between 1 and 5 miles from town center ◻ more than 5 miles from town center
13.	**Location of Public Middle School** School Name:_____	◻ within 1 mile of town center ◻ between 1 and 5 miles from town center ◻ more than 5 miles from town center
14.	**Location of Public Elementary School** School Name:_____	◻ within 1 mile of town center ◻ between 1 and 5 miles from town center ◻ more than 5 miles from town

		center
15.	**Location of Any Additional School** *(indicate what type of school)* □ Public Elementary School □ Public Middle School □ Public High School □ Private School □ College or University □ Other School Name:	□ within 1 mile of town center □ between 1 and 5 miles from town center □ more than 5 miles from town center
16.	**Location of Any Additional School** *(indicate what type of school)* □ Public Elementary School □ Public Middle School □ Public High School □ Private School □ College or University □ Other School Name:_____	□ within 1 mile of town center □ between 1 and 5 miles from town center □ more than 5 miles from town center
17.	**Location of Any Additional School** *(indicate what type of school)* □ Public Elementary School □ Public Middle School □ Public High School □ Private School □ College or University □ Other School Name:_____	□ within 1 mile of town center □ between 1 and 5 miles from town center □ more than 5 miles from town center
18.	**Location of Any Additional School** *(indicate what type of school)* □ Public Elementary School □ Public Middle School □ Public High School □ Private School □ College or University □ Other School Name:	□ within 1 mile of town center □ between 1 and 5 miles from town center □ more than 5 miles from town center

II. Town recreational amenities:

The following section is to collect information about recreational amenities available in your town and beyond. For each amenity, please check off its distance from your central town point, the condition of the amenity, and whether it has the specific access features listed. You may include amenities that are located in surrounding towns if you know that residents living in your town tend to use them (for example, if there is not a skate-park in your town, but people travel to the next town over to use that town's skate-park, be sure to include it). If there are any comments related to a specific amenity, please write it in the space provided. If there is more than one of a specific amenity in the town (e.g., two different parks), please list additional amenities in one of the "Other Amenity" sections at the end of the tool.

Amenity	Distance from town center *(check one)*	Condition *(check one)*	Access *(check all that apply)*
1. Hiking or Walking Trail(s)	☐ *Yes* – within 1 mile of town center ☐ *Yes* – 1 to 5 miles from town center ☐ *Yes* - 5 to 15 miles away from town center ☐ *Yes* – beyond 15 miles away from town center ☐ *No* – town does not have this amenity	☐ Fair/Poor ☐ Good/ Excellent	☐ Clearly marked signs for amenity ☐ Designated parking for amenity ☐ Sidewalks leading to amenity
Comments:			
2. Biking Path(s)	☐ *Yes* – within 1 mile of town center ☐ *Yes* – 1 to 5 miles from town center ☐ *Yes* - 5 to 15 miles away from town center ☐ *Yes* – beyond 15 miles away from town center ☐ *No* – town does not have this amenity	☐ Fair/Poor ☐ Good/ Excellent	☐ Clearly marked signs for amenity ☐ Designated parking for amenity ☐ Sidewalks leading to amenity
Comments:			

Amenity	Distance from town center *(check one)*	Condition *(check one)*	Access *(check all that apply)*
3. Public Park(s)	☐ *Yes* – within 1 mile of town center ☐ *Yes* – 1 to 5 miles from town center ☐ *Yes* - 5 to 15 miles away from town center ☐ *Yes* – beyond 15 miles away from town center ☐ *No* – town does not have this amenity	☐ Fair/Poor ☐ Good/ Excellent	☐ Clearly marked signs for amenity ☐ Designated parking for amenity ☐ Sidewalks leading to amenity
Comments:			
4. Swimming Beach	☐ *Yes* – within 1 mile of town center ☐ *Yes* – 1 to 5 miles from town center ☐ *Yes* - 5 to 15 miles away from town center ☐ *Yes* – beyond 15 miles away from town center ☐ *No* – town does not have this amenity	☐ Fair/Poor ☐ Good/ Excellent	☐ Clearly marked signs for amenity ☐ Designated parking for amenity ☐ Sidewalks leading to amenity
Comments:			
5. Public Use Swimming Pool	☐ *Yes* – within 1 mile of town center ☐ *Yes* – 1 to 5 miles from town center ☐ *Yes* - 5 to 15 miles away from town center ☐ *Yes* – beyond 15 miles away from town center ☐ *No* – town does not have this amenity	☐ Fair/Poor ☐ Good/ Excellent	☐ Clearly marked signs for amenity ☐ Designated parking for amenity ☐ Sidewalks leading to amenity
Comments:			

Amenity	Distance from town center *(check one)*	Condition *(check one)*	Access *(check all that apply)*
6. River with canoe/kayak/boat/ watersport access	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
7. Skate Park	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
8. Ice Skating Rink	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			

Amenity	Distance from town center *(check one)*	Condition *(check one)*	Access *(check all that apply)*
9. Roller Skating Rink	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
10. Town Recreational Center (e.g. YMCA or town recreational facility)	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
11. Private Fitness Facility (e.g. Curves, Gold's Gym, etc.)	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			

Amenity	Distance from town center *(check one)*	Condition *(check one)*	Access *(check all that apply)*
12. Playground(s)	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
13. Playing Fields or Courts	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
14. Other Amenity: _____ _____ _____	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			

Amenity	Distance from town center *(check one)*	Condition *(check one)*	Access *(check all that apply)*
15. Other Amenity: _____ _____	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
16. Other Amenity: _____ _____ _____	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			
17. Other Amenity: _____ _____ _____	❑ *Yes* – within 1 mile of town center ❑ *Yes* – 1 to 5 miles from town center ❑ *Yes* - 5 to 15 miles away from town center ❑ *Yes* – beyond 15 miles away from town center ❑ *No* – town does not have this amenity	❑ Fair/Poor ❑ Good/ Excellent	❑ Clearly marked signs for amenity ❑ Designated parking for amenity ❑ Sidewalks leading to amenity
Comments:			

Amenity	Distance from town center *(check one)*	Condition *(check one)*	Access *(check all that apply)*
18. Other Amenity: _____ _____	☐ *Yes* – within 1 mile of town center ☐ *Yes* – 1 to 5 miles from town center ☐ *Yes* - 5 to 15 miles away from town center ☐ *Yes* – beyond 15 miles away from town center ☐ *No* – town does not have this amenity	☐ Fair/Poor ☐ Good/ Excellent	☐ Clearly marked signs for amenity ☐ Designated parking for amenity ☐ Sidewalks leading to amenity
Comments:			

APPENDIX M:

RURAL ACTIVE LIVING ASSESSMENT (RALA)

PROGRAM AND POLICY ASSESSMENT TOOL

Town name: _____

Auditor name: _____

Rural Active Living Assessment (RALA)
PROGRAM AND POLICY ASSESSMENT Tool

Town Programs and Policies	*Check One*
1. Does the town have a policy that requires bikeways or pedestrian walkways in new public infrastructure projects?	◻ Yes ◻ No ◻ Don't know ◻ N/A
Comments:	
2. Does the town regularly clear snow from sidewalks?	◻ Yes ◻ No ◻ Don't know ◻ N/A
Comments:	
3. Does the town have a public recreation department that offers physical activity programming?	◻ Yes ◻ No ◻ Don't know
If Yes:	
3a. Do they offer physical activity programming for local youth?	◻ Yes ◻ No ◻ Don't know
3b. *If Yes:* What age range is served by these programs? _____	
3c. Do they offer physical activity programming for local adults?	◻ Yes ◻ No ◻ Don't know
3d. *If Yes:* What age range is served by these programs?	
3e. Are physical activity resources/facilities available for local resident use outside of programming?	◻ Yes ◻ No ◻ Don't know
3f. Does the recreation department provide scholarships or offer a sliding fee scale for lower income residents?	◻ Yes ◻ No ◻ Don't know

Town Programs and Policies	*Check One*
Comments:	
4. Does the town have a private organization (such as the YMCA or a religious organization) that offers physical activity programming?	◻ Yes ◻ No ◻ Don't know
If Yes:	
4a. Do they offer physical activity programming for local youth?	◻ Yes ◻ No
4b. *If Yes,* what age range is served by these programs?	◻ Don't know
4c. Do they offer physical activity programming for local adults?	◻ Yes ◻ No
4d. *If Yes:* What age range is served by these programs?	◻ Don't know
4e. Are there membership requirements to participate in these programs?	◻ Yes ◻ No ◻ Don't know
4f. Are physical activity resources/facilities available for local resident use outside of programming?	◻ Yes ◻ No ◻ Don't know
4g. Does the organization provide scholarships or offer a sliding fee scale for lower income residents?	◻ Yes ◻ No ◻ Don't know
Comments:	

Town Programs and Policies	*Check One*
5a. Does the town offer any *local* public transportation options, such as public busses or vans? 5a1. If yes, please specify:	☐ Yes ☐ No ☐ Don't know
5b. Are there any *long-distance* public transportation options available in your town, such as a train or Greyhound Bus? 5b1. If yes, please specify: _____	☐ Yes ☐ No ☐ Don't know
Comments:	

School Programs and Policies	*Check One*
6. Does the town have any "Walk to School" programs or other programs that encourage children to walk or bike to school?	☐ Yes ☐ No ☐ Don't know
Comments:	
7. Does the town participate in the National "Safe Routes to School" program?	☐ Yes ☐ No ☐ Don't know
Comments:	
8. Do the public schools in the town offer other sponsored physical activity initiatives for students?	☐ Yes ☐ No ☐ Don't know
Comments:	

School Programs and Policies	*Check One*
9. Do the public schools in the town allow public access to their recreation facilities after school hours?	☐ Yes ☐ No ☐ Don't know
Comments:	
10. Do the public schools have a late bus option for children that stay after school for sponsored activities?	☐ Yes ☐ No ☐ Don't know
Comments:	
11. What percent (%) of children live within 1-mile of their school?	_____% ☐ Don't know
Comments:	

APPENDIX N:

NUTRITION ENVIRONMENT MEASURES SURVEY- STORE

Nutrition Environment Measures Survey (NEMS)
Food Outlet Cover Page

Rater ID: ☐☐

O Grocery Store
O Convenience Store
O Other _____

Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐/☐☐/☐☐ (Month/Day/Year)

Start Time: ☐☐:☐☐ O AM O PM

End Time: ☐☐:☐☐ O AM O PM

Number of cash registers: ☐☐

O SD O FC O FF O Specialty O Other

Restaurant ID: ☐☐-☐-☐☐-☐☐☐

Site Visit Date: ☐☐/☐☐/☐☐ (Month/Day/Year)

Start Time: ☐☐:☐☐ O AM O PM

End Time: ☐☐:☐☐ O AM O PM

Menu/Internet Review Date: ☐☐/☐☐/☐☐ (Month/Day/Year)

Start Time: ☐☐:☐☐ O AM O PM

End Time: ☐☐:☐☐ O AM O PM

Other Visit/Interview Date: ☐☐/☐☐/☐☐ (Month/Day/Year)

Start Time: ☐☐:☐☐ O AM O PM

End Time: ☐☐:☐☐ O AM O PM

Comments: _____

_____

Nutrition Environment Measures Survey (NEMS)
Cover Page

8250013302

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
Measure #1: MILK

Rater ID: ☐☐ Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐/☐☐/☐☐ (Month Day Year)

○ Grocery Store ○ Convenience Store ○ Other

Marking Instructions

Please use a pencil or blue or black ink. Correct ● Incorrect ⊘ ⊗ ◒ ◉

A. Reference Brand

1. Store brand (preferred) ○ Yes ○ No

2. Alternate Brand Name: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Comments: _____

B. Availability

Comments:

1. a. Is low-fat (skim or 1%) available? ○ Yes ○ No _____

b. If not, is 2% available? ○ Yes ○ No ○ NA _____

2. **Shelf space:** (measure only if low fat milk is available)

Type	Pint	Quart	Half gallon	Gallon
a. Skim	☐☐	☐☐	☐☐	☐☐
b. 1%	☐☐	☐☐	☐☐	☐☐
c. Whole	☐☐	☐☐	☐☐	☐☐

C. Pricing All items should be same brand

Comments:

1. Whole milk, quart $☐.☐☐ _____

2. Whole milk, half-gallon $☐.☐☐ _____

3. Skim or 1% milk, quart $☐.☐☐ _____
(Lowest-fat milk available)

4. Skim or 1% milk, half-gallon $☐.☐☐ _____
(Lowest-fat milk available)

Alternate Items:

5. 2%, quart $☐.☐☐ ○ N/A _____

6. 2%, half-gallon $☐.☐☐ ○ N/A _____

8898156331

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
Measure #2: FRUIT

Rater ID: ☐☐

Date: ☐☐ / ☐☐ / ☐☐
Month Day Year

Store ID: ☐☐-☐-☐☐-☐☐☐

○ Grocery Store ○ Convenience Store ○ Other

Availability and Price

Produce Item		Available Yes	Available No	Price	Unit #	Unit pc	Unit lb	Quality A	Quality UA	Comments
1. Bananas		○	○	$☐.☐☐	☐	○	○	○	○	
2. Apples	○ Red delicious ○ _____	○	○	$☐.☐☐	☐	○	○	○	○	
3. Oranges	○ Navel ○ _____	○	○	$☐.☐☐	☐	○	○	○	○	
4. Grapes	○ Red seedless ○ _____	○	○	$☐.☐☐	☐	○	○	○	○	
5. Cantaloupe		○	○	$☐.☐☐	☐	○	○	○	○	
6. Peaches		○	○	$☐.☐☐	☐	○	○	○	○	
7. Strawberries		○	○	$☐.☐☐	☐	○	○	○	○	
8. Honeydew Melon		○	○	$☐.☐☐	☐	○	○	○	○	
9. Watermelon	○ Seedless ○ _____	○	○	$☐.☐☐	☐	○	○	○	○	
10. Pears	○ Anjou ○ _____	○	○	$☐.☐☐	☐	○	○	○	○	

11. Total Types: (Count # of yes responses) ☐☐

0450176946

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
Measure #3: VEGETABLES

Rater ID: ☐☐

Date: ☐☐ / ☐☐ / ☐☐
Month Day Year

Store ID: ☐☐-☐-☐☐-☐☐☐

O Grocery Store O Convenience Store O Other

Availability and Price

Produce Item		Available Yes	Available No	Price	Unit #	Unit pc	Unit lb	Quality A	Quality UA	Comments
1. Carrots	O 1 lb bag O_____	O	O	$☐.☐☐	☐	O	O	O	O	
2. Tomatoes	O Loose O_____	O	O	$☐.☐☐	☐	O	O	O	O	
3. Sweet Peppers	O Green bell peppers O_____	O	O	$☐.☐☐	☐	O	O	O	O	
4. Broccoli	O Bunch O_____	O	O	$☐.☐☐	☐	O	O	O	O	
5. Lettuce	O Green leaf O_____	O	O	$☐.☐☐	☐	O	O	O	O	
6. Corn		O	O	$☐.☐☐	☐	O	O	O	O	
7. Celery		O	O	$☐.☐☐	☐	O	O	O	O	
8. Cucumbers	O Regular O_____	O	O	$☐.☐☐	☐	O	O	O	O	
9. Cabbage	O Head O_____	O	O	$☐.☐☐	☐	O	O	O	O	
10. Cauliflower		O	O	$☐.☐☐	☐	O	O	O	O	

11. Total Types: (Count # of yes responses) ☐☐

6577396766

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #4: GROUND BEEF

Rater ID: ☐☐

Date: ☐☐ / ☐☐ / ☐☐
Month Day Year

Store ID: ☐☐-☐-☐☐-☐☐☐

O Grocery Store O Convenience Store O Other

Availability and Price

Item	Available Yes	No	N/A	Price/lb.	Comments
Healthier option:					
1. Lean ground beef, 90% lean, 10% fat (Ground Sirloin)	O	O		$☐.☐☐	
Alternate Items:					
2. Lean ground beef, (<10% fat) ☐☐ % fat	O	O	O	$☐.☐☐	
3. Ground Turkey, (≤10% fat) ☐☐ % fat	O	O	O	$☐.☐☐	

4. # of varieties of lean ground beef (≤10% fat) O 0 O 1 O 2 O 3 O 4 O 5 O 6+

Regular option:					
5. Standard ground beef, 80% lean, 20% fat	O	O		$☐.☐☐	
Alternate Item:					**Comments**
6. Standard alternate ground beef, if above is not available ☐☐ % fat	O	O	O	$☐.☐☐	

4349643520

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #5: HOT DOG

Rater ID: ☐☐ Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐/☐☐/☐☐ (Month Day Year)

○ Grocery Store ○ Convenience Store ○ Other

Availability and Price

Item	Available Yes	No	N/A	Price/pkg.	Comments
Healthier option:					
1. Oscar Mayer 98% Fat Free Wieners (turkey/beef) 0.5g fat	○	○		$☐.☐☐	
Alternate Items: (≤ 9g fat)					
2. Fat-free other brand 0g fat ☐☐☐☐☐☐☐☐☐☐☐☐☐☐ (Brand name) ☐☐☐ (Kcal/svg)	○	○	○	$☐.☐☐	
3. Light Wieners (turkey/pork)	○	○	○	$☐.☐☐	
4. Light beef Franks (usually 1/3 less calories, 50% less fat)	○	○	○	$☐.☐☐	
5. Turkey Wieners (1/3 less fat)	○	○	○	$☐.☐☐	
6. Other ☐☐☐☐☐☐☐☐☐☐☐☐	○	○	○	$☐.☐☐	☐☐ oz pkg ☐☐ Hot dogs/pkg ☐☐ g fat ☐☐☐ kcal/svg
Regular option:					
7. Oscar Mayer Wieners (turkey/pork/chicken)-regular 12g fat	○	○		$☐.☐☐	
Alternate Items: (≥10g fat)					
8. Beef Franks (regular)	○	○	○	$☐.☐☐	
9. Other ☐☐☐☐☐☐☐☐☐☐☐☐	○	○	○	$☐.☐☐	☐☐ oz pkg ☐☐ Hot dogs/pkg ☐☐ g fat ☐☐☐ kcal/svg

5986187936

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #6: FROZEN DINNERS

Rater ID: ☐☐ Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐ / ☐☐ / ☐☐
Month Day Year

O Grocery Store O Convenience Store O Other

A. Reference Brand

1. Stouffer's brand (preferred) O Yes O No

2. Alternate brand (with reduced-fat dinners available) Brand Name: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Comments: _____

B. Availability

1. Are reduced-fat frozen dinners available? (≤9g fat/8-11 oz.) O Yes O No _____

Shelf space:(measure only if reduced-fat frozen dinners are available)

2. Reduced-fat dinners/regular dinners: Proportion O <= 10% O 11-33% O 34-50% O 51%+

C. Pricing (All items must be same brand)

Reduced-Fat Dinner	Price/ Pkg	Regular Dinner	Price/ Pkg	Comments
1. Lean Cuisine Lasagna ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	Stouffer's Lasagna ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	
2. Lean Cuisine Roasted Turkey Breast ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	Stouffer's Roasted Turkey Breast ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	
3. Lean Cuisine Meatloaf ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	Stouffer's Meatloaf ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	

Reduced-Fat Alternate (≤ 9g fat)	Price/ Pkg	Regular Alternate (≥ 10g fat)	Price/ Pkg	Comments
4. Other _____ ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	Other _____ ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	
5. Other _____ ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	Other _____ ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	
6. Other _____ ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	Other _____ ☐☐ oz. ☐☐☐ Kcal. ☐☐ g fat	$☐☐.☐☐	

7422087785

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #7: BAKED GOODS

Rater ID: ☐☐ Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐ / ☐☐ / ☐☐ (Month Day Year)

○ Grocery Store ○ Convenience Store ○ Other

Availability & Price

Low-fat baked goods ≤3g fat/serving

Item	Available Yes	Available No	Amt. per package	g fat/ per item	kcal/ per item	Price	Comments
Healthier option:							
1. Bagel Single	○	○		☐☐	☐☐☐	$☐.☐☐	
	Yes	**No**	**N/A**				
Package	○	○	○	☐☐	☐☐	☐☐☐	$☐.☐☐
Alternate Items:	**Yes**	**No**	**N/A**				
2. English muffin	○	○	○	☐☐	☐☐	☐☐☐	$☐.☐☐
3 a. Low-fat muffin ☐☐☐☐☐☐☐☐☐☐	○	○	○	☐☐	☐☐	☐☐☐	$☐.☐☐
b. # varieties of low fat muffins	○ 0	○ 1	○ 2	○ 3+			
Regular option (≥ 4g fat/serving or 400 Kcal/serving):							
4. Regular muffin	○	○		☐☐	☐☐	☐☐☐	$☐.☐☐
Alternate Items:	**Yes**	**No**	**N/A**				
5. Regular Danish	○	○	○	☐☐	☐☐	☐☐☐	$☐.☐☐
6. Other	○	○	○	☐☐	☐☐	☐☐☐	$☐.☐☐

2816345830

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #8-CS: BEVERAGE

Rater ID: ☐☐ Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐ / ☐☐ / ☐☐ (Month Day Year)

○ Grocery Store ○ Convenience Store ○ Other

Availability & Price

Healthier option:		Available Yes	No	N/A	Price	Comments
1. Diet Coke	12 oz.	○	○		$☐.☐☐	
	20 oz.	○	○		$☐.☐☐	
2. Alternate brand of diet soda		Yes	No	N/A		
☐☐☐☐☐☐☐☐☐☐☐☐	12 oz.	○	○	○	$☐.☐☐	
☐☐☐☐☐☐☐☐☐☐☐☐	20 oz.	○	○	○	$☐.☐☐	
Regular option:		Yes	No			
3. Coke	12 oz.	○	○		$☐.☐☐	
	20 oz.	○	○		$☐.☐☐	
4. Alternate brand of sugared soda		Yes	No	N/A		
☐☐☐☐☐☐☐☐☐☐☐☐	12 oz.	○	○	○	$☐.☐☐	
☐☐☐☐☐☐☐☐☐☐☐☐	20 oz.	○	○	○	$☐.☐☐	

Healthier option:	Available Yes	No	N/A	Price
5. 100% juice, 15.2 oz.				
○ Minute Maid ○ Tropicana ○ Other	○	○		$☐.☐☐
Alternate Items:	Yes	No	N/A	
6. 100% juice, 14 oz.				
○ Minute Maid ○ Tropicana ○ Other	○	○	○	$☐.☐☐
7. 100% juice, ○ _____oz.				
○ Minute Maid ○ Tropicana ○ Other	○	○	○	$☐.☐☐

Regular option:	Yes	No	N/A	Price
8. Juice Drink, 15.2 oz				
○ Minute Maid ○ Tropicana ○ Other	○	○		$☐.☐☐
Alternate Items:	Yes	No	N/A	
9. Juice Drink, 14 oz.				
○ Minute Maid ○ Tropicana ○ Other	○	○	○	$☐.☐☐
10. Juice Drink, ○ _____oz.				
○ Minute Maid ○ Tropicana ○ Other	○	○	○	$☐.☐☐

3722001173

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #8-GS: BEVERAGE

Rater ID: ☐☐ Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐ / ☐☐ / ☐☐ (Month Day Year)

○ Grocery Store ○ Convenience Store ○ Other

Availability & Price

Healthier option:	Available size	Available Yes	No	N/A	Price	Comments
1. Diet Coke	12 pack 12 oz.	○	○		$☐.☐☐	
	6 pack 12 oz.	○	○	○	$☐.☐☐	
2. Alternate brand of diet soda						
☐☐☐☐☐☐☐☐☐☐☐☐	12 pack 12 oz.	○	○	○	$☐.☐☐	
☐☐☐☐☐☐☐☐☐☐☐☐	6 pack 12 oz	○	○	○	$☐.☐☐	
Regular option:						
3. Coke	12 pack 12 oz.	○	○		$☐.☐☐	
	6 pack 12 oz.	○	○	○	$☐.☐☐	
4. Alternate brand of sugared soda						
☐☐☐☐☐☐☐☐☐☐☐☐	12 pack 12 oz.	○	○	○	$☐.☐☐	
☐☐☐☐☐☐☐☐☐☐☐☐	6 pack 12 oz	○	○	○	$☐.☐☐	

Healthier option:	Yes	No	N/A	Price	Comments
5. Minute Maid 100% juice, (64 oz., half gallon)	○	○		$☐.☐☐	
Alternate Items:					
6. Tropicana 100% juice, (64 oz., half gallon)	○	○	○	$☐.☐☐	
7. Other: ☐☐☐☐☐☐☐☐☐☐☐☐	○	○	○	$☐.☐☐	
Regular option:					
8. Minute Maid juice drink, (64 oz., half gallon)	○	○		$☐.☐☐	
Alternate Items:					
9. Tropicana juice drink, (64 oz., half gallon)	○	○	○	$☐.☐☐	
10. Other: ☐☐☐☐☐☐☐☐☐☐☐☐	○	○	○	$☐.☐☐	

2399270080

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #9: BREAD

Rater ID: ☐☐

Date: ☐☐ / ☐☐ / ☐☐
Month Day Year

Store ID: ☐☐-☐-☐☐-☐☐☐

○ Grocery Store ○ Convenience Store ○ Other

Availability & Price

Item	Available Yes	No	N/A	Loaf size (ounces)	Price/loaf	Comments
Healthier Option: Whole grain bread (100% whole wheat bread and whole grain bread)						
1. Nature's Own 100% Whole Wheat Bread	○	○		☐☐	$☐.☐☐	
Alternate Items:						
2. Sara Lee Classic 100% Whole Wheat Bread	○	○	○	☐☐	$☐.☐☐	
3. Other: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	○	○	○	☐☐	$☐.☐☐	
4. # of varieties of 100% whole wheat bread and whole grain (all brands)	○0	○1	○2	○3	○4	○5 ○6+
Regular Option: White bread (Bread made with refined flour)						
5. Nature's Own Butter Bread	○	○		☐☐	$☐.☐☐	
Alternate Items:						
6. Sara Lee Classic White Bread	○	○	○	☐☐	$☐.☐☐	
7. Other: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	○	○	○	☐☐	$☐.☐☐	

B320121759

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #10: BAKED CHIPS

Rater ID: ☐☐ Store ID: ☐☐ - ☐ - ☐☐ - ☐☐☐

Date: ☐☐ / ☐☐ / ☐☐
Month Day Year

○ Grocery Store ○ Convenience Store ○ Other

Availability & Price

Low-fat chips ≤3g fat/1 oz. serving

Item	Size (oz.)	Available	Price	Comments
Healthier Option :		Yes No		
1. Baked Lays Potato Chips	☐☐ oz.	○ ○	$☐.☐☐	
Alternate Item:		Yes No N/A		
2. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	☐☐ oz.	○ ○ ○	$☐.☐☐	

3. # of varieties of low-fat chips (any brand) ○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6+

Regular Option (select most comparable size to healthier option available):

		Yes No		
4. Lays Potato Chips Classic	☐☐ oz.	○ ○	$☐.☐☐	
Alternate Item:		Yes No N/A		
5. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	☐☐ oz.	○ ○ ○	$☐.☐☐	

9805006716

Measure Complete ☐

Nutrition Environment Measures Survey (NEMS)
MEASURE #11: CEREAL

Rater ID: ☐☐

Date: ☐☐ / ☐☐ / ☐☐
Month Day Year

Store ID: ☐☐-☐-☐☐-☐☐☐

O Grocery Store O Convenience Store O Other

Availability & Price

Healthier cereals < 7 g sugar per serving

Item	Available Yes	No	N/A	Size (ounces)	Price	Comments
Healthier Option :						
1. Cheerios (Plain)	O	O		☐☐	$☐.☐☐	
Alternate Item:	**Yes**	**No**	**N/A**			
2. Other	O	O	O	☐☐	$☐.☐☐	
3. # of varieties of healthier cereals	O 0	O 1	O 2	O 3+		
Regular Option (≥7g of sugar per serving):						
4. Cheerios (Flavored)	O	O		☐☐	$☐.☐☐	
Alternate Item:	**Yes**	**No**	**N/A**			
5. Other	O	O	O	☐☐	$☐.☐☐	

9848496682

APPENDIX O:

NUTRITION ENVIRONMENT MEASURES SURVEY - RESTAURANT

Nutrition Environment Measures Survey (NEMS)
Food Outlet Cover Page

Rater ID: ☐☐

O Grocery Store
O Convenience Store
O Other_____

Store ID: ☐☐-☐-☐☐-☐☐☐

Date: ☐☐/☐☐/☐☐
Month Day Year

Start Time: ☐☐:☐☐ O AM O PM

End Time: ☐☐:☐☐ O AM O PM

Number of cash registers: ☐☐

O SD O FC O FF O Specialty O Other

Restaurant ID: ☐☐-☐-☐☐-☐☐☐

Site Visit Date: ☐☐/☐☐/☐☐ Month Day Year

Start Time: ☐☐:☐☐ O AM O PM
End Time: ☐☐:☐☐ O AM O PM

Menu/Internet Review Date: ☐☐/☐☐/☐☐ Month Day Year

Start Time: ☐☐:☐☐ O AM O PM
End Time: ☐☐:☐☐ O AM O PM

Other Visit/Interview Date: ☐☐/☐☐/☐☐ Month Day Year

Start Time: ☐☐:☐☐ O AM O PM
End Time: ☐☐:☐☐ O AM O PM

Comments: _____

_____

Nutrition Environment Measures Survey (NEMS)
Cover Page

8250013302

Nutrition Environment Measures Survey (NEMS)
RESTAURANT MEASURES–DATA COLLECTION

Restaurant ID: ☐☐ - ☐ - ☐☐ - ☐☐☐ Date: ☐☐/☐☐/☐☐ (Month / Day / Year)

Rater ID: ☐☐

1) Type of Restaurant: Code # ☐☐

2) Data Sources: Site Visit/Observation O yes O no | Take-Away Menu O yes O no | Internet O yes O no | Interview O yes O no

3) Site Visit Information:

- Take-away Menu O yes O no
- Nutrition Information O yes O no
- Other: O yes O no
- Other: O yes O no

Comments: _____

4) Take-Away Menu Features:

- Nutrition Information O yes O no
- Identification of healthier menu items O yes O no
- Other: O yes O no
- Other: O yes O no

Comments: _____

5) Internet Site Features:

- Menu O yes O no
- Nutrition Information O yes O no
- Identification of healthier menu items O yes O no
- Other: O yes O no

Web site URL _____

Comments: _____

6) Interview Information:

- Menu options O yes O no
- Pricing O yes O no
- Other: O yes O no

Comments (describe items above) _____

7) Hours of operation: Data Source(s): O Site O Menu O Web

Sunday O Open O Closed	Thursday O Open O Closed	Friday O Open O Closed	Saturday O Open O Closed
O B: 6:00 - 11:00am	O B: 6:00 - 11:00am	O B: 6:00 - 11:00am	O B: 6:00 - 11:00am
O L: 11:00 am - 3:00 pm	O L: 11:00 am - 3:00 pm	O L: 11:00 am - 3:00 pm	O L: 11:00 am - 3:00 pm
O D: 5:00 pm to Close	O D: 5:00 pm to Close	O D: 5:00 pm to Close	O D: 5:00 pm to Close
☐☐:☐☐ O AM O PM	☐☐:☐☐ O AM O PM	☐☐:☐☐ O AM O PM	☐☐:☐☐ O AM O PM

O Open 24 Hours (If 24-hr, leave *Hours of Operation section* blank)

8) Access: Drive-thru window O yes O no | Parking onsite O yes O no

Comments: _____

9) Size of Restaurant: O Seating capacity = ☐☐☐ OR O Number of tables = ☐☐☐

Comments: _____

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Nutrition Environment Measures Survey (NEMS)
RESTAURANT MEASURES–DATA COLLECTION

Restaurant ID: ☐☐ - ☐ - ☐☐ - ☐☐☐ Date: ☐☐/ ☐☐/☐☐ (Month / Day / Year)

Rater ID: ☐☐

Site visit (Observation)	Select One	Comments
10) Restaurant has a salad bar	O yes O no	
11) Signage/Promotions a. Is nutrition information posted near point-of-purchase, or available in a brochure?	O yes O no	
b. Do signs/table tents/displays highlight healthy menu options?	O yes O no	
c. Do signs/table tents/displays encourage **healthy** eating?	O yes O no	
d. Do signs/table tents/displays encourage unhealthy eating?	O yes O no	
e. Do signs/table tents/displays encourage overeating (all-you-can-eat, super-size, jumbo, grande, supreme, king size, feast descriptors on menu or signage)?	O yes O no	
f. Does this restaurant have a low-carb promotion?	O yes O no	
g. Other? _____	O yes O no	
Menu Review/Site visit		
12) a. Chips	O yes O no	
b. Baked chips	O yes O no	
13) a. Bread	O yes O no	
b. 100% wheat or whole grain bread	O yes O no	
14) 100% fruit juice	O yes O no	
15) 1% Low-fat, skim, or non-fat milk	O yes O no	

Nutrition Environment Measures Survey (NEMS)
RESTAURANT MEASURES–DATA COLLECTION

Restaurant ID: ☐☐ - ☐ - ☐☐ - ☐☐☐ Date: ☐☐/ ☐☐/☐☐ (Month / Day / Year)

Rater ID: ☐☐

Menu Review/Site Visit

22) Facilitators & Supports	Select One	Comments
a. Nutrition information on menu (paper or posted menu)	O yes O no	
b. Healthy entrees identified on menu	O yes O no	
c. Reduced-size portions offered on menu	O yes O no O standard	
d. Menu notations that encourage healthy requests	O yes O no	
e. Other? _____	O yes O no	

23) Barriers		
a. Large portion sizes encouraged? Super-size items on menu	O yes O no	
b. Menu notations that discourage special requests (e.g., *No substitutions* or charge for substitutions)	O yes O no	

Nutrition Environment Measures Survey (NEMS)
RESTAURANT MEASURES–DATA COLLECTION

Restaurant ID ☐☐-☐-☐☐-☐☐☐ Date: ☐☐/☐☐/☐☐ (Month/Day/Year)

Rater ID: ☐☐

23) Barriers (Cont.)	Select One	Comments
c. All-you-can-eat or "unlimited trips"	O yes O no	
d. Other? _____	O yes O no	

24) Pricing

a. Sum of individual items compared to combo meal	O more O less O same O NA	
b. Healthy entrees compared to regular ones	O more O less O same O NA	
c. Charge for shared entree?	O yes O no	
d. Smaller portion compared to regular portion (if 22c is No or Standard then mark N/A)	O more O less O same O NA	
e. Other? _____	O more O less O same O NA	

Nutrition Environment Measures Survey (NEMS)
RESTAURANT MEASURES–DATA COLLECTION

Restaurant ID: ☐☐ - ☐ - ☐☐ - ☐☐☐ Date: ☐☐/☐☐/☐☐ (Month/Day/Year)

Rater ID: ☐☐

Menu Review	Select One				Comments
25) **Kid's menu?**	O yes	O no			
a. Age limit	O 10 and Under	O 12 and under	O Other	O NA	
b. Any healthy entrees?	O yes	O no	O NA		
c. 100% fruit juice	O yes	O no	O NA		
d. 1% low-fat, skim or non-fat milk	O yes	O no	O NA		
e. Are there free refills on unhealthy drinks?	O yes	O no	O NA		
f. Are there any healthy side items (either assigned or to choose)?	O yes	O no	O NA		
g. Can you substitute a healthy side for an assigned unhealthy one?	O yes	O no	O NA		
h. Do any entrees that have assigned sides include an assigned healthy side?	O yes	O no	O NA		
i. Is an unhealthy dessert automatically included in a kid's meal?	O yes	O no	O NA		
j. Are there any healthy desserts (either free or at additional cost)?	O yes	O no	O NA		
k. Is nutrition information (e.g., calories or fat) provided on the kid's menu?	O yes	O no	O NA		
l. Other unhealthful eating promotion?	O yes	O no	O NA		
m. Other healthful eating promotion?	O yes	O no	O NA		

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APPENDIX P:

SCORING SHEETS FOR NEMS-RESTAURANT AND NEMS-STORE

NEMS- R Scoring Sheet

NEMS Scoring Sheet for Restaurants

Restaurant:

Sources of Information		
Measure	**Points Allotted**	**Total Points**
Site Visit: Nutrition Information	Yes = 3 points	
Menu (take away or in-house): Nutrition information on menu	Yes = 3 points	
Menu(take away or in-house): ID of healthier menu items	Yes = 2 points	
Internet: Nutrition information	Yes = 2 points	
Internet: ID of healthier menu items	Yes = 2 points	
Site Visit (Observation)	**Subtotal=**	
Salad Bar	No points	
Nutrition information at P-O-P	Yes = 3 points	
Signs/banners show healthy menu options	Yes = 3 points	
Signs encourage healthy eating	Yes = 3 points	
Signs encourage unhealthy eating	Yes = -3 points	
Signs/banners encourage overeating	Yes = -3 points	
Low carb promotion	Yes = -3 points	
Menu Review/Site Visit	**Subtotal=**	
Baked chips	Yes = 3 points	
Whole Grain bread	Yes = 3 points	
100 % fruit juice	Yes = 3 points	
1% low-fat, skim or non-fat milk	Yes = 3 points	
Menu Review	**Subtotal=**	
Main dishes/entrees: Healthy Options	1 choice = 1 point 2-4 choices = 2 points 5+ choices = 3 points	
Main dish salads: Healthy Options	1 choice = 1 point 2-4 choices = 2 points 5+ choices = 3 points	
Low-fat or fat free salad dressings	1 choice = 1 point 2 choices = 2 points 3+ choices = 3 points	
Fruit w/o added sugar	Yes = 3 points	
Non-fried side of vegetables	Yes = 3 points	
Diet soda	Yes = 3 points	
Facilitators & Supports (Menu Review)	**Subtotal=**	
Nutrition information on menu **Or** Healthy entrée identified on menu	Yes = 3 points	
Reduced-size portions offered on menu	Yes = 3 points	
Menu notations that encourage healthy requests	Yes = 3 points	
Barriers (Menu Review)	**Subtotal=**	
Super-sizing, large sizes encouraged	Yes = -3 points	
Menus discourages special requests	Yes = -3 points	
All-you can eat or unlimited trips	Yes = -3 points	
Pricing	**Subtotal=**	
Combo meal cheaper than individual items (sum = "more")	Yes = -3 points	
Healthy entrees cost more than regular ones	Yes = -3 points	
Charge for shared entrée	Yes = -3 points	
Smaller portion at reduced $$	Yes = 3 points	
	Subtotal=	
	Total NEMS Restaurant Score=	

NEMS-S Scoring Sheet

NEMS Scoring Sheet for Stores

Store:

Item	Availability of Healthier Item	Avail Total Points	Price	Price Total Points	Quality	Quality Total Points
Milk	YES low-fat/skim = 2 pts Proportion (lowest-fat to whole) ≥ 50% = 1 pt		Lower for lowest-fat = 2 pts Same for both = 1 pt Higher for low-fat = -1 pt			
Fruits	0 varieties = 0 pts < 5 varieties = 1 pt 5-9 varieties = 2 pts 10 varieties = 3 pts				25-49% acceptable = 1 pt 50-74% acceptable = 2 pts 75%+ acceptable = 3 pts	
Vegetables	0 varieties = 0 pts < 5 varieties = 1 pt 5-9 varieties = 2 pts 10 varieties = 3 pts				25-49% acceptable = 1 pt 50-74% acceptable = 2 pts 75%+ acceptable = 3 pts	
Ground Beef	YES lean meat = 2 pts 2-3 varieties ≤ 10% fat = 1 pt > 3 varieties ≤ 10% fat = 2 pts		Lower for lean meat = 2 pts Higher for lean meat = -1 pt			
Hot dogs	YES fat-free = 2 pts Light, not fat-free = 1pt		Lower for fat-free or light = 2 pts Higher for fat-free or light = -1 pt			
Frozen dinners	YES all 3 reduced-fat types = 3 pts YES 1 or 2 reduced-fat types = 2 pts		*Lower for reduced-fat = 2 pts Higher for reduced-fat = -1 pt			
Baked goods	YES low-fat items = 2 pts		Lower for low-fat (per piece) = 2 pts Higher for low-fat (per piece) = -1 pt			
Beverages	YES diet soda = 1 pt YES 100% juice = 1 pt		Lower for diet soda = 2 pts Higher for 100% juice = -1 pt			
Bread	YES whole grain bread = 2 pts >2 varieties whole wheat bread = 1 pt		Lower for whole wheat = 2 pts Higher for whole wheat = -1 pt			
Baked chips	YES baked chips = 2 pts > 2 varieties baked chips = 1 pt		**Lower for baked chips = 2 pts Higher for baked chips = -1 pt			
Cereal	YES healthier cereal = 2 pts		**Lower for healthier cereal = 2 pts Higher for healthier cereal=-1 pt			
	Availability Subtotal=		Price Subtotal=		Quality Subtotal=	
					Total NEMS Store Score =	

Ranges- Availability Subtotal: 0 to 30 **Price Subtotal:** -9 to 18 **Quality Subtotal:** 0 to 6
TOTAL NEMS SCORE RANGE: -9 to 54

* Based on majority of frozen food items
**Per box or bag, not price per ounce

APPENDIX Q:

SCHOOL PHYSICAL ACTIVITY POLICY ASSESSMENT (S-PAPA)

School Physical Activity Policy Assessment (S-PAPA)

Monica A. F. Lounsbery, Ph.D.[1]
Thomas L. McKenzie, Ph.D.[2]
James R. Morrow, Ph.D.[3]
Kathryn A. Holt, B.S.[1]

[1]University of Nevada, Las Vegas, Las Vegas, NV
[2] San Diego State University, San Diego, CA
[3] University of North Texas, Denton, TX

Background
The School Physical Activity Policy Assessment (S-PAPA) assesses physical activity policy related to physical education, recess, and other physical activity opportunities at elementary schools. It uses open-ended, dichotomous, multichotomous, and checklist formatting and has 7 background items and three modules: (a) Physical Education (40 items); (b) Recess (27 items), and (c) Other Before, During, and After School Programs (15 items). Test-retest results suggest SPAPA items are reliable and can be useful in assessing PA policies in elementary schools (Lounsbery et al., 2011). Total administration time for all three modules is approximately 23 minutes.

Acknowledgements
The development of S-PAPA was supported by a grant (#67113) from Active Living Research, a national program of the Robert Wood Johnson Foundation.

Lounsbery, M. A. F., McKenzie, T. L. Morrow, J. R., Holt, K. A. & Budnar, R.G. (2011). *School Physical Activity Policy Assessment (SPAPA): Test-Retest Reliabilities.* Manuscript submitted for publication, April 15.

For more information about S-PAPA, email monica.lounsbery@unlv.edu.

SCHOOL PHYSICAL ACTIVITY POLICY ASSESSMENT

Thank you for taking the time to complete this survey.

Would you like to receive the results of this study when they become available? ☐**Yes** ☐**No**

DATE OF COMPLETION: _____

RESPONDENT'S NAME: _____

GENDER: ☐female ☐male

PHONE NUMBER: _____

SCHOOL NAME: _____

ADDRESS : _____

_____

DISTRICT: _____

EMAIL: _____

***IMPORTANT* - Please Read - This instrument is meant to be an inventory of your school environment. If you do not know the answer to a question, please seek administrative or other appropriate advice to ensure complete and accurate information.**

If you have any questions, please contact:

SECTION A. BACKGROUND AND GENERAL QUESTIONS

1. What is your current position at this school? (check one)

☐1. Principal ☐2. Assistant Principal
☐3. Physical education specialist ☐4. Classroom teacher
☐5. Project Coordinator (name program) _____ ☐6. Other (please specify) _____

2. How long have you worked in **THIS** position at this school? _____years

3. What grade levels are taught at this school? (Check all that apply.)

☐K ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8

4. What grade levels receive physical education at this school? (Check all that apply.)

☐K ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8

5. How many students are enrolled in your school? _____students

6. What percentage of students is eligible for free or reduced school meals in your school? _____% of students

7. This question asks about facilities available for physical activity at your school. Please place an 'X' in the appropriate spaces to identify if the following facilities are typically available for physical education and for before and after school physical activity programs at your school. (Check all that apply.)

	Physical Education	Before School	After School
a. Gymnasium	☐	☐	☐
b. Multipurpose Room/Cafeteria	☐	☐	☐
c. Blacktop Area	☐	☐	☐
d. Grassy Field (Football/Soccer)	☐	☐	☐
e. Playground	☐	☐	☐
f. Regular classroom for indoor physical education	☐	☐	☐
g. Trailers or mobile building for indoor physical education	☐	☐	☐

MODULE 1. PHYSICAL EDUCATION

Formal Physical Education Policies

	Yes	No	Don't Know
8. Does your **school district** have a written policy that requires schools to follow specific physical education standards or guidelines? (e.g., NASPE)	☐	☐	☐
9. Does your **school** have a written policy that requires your school's physical education program to follow specific physical education standards or guidelines? (e.g., NASPE)	☐	☐	☐
10. Does your **school district** have a written policy that requires a specific number of minutes per week or a specific number of days per week that students will have physical education?	☐	☐	☐

	Yes	No	Don't Know
11. Does your **school** have a written policy that requires a specific number of minutes per week or a specific number of days per week that students will have physical education?	☐	☐	☐
12. Does your **school district** have a written policy that specifies the maximum student-to-teacher ratio for physical education? If **Yes**, what is the ratio? ____Students : __1__Teacher	☐	☐	☐
13. Does your **school** have a written policy that specifies the maximum student-to-teacher ratio for physical education? If **Yes**, what is the ratio? ____Students : __1__Teacher	☐	☐	☐
14. Does your **school district** have a written policy that requires elementary school physical education programs to test students' fitness levels? If **Yes**, what fitness test do you use? ☐ Local/District test ☐ President's Challenge ☐ FITNESSGRAM ☐ Other _____	☐	☐	☐
15. Does your **school** have a written policy that requires your physical education program to test students' fitness levels? If **Yes**, what fitness test do you use? ☐ Local/District test ☐ President's Challenge ☐ FITNESSGRAM ☐ Other _____	☐	☐	☐
16. Does your **school district** have a written policy that teachers must assign student grades for physical education? If **Yes**, are grades assigned by: ☐ Percentages ☐ Letters (A, B, C, etc.) ☐ Pass/Fail or Satisfactory/Unsatisfactory ☐ Other _____	☐	☐	☐
17. Does your **school** have a written policy that teachers must assign student grades for physical education? If **Yes**, are grades assigned by: ☐ Percentages ☐ Letters (A, B, C, etc.) ☐ Pass/Fail or Satisfactory/Unsatisfactory ☐ Other _____	☐	☐	☐

18. Is the grading policy for physical education the same as it is for other core subject areas? ☐ ☐ ☐

19. Excluding teacher evaluations, does your **school district** have a written policy that requires your **physical education program** to be evaluated annually? ☐ ☐ ☐

20. Excluding teacher evaluations, does your **school** have a written policy that requires the **physical education program** to be evaluated annually? ☐ ☐ ☐

General Profile of School Physical Education

21. How many physical education classes **per week** do students receive? (Provide the average)
_____ classes per week

22. How many total minutes **per week** of physical education do students receive? (Provide the average)
_____ minutes per week

23. What is the typical number of students in a physical education class at your school? (Provide the average class size) -
_____ students

24. What percentage of the physical education program is taught by: **(Must add up to 100%)**

_____% Certified Physical Education Teachers
_____% Classroom Teachers
_____% Instructional Aides
_____% Other (Please specify _____)
100 %

Professional Staff Development

	Yes	No	Don't Know
25. Are physical education teachers required to attend staff development sessions at least once per year?	☐	☐	☐

26. How many hours of staff development do physical education teachers participate in yearly that are specifically dedicated for physical education? (Provide the average)
_____ hours per year

27. Of those staff development sessions specifically allocated to physical education (see time indicated in question 26, what proportion of the time focuses **SPECIFICALLY** on the promotion of physical activity for students?

☐ 0%-25%
☐ 25%-50%
☐ 50%-75%
☐ 75%-100%

	Yes	No	Don't Know
28. Does your school or school district provide financial support for physical education teacher's professional development?	☐	☐	☐

If Yes, which of the following expenses are covered? (Check all that apply)

- ☐ Registration for conferences
- ☐ Travel to conferences
- ☐ CEU registration
- ☐ Other _____

Physical Education Content, Curriculum, and Delivery

29. Are those who teach physical education provided with:

	No	Partially	Yes
a. Goals, objectives, and expected outcomes for their classes?	☐	☐	☐
b. A physical education curriculum?	☐	☐	☐
c. A chart describing the scope and sequence of instruction?	☐	☐	☐
d. Specific lesson plans or learning activities?	☐	☐	☐
e. Plans on how to assess or evaluate students?	☐	☐	☐

	Yes	No	Don't Know
30. Are those who teach physical education required to use a specific curriculum? (e.g., SPARK, CATCH)	☐	☐	☐

31. In general, how frequently does physical education address each of the following categories?

	Rarely	Sometimes	Often
a. Physical/motor skill development	☐	☐	☐
b. Understanding movement concepts, principles, strategies, and tactics	☐	☐	☐
c. Expressive movement patterns (e.g., dance, creativity)	☐	☐	☐
d. Promoting active participation in physical activity	☐	☐	☐
e. Physical fitness development	☐	☐	☐
f. Responsible personal and social behavior development	☐	☐	☐
g. Valuing physical activity for health benefits beyond physical education	☐	☐	☐

	Rarely	Sometimes	Often
32. During physical education, how often are students required to do extra physical activity for disciplinary reasons (e.g., run laps for being late; do push-ups for off task or bad behavior)?	☐	☐	☐
33. How often do classroom teachers/counselors withhold individual students from physical education to fulfill other academic requirements?	☐	☐	☐
34. How often do classroom teachers withhold individual students from physical education for disciplinary reasons?	☐	☐	☐
35. How often is the delivery of physical education compromised because of competing demands for physical education space (e.g., for pictures, assemblies)?	☐	☐	☐

36. How many days during a semester are physical education classes cancelled (e.g., for inclement weather, gym not available, assemblies, etc.)? (Provide the average.)
_____days/semester

	Yes	No	Don't Know
37. During inclement weather, is there a space for students to be physically active during physical education class time?	☐	☐	☐

	Similar	Smaller	Larger
38. Relative to other subject matter areas, the number of students in physical education class is typically:	☐	☐	☐

39. Describe how the **physical education program** is evaluated. (Do not include teacher evaluations)

40. What is the student-to-licensed teacher ratio in physical education class (not including teacher aides)?
____Students : 1 Licensed Teacher

Physical Education Time Relative to Physical Activity.

41. What is the **scheduled** length of a typical physical education class period?
_____ **scheduled** minutes

42. Considering that scheduled time may be lost due to students' late arrival, how many **actual** minutes are students in the physical education setting? (Provide the average.)
_____ **actual** minutes

43. Items 43a and 43b ask about the average actual minutes reported in Item 42. The sum of minutes for these items should equal the number of minutes reported in item 42.

a. During a typical physical education class, think about how long **most** students are physically inactive such as while receiving instructions or waiting for a turn. Estimate the number of total minutes students are typically **lying down, sitting, or standing**. _____ minutes per class (Provide the average)

b. During a typical physical education class, think about how long **most** students are physically active **at least** to the level of a moderately paced walk. Estimate the number of total minutes students are engaged in **moderate to vigorous** physical activity. _____ minutes per class (Provide the average)

Exemptions

44. Does your school permit students to be exempt from physical education for **one grading period or longer** for the following reasons? (Check all that apply.)

- ☐ No exemptions are permitted
- ☐ Religious reasons
- ☐ Long-term physical or medical disability
- ☐ Cognitive disability
- ☐ Behavioral disorder
- ☐ Participation in community sports activities

Physical Education Teacher Duties

45. In addition to teaching classes, what additional duties are unique to the physical education teacher? (These are duties required of the physical education teacher that other teachers do not do.) (Check all that apply.)

- ☐ None
- ☐ Bus duty
- ☐ Recess duty
- ☐ Lunch duty
- ☐ Playground duty before & after school
- ☐ Maintain facilities
- ☐ Other _____

Budget

	Yes	No	Don't Know
46. Does your school have a budget allocation for physical education equipment and supplies?	☐	☐	☐

If **Yes**, on average how much does the school spend on physical education equipment per year? $_____

	Not Involved	Somewhat Involved	Great Deal Involved
47. How involved is the physical education teacher with budget decisions related to physical education?	☐	☐	☐

End. Thank You

MODULE 2. RECESS

Formal Recess Policies

		Yes	No	Don't Know
1.	Does your **school district** have a written policy that specifies the number of recess minutes per day students should receive? If **Yes**, how many minutes per day? _____ minutes	☐	☐	☐
2.	Does your **school** have a written policy that specifies the number of recess minutes per day students should receive? If **Yes**, how many minutes per day? _____ minutes	☐	☐	☐
3.	Does your **school district** have a written policy requiring that students be provided with organized activities during recess?	☐	☐	☐
4.	Does your **school** have a written policy requiring that students be provided with organized activities during recess?	☐	☐	☐
5.	Does your **school district** have a written policy requiring recess supervisors to receive formalized training on playground supervision?	☐	☐	☐
6.	Does your **school** have a written policy requiring recess supervisors to receive formalized training on playground supervision?	☐	☐	☐
7.	Does your **school district** have a written policy that specifies a maximum student-to-supervisor ratio during recess? If **Yes**, what is the ratio? _____Students : __1__Supervisor	☐	☐	☐
8.	Does your **school** have a written policy that specifies a maximum student-to-supervisor ratio during recess? If **Yes**, what is the ratio? _____Students : __1__Supervisor	☐	☐	☐
9.	Does your **school district** have a written policy requiring regular maintenance of playground facilities and equipment?	☐	☐	☐
10.	Does your **school** have a written policy requiring regular maintenance of playground facilities and equipment?	☐	☐	☐

General School Profile of Recess

		Yes	No	Don't Know
11.	Does your school provide all students with scheduled recess daily?	☐	☐	☐

12. **Not including lunch time recess**, on average how many recess **sessions** per day do individual students receive?
Primary Grades K-2 _____**sessions**
Intermediate Grades 3-5 _____**sessions**

13. On average, how many total minutes per day does a student receive recess? (Do not include time for lunch when students are eating and are not physically active)

- ☐ Less than 15 minutes of recess per day
- ☐ 15 to 20 minutes of recess per day
- ☐ Over 21 minutes per day

	Rarely	Sometimes	Very Often
14. How often do classroom teachers/counselors keep individual students from recess to fulfill academic requirements?	☐	☐	☐

Recess Supervision

15. What is the student-to-supervisor ratio during recess? _____Students : __1__Supervisor

	Yes	No	Don't Know
16. Do recess supervisors regularly provide organized activities during recess? (e.g., walking or running programs)	☐	☐	☐
17. Are recess supervisors asked to encourage students to be physically active during recess?	☐	☐	☐
18. Are rules for how to behave at recess posted for students and adults to see?	☐	☐	☐
19. Are recess rules taught to the students?	☐	☐	☐

If <u>Yes</u>, who teaches the rules to students? (Check all that apply.)

- ☐ Classroom teacher
- ☐ Physical education teacher
- ☐ Other specialist
- ☐ Administration
- ☐ Other_____

Supervisor Training/Credentialing

20. Who supervises recess at your school? (Check all that apply.)

- ☐ Classroom Teachers
- ☐ Physical Education Teacher(s)
- ☐ Administrators
- ☐ Paraprofessionals
- ☐ Hourly Wage Employees
- ☐ Volunteers

	Yes	No	Don't Know
21. Are recess supervisors required to receive formalized training on playground supervision?	☐	☐	☐

Recess Access

	Yes	No	Don't Know
22. During favorable weather conditions, are students allowed to stay indoors during recess?	☐	☐	☐
23. During inclement weather, can students be physically active during recess?	☐	☐	☐
24. Are teachers permitted to withhold scheduled recess from students for academic reasons?	☐	☐	☐
25. Are teachers permitted to withhold recess from students for disciplinary reasons?	☐	☐	☐

Recess Equipment

	Yes	No	Don't Know
26. Is there a separate annual equipment budget for recess equipment and supplies?	☐	☐	☐

If **Yes**, how much? $_____ per year

27. Is loose equipment (e.g., balls, jump ropes) available for children to play with during recess?	☐	☐	☐

If **Yes**, who provides it? (Check all that apply)

- ☐ Individual Classroom Teachers
- ☐ Physical Education Teacher
- ☐ Central Office
- ☐ Recess Supervisors
- ☐ Individual Students
- ☐ Other_____

End. Thank You.

MODULE 3. BEFORE, DURING, AND AFTER SCHOOL PHYSICAL ACTIVITY PROGRAMS

Formal Before, During, and After School Policies

		Yes	No	Don't Know
1.	Does your **school district** have a written policy that encourages students to walk or bike to school?	☐	☐	☐
2.	Does your **school** have a written policy that encourages students to walk or bike to school?	☐	☐	☐
3.	Does your **school district** have a written policy that requires all school personnel to receive professional development on the promotion of physical activity?	☐	☐	☐
4.	Does your **school** have a written policy that requires all school personnel to receive professional development on the promotion of physical activity?	☐	☐	☐

Profile of Before, During, and After School Programs

NOTES: **Intramurals** refer to organized sport competitions that are offered only to students who are enrolled in your school. **Interscholastic** sports refer to organized sport competitions in which your school competes against another school.

5. Please identify whether or not: (a) your school provides specific physical activity programs, (b) if a separate fee is required of students to participate in them, and (c) whether your school provides special transportation for these programs. In making your decisions, include school sponsored programs only. **Do not include programs that are provided by outside agencies.**

PROGRAM		OFFERED		FEE REQUIRED		TRANSPORTATION PROVIDED	
a.	Intramural Sports	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
b.	Interscholastic Sports	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
c.	Physical Activity Clubs (e.g., running, dance)	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
d.	Special Activity Events (e.g., field days, Jump Rope for Heart)	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No

6. If your school sponsors interscholastic sports, who may participate? (Choose one.)

☐ School has no interscholastic sports
☐ All students, without restriction
☐ Selected students only (restrictions by number, skill level or grade level); if so why? _____
☐ Other _____

7. In addition to physical education classes and recess periods, do classroom teachers provide regular physical activity breaks during the school day? (e.g., "Take 10" program)

- ☐ Yes, School Wide
- ☐ Yes, Individual Teachers
- ☐ No
- ☐ Don't Know

If Yes, check which grade levels provide regular physical activity breaks? (Check all that apply.)

- ☐ K-2
- ☐ 3-5

Transport to School

	Yes	No	Don't Know
8. Does your school encourage walking or bicycling to school?	☐	☐	☐
9. Are there bike racks or safe places for students to store bikes or other equipment related to active commuting to school?	☐	☐	☐
10. Are crossing guards available for students who actively commute to school?	☐	☐	☐

Integration of Physical Activity into Academic Curriculum

	Yes	No	Don't Know
11. Does your school encourage classroom teachers to promote physical activity with their students?	☐	☐	☐
12. Does your school recruit volunteers to help in physical education, recess, or before and after school physical activity programs?	☐	☐	☐
13. Does your school have a written wellness policy that addresses physical activity?	☐	☐	☐

If Yes, how well is the school wellness policy followed by your school?

- ☐ Not Followed
- ☐ Somewhat Followed
- ☐ Mostly Followed

	Yes	No	Don't Know
14. Does your school have a wellness coordinator?	☐	☐	☐

	Yes	No	Don't Know
15. Are the opportunities for students to participate in your school's physical activity programs communicated to parents/guardians?	☐	☐	☐

If Yes, check all communication methods used.

- ☐ Materials distributed to families
- ☐ Available on school/district website
- ☐ Student handbook
- ☐ Student orientation
- ☐ Open House
- ☐ Newsletters
- ☐ Automated phone calls
- ☐ Electronic means (e.g., e-mail)
- ☐ Other _____

End. Thank You.

APPENDIX R:

THE SUN SENTINAL NEWSPAPER ARTICLE OF THE FINDINGS FROM THE NEEDS ASSESSMENT

This article was written for the local newspaper, The Sun Sentinel, in order to share the findings of the needs assessment with the community. The article was published in The Sun Sentinel in November of 2012.

Findings of the Community Health Needs Assessment

A health needs assessment was recently conducted in Charleston. Through the assessment, community needs, strengths, assets, weaknesses, existing resources, needed resources, priority health issues, social concerns and environmental concerns were identified. The nutrition environment, food availability, the built environment and policies influencing health were also assessed. Information obtained in the needs assessment came from residents who participated in one the eight focus groups (67 participants), individuals who participated in the key informant interviews (11 interviewees), the assessment of the built environment and the assessment of the nutrition environment. The findings illustrate health, social, policy and environmental concerns, needs and service gaps and will be used to inform future planning and development of programs to improve health and quality of life in Charleston. The findings will also be used to obtain funding to implement programs, policies, and environmental changes to improve the health and wellness of the community.

The identified priority health concerns include: obesity, diabetes, high blood pressure, asthma, stroke, cancer, teen pregnancy, stress, depression, prescription non-compliance, heart disease, no insurance, access to care, access to healthy foods, poverty, and lack of health and nutrition knowledge. The greatest social concerns identified were high school drop out rate, teen pregnancy, poverty, domestic violence, poor housing, lack of low-income housing, alcohol abuse, drugs, smoking, bullying, no jobs, lack of education, illiteracy, no recreation and nothing to do. Environmental concerns include the chemicals in the environment from farming, smoking (lack of citywide smoke-free air ordinance), the water supply system and the lack of recycling available in the community.

The assessment of the nutrition environment showed that residents have limited options available when it comes to purchasing and having access to fresh, affordable, quality produce and healthy food options. There are a limited number of restaurants in town with a limited number of healthy options available at those restaurants. There is not a farmers market. There is

one grocery store, a WIC food distribution center and one food pantry. There is a need to increase the availability of healthy food options for the residents.

The assessment of the built environment showed that the majority of streets do not have sidewalks and for those that do, most of the sidewalks are in poor condition with little connectivity to surrounding areas. Most street segments do have public lighting and stop signs; children at play signs were also common. In most places, there are no cross walks and where there are cross walks, the cross walks are faded and in poor condition. There is a need for crosswalks and more signage for pedestrian and bicycle safety. There is a need for the community to adopt a complete streets policy to increase the safety of people walking and biking and to increase things such as, the number of sidewalks, signage and bike lanes. In terms of recreation, there are two youth leagues for baseball and football, as well as a church that sponsors Upward basketball in the winter. The middle and high schools offer sports for students to play. Outside of the schools and churches, a small private gym, CARE's group fitness room, one park and one set of ball fields, there is nothing available to residents for recreation and exercise. There is not a nice big park, a public gym or community recreation center. There is a great need for a community recreation, exercise and wellness center. There is also a need for outdoor recreation such as a park, walking trails, bike lanes, and more sidewalks.

The assessment of policies influencing health revealed that there is not a citywide smoke-free clean air ordinance, there are no formal joint-use agreements between the community and the schools, or the community and local churches to share use of facilities, there is not a complete streets policy in place, there is not a housing policy or design policy and there are no zoning regulations. It would be good for the city to consider a smoke-free air ordinance, complete streets policy, and formal joint-use agreements.

Assets, resources and organizations in the community contributing to health and wellness include: The medical facilities (Tallahatchie General Hospital, Rural Health Clinic, Health Department, Region One Mental Health Center, and Wolfe Family Clinic), Diabetic Shoppe, SonEdna Foundation, Rotary Club, Charleston Day Club, Lions Club, CARE, CARE closet, Sun-Sentinel News Paper, community garden, Magnolia Garden Club, local churches, Tallahatchie Youth League, Robert Hill Youth League, the library, Boy Scouts, Boys and Girls Club, Tallahatchie County Health Council, Adolescent Opportunity Program, day cares, School

Health/ Wellness Council, East Tallahatchie School District, Extension Services, chronic disease self-management class and the sex-education curriculum for 6-9th graders.

Overall, the needs identified in order to improve health and wellness in the community include the need for: a community recreation, exercise and wellness facility, worksite (employee) wellness (health) programs, community wellness programs, health education, health seminars, sex-education, efforts to reduce domestic violence, community classes, reading classes, after school programs (programs to increase high school graduation rate, reduce teen pregnancy, improve mental health of students), community walking groups, group fitness classes, gathering place, place to socialize, farmers market, park, more sidewalks, repair existing sidewalks, outdoor recreation facilities, swimming pool, walking path, increased opportunity for jobs, recycling and policy changes.

The findings of the needs assessment will be used to write grants and obtain funding to address the identified health, social and environmental concerns. We are also establishing a community-university partnership among the University of Mississippi, Tallahatchie General Hospital and CARE. The hope is that using the findings of the needs assessment and through this partnership and collaboration of existing community organizations the health, wellness and quality of life in the community will be improved. If you have any questions about the assessment or would like to provide comments and insight, please contact Catherine Woodyard via phone: (501) 276-5459 or email: catherinedane84@gmail.com. Brochures are available for free at the CARE building that document the findings of the assessment, as well. Pease feel free to pick one up.

APPENDIX S:

POSSIBLE FUTURE EFFORTS TO IMPROVE HEALTH AND WELLNESS

Charleston, MS

Possible Future Efforts to Address Identified Needs and Community Concerns

Health Education

- There is a great need for health education
- Conduct various Health Seminars
    - Diabetes Education, Nutrition Education, Exercise, Disease Prevention, Health Promotion, Stress, Healthy Cooking, General Wellness, Weight Management, Lifestyle Change, Smoking Cessation, Prenatal Care, Health Behavior Change
- Display healthy messages- Mass Media Campaign
- Encourage personal ownership of and responsibility for health

Increase resources for exercise, recreation, and socialization

- Community Recreation and Wellness Center/ Education Center
- Nice park with basketball goals, picnic tables, playground, grills, public lighting, central place to gather and socialize
- Walking Trails, Bike Lanes
- Repair sidewalks and improve walkability of the environment
- Complete Streets Policy
- Group fitness classes, community walking groups
- Joint-Use Agreements

Develop a Community-University Partnership

- Identify potential faculty/ residents to serve on the board
- Potential for service-learning projects
- Write grants and identify funding source for potential programs and needed resources
- Numerous departments within the University could be involved with efforts to improve health and well-being in Charleston

Increase Healthy Food Options:

- Convenient and Dollar Stores increase healthy options/ sell produce
- Farmers market
- Build cafeteria at the Hospital

Potential Programs and Activities:

- Worksite Health Promotion Programs/ Wellness Programs
- Excel by Five
- Peer Mentoring Program
- Apprenticeship Programs
- Reading classes/ community classes
- Allied Health Program at the High School
- Show movies and documentaries to community
- Increase health programming in the schools
- Communitywide Wellness Competitions
- GOALS Program
- Program to improve prenatal care
- Activities, programs and social events for adults and youth
- Communitywide Wellness Assessments – Health Fairs
- Programs and efforts to address domestic and sexual violence
- Programs to provide education about money management (budgeting)

Involve Churches

- Educate Pastors on Health Education
- Infuse health education into Bible classes/ Sunday School classes
- Congregational Nurses
- Youth Programs in churches

Additional doctors, nurse practitioners, and social workers are needed

Implementation of a citywide smoke-free air ordinance

Start recycling

Create new business, Small Business Development Center

Involve community leaders and businesses

Weekly health column in the Sun-Sentinel

VITA

Catherine Dane Woodyard

EDUCATION

2007 Bachelor of Science — The University of Mississippi
School of Applied Sciences
Major: Exercise Science
Cum Laude

2009 Master of Science — The University of Mississippi
School of Applied Sciences
Major Area: Health Promotion
Thesis: Celebration Drinking and the Self-fulfilling Prophecy of Alcohol Misperceptions: Implications for the University of Mississippi

EMPLOYMENT RECORD

Academic Appointments

August 2008 – Present — Graduate Research Assistant and Instructor
University of Mississippi
Health, Exercise Science and Recreation Management
Duties:
Assist faculty on various research projects
Teach various undergraduate courses (100% responsibility for course delivery)
Teaching Assistant for Master and Doctoral level courses

COURSE RECORD
Courses taught at the University of Mississippi
Instructor of Record:

- HP 191 Personal and Community Health
  - Fall 2008, Spring 2009, Summer 2010, Summer 2011, August Intersession 2012
- HP 203 First Aid and CPR
  - Winter Intersession 2011
- ES 440 Behavioral Aspects of Exercise Science

- Fall 2009, Spring 2010, Summer 2010, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012

Teaching Assistant:

- ES 620 Master's Level Introductory Statistics
- PHAD 680 Doctoral Level Advanced Statistics
- Study Abroad Service Learning Course to Belize

August 2007 – June 2010 Graduate Research Assistant
University of Mississippi
Center for Health Behavior Research
Alcohol Awareness Grant funded by Anheuser Busch
Purpose: Decrease the misuse and abuse of alcohol, promote healthy behaviors and correct students' misperceptions of the campus-drinking norm through a social norms mass media intervention.
Duties: Design products for mass media campaign (table tents, stall talk, t-shirts, posters, billboards). Recruit research participants, study design, questionnaire development, conference presentations, publications, and data analysis.

Other Employment

July 2011 – December 2011 Mississippi State Network Organizer
Safe Routes to School National Partnership
Duties:
Oversee the daily operations of the Network Partners
Resolve SRTS issues affecting statewide implementation
Conduct policy research
Attend local, state, and national meetings

August 2008 – December 2009 University of Mississippi
Office of Student-Athlete Academic Support
Academic Tutor

January 2006 – December 2007 Intramurals Sports Assistant
Department of Campus Recreation

Summer 2004 and 2005 Summer Camp Counselor Camp Ozark, Inc. Mt. Ida, AR
Lake Crew, ropes course, fitness classes.

HONORS and AWARDS

Graduate School Class Marshal for Commencement, The University of Mississippi, 2012-2013
Graduate Student Achievement Award for the School of Applied Sciences, 2012-2013
Graduate School Dissertation Fellowship, The University of Mississippi, Spring 2013
University of Mississippi School of Applied Sciences Student of the Month, November 2012

Who's Who Among Students in American Universities and Colleges, 2010-2011
Graduate Student Council Medal of Service Award, The University of Mississippi, 2009
Graduate Student Achievement Award for the School of Applied Sciences, 2008-2009
H. Leon Garrett Graduate Award in Health Promotion, The University of Mississippi, 2008-2009
Phi Kappa Phi Academic Honor Society, Inducted 2009
Chancellors Honor Roll, The University of Mississippi, Spring 2006, Fall 2007, Spring 2007
Chancellors Honor Roll, University of Arkansas at Little Rock, Spring 2005

SERVICE

Problem Solving for Better Health Workshop, Facilitator, March 2013
Study Abroad Service Learning Course to Belize – January 2013
Bike Walk Mississippi (BWM) Board Member, July 2011 – December 2012
BWM Safe Routes to School and Complete Streets Committee Chair, November 2011 – December 2012
Safe Routes to School Volunteer for Walking School Busses, Fall 2008 - present
Community Advocate Health Training Program Coordinator, October 2012
Oxford School District Health and Wellness Fair, September 2012
East Tallahatchie Schools Health Fair for teachers, August 2012
Dean Search Committee (appointed) for School of Applied Sciences, Fall 2011 - Spring 2012
APHA PHEHP Program Planning Committee, Fall 2011
Mission Trip to Piña Blanca, Honduras with Salt and Light Ministries July, 2010
Appointed member of the temporary GSC elections committee, Spring 2010
Graduate Student Council Senator for HESRM department, Fall 2007- Spring 2010
Graduate Student Council Philanthropy Planning Committee, Fall 2009 - Spring 2010
Abstract Reviewer for American Public Health Association, 2009
UM Faculty HealthWorks Planning Committee Member, Fall 2008
Hope for Africa Member, August 2007- May 2010
University Health Promotion Advisory Board, Fall 2007
Fitness Assessments at Pope School, December 2007
Gulf Coast Trip Organizational Leader, Fall 2007
UMFUSION Site Leader, September 2007
ASB Community Service Committee, August 2007- May 2008

GRANTS AND CONTRACTS

Completed Research Support

James C. Kennedy Foundation Hallam (PI) / Woodyard (PD) 8/2012 – 5/2013
Community-Based Comprehensive Health Needs Assessment for Charleston, MS Part 2
The purpose of this grant is to continue the conduction of a community-based needs assessment in Charleston, MS as the initial and necessary first step to a community-based participatory research approach in order to determine the perceived needs of the community and to identify priority health issues which will inform and direct future program planning and resource allocation in the community.
Submitted: August 2012

Amount Requested: $12,544 Amount Funded: $12,544
Role: Project Director and Grant Writer

Community Foundation of Northwest Mississippi Hallam (PI) / Woodyard (PD)
6/2012 – 12/2012
Community-Based Comprehensive Health Needs Assessment for Charleston, MS Part 1
The purpose of this grant is to conduct a community-based needs assessment in Charleston, MS as the initial and necessary first step to a community-based participatory research approach in order to determine the perceived needs of the community and to identify priority health issues which will inform and direct future program planning and resource allocation in the community.
Submitted: April 2012
Amount Requested: $16, 819 Amount Funded: $5,630
Role: Project Director and Grant Writer

Anheuser-Busch Hallam (PI) 8/2007 – 6/2010
Reducing the Harmful Outcomes of Alcohol Misuse and Abuse
The primary purpose of this project is to decrease the misuse and abuse of alcohol, promote healthy behaviors and correct students' misperceptions of the campus-drinking norm through a social norms mass media intervention.
Role: Research Assistant and Co-Primary Investigator

RWJF #63348 Active Living Research (RWJF) Hallam (PI) 11/2007 – 03/2009
Perception of the rural environment for physical activity: Instrument Development
The primary purpose of this project is to develop an instrument that measure adolescents, adults and older adults' perceptions of the environment for physical activity.
Role: Research Assistant

Grants Not Funded

Letter of Intent Submitted to Active Living Research Rapid Response
Mississippi Department of Transportation Hallam (PI)
Assessment of school siting decisions in Mississippi
The purpose of this investigation is to identify current school siting decision practices and to influence school siting policy in Mississippi to encourage community centered schools that foster community engagement and active commuting to and from school.
Submitted: April 2012
Amount Requested: $137,795.93
Role: Co-Primary Investigator and Grant Writer

School Siting in Mississippi
The purpose of this investigation is to identify current school siting decision practices and to influence school siting policy in Mississippi to encourage community centered schools that foster community engagement and active commuting to and from school.
Submitted: July 2011
Amount Requested: $149,980
Role: Co-Primary Investigator and Grant Writer

PROFESSIONAL ACTIVITIES

Professional Memberships

- Society of Behavioral Medicine
  2012 – Present
- Mississippi Public Health Association
  2011 – Present
- Bike Walk Mississippi
  2011 - Present
- Mississippi Safe Routes to School State Network Partnership
  2011
- American Public Health Association
  2009 – Present Public Health Education and Health Promotion Section

Professional Certifications

- American Red Cross Certifying Instructor, July 2007 – present

PEER- REVIEWED PUBLICATIONS

Woodyard CD, Hallam JS, Bentley JP. (2013) Drinking Norms: Predictors of Misperceptions Among College Students. *American Journal of Health Behavior*, 37(1): 14-24.

Gamble A, Waddell D, Ford MA, Bentley JP, **Woodyard CD**, Hallam, JS. (2012). Obesity and Health Risk of Children in the Mississippi Delta. *Journal of School Health*, 82(10): 478-483.

Woodyard, CD. (2011). Exploring the Therapeutic Effects of Yoga and its Ability to Increase Quality of Life. *International Journal of Yoga*, 4(2): 49-54.

Woodyard, CD and Hallam, JS. (2010). Differences in College Student Typical Drinking and Celebration Drinking. *Journal of American College Health*, 58(6): 533-538.

Brewer, C, Bentley, JP, Hallam JS, **Woodyard, CD**, Waddell D. Use of Analgesics for Exercise-Associated Pain: Prevalence & Predictors of Use in Recreationally-Trained College-Aged Students. *Journal of Strength and Conditioning Research*, JSCR-08-2788.

PUBLISHED ABSTRACTS

Woodyard CD, Hallam JS, and Bentley JP. (2012). Overestimation of drinking norms among college students: The case of celebration drinking versus drinking in general. Annals of Behavioral Medicine, 43, Supplement, B205.

Woodyard CD, and Hallam JS. (2009). Celebration drinking and the self-fulfilling prophecy of alcohol. Research Quarterly for Exercise and Sport, 80(1), Supplement, A35.

PROFESSIONAL PRESENTATION (Peer-reviewed)

Woodyard CD, Hallam JS. Identifying Needs and Developing Efforts to Improve Health through Community-Based Participatory Research in the Mississippi Delta. American Academy of Health Behavior Conference, Santa Fe, NM, March 2013.

Woodyard CD, Hallam JS, and Bentley JP. Overestimation of drinking norms among college students: The case of celebration drinking versus drinking in general. Society of Behavioral Medicine, New Orleans, LA, April 2012.

Woodyard CD, Hallam JS, and Bentley JP. Drinking Norms: Predictors of misperceptions among college students during celebration drinking occasions and when drinking in general. University of Mississippi Graduate Student Council Research Day and Symposium, Oxford, MS, April 2012.

Hallam JS, Goldman WB, Martin JB, **Woodyard CD**, Gamble A, Valliant M. Walkability and perceived environmental barriers to walking to school in a rural environment. American Academy of Health Behavior, Austin, TX, March 2012.

Woodyard CD, Hallam JS. Knowledge of dietary guidelines and use of nutrition fact labels among young adults in the US. American Public Health Association, Washington DC, November 2011.

Hatchett A, Gamble A**, Woodyard CD.** Differences in behavioral variables among CrossFit and traditional fitness training participants. American Academy of Health Behavior, Hilton Head, SC, March 2011.

Woodyard CD, Hallam JS. Difference in college student typical drinking and celebration drinking. American Academy of Health Behavior Annual Meeting, Clearwater, FL, February 2010.

Woodyard CD, Hallam JS. Celebration drinking and the self-fulfilling prophecy of alcohol misperceptions. American Association for Health Education, Tampa, FL, April 2009.

INVITED PRESENTATIONS

2013 The Mississippi Department of Health and The University of Mississippi Medical Center, Jackson, MS, March
Presentation of dissertation needs assessment methodology to the Mississippi Department of Health Office of Planning and Evaluation and to the Mississippi Public Health Institute. The presentation was also presented to graduate students in the Clinical Sciences PhD program in the Qualitative Research Methods class.

2012 Sardis Lake Health and Safety Fair, Oxford, MS, September
The MS corps of engineers sponsored a health and wellness program for the special needs children in the Oxford School District. The topic of focus for my program was the

importance of physical and activity and exercise. Over 150 students attended the program.

2012 Tallahatchie Wellness Challenge, Charleston, MS, August
Speaker and presenter of the Behavior Change and Goal Setting Seminar, which focused on the initiation of behavior change and the importance of goal setting, self-monitoring and time-management for successful behavior change. 170 adults signed up for the Challenge.

2012 Charleston, MS Rotary Club Meeting, Charleston, MS, June
Speaker and presenter of information regarding the comprehensive community-based health needs assessment that was conducted over the course of the summer 2012 in Charleston, MS.

2011 Girl Empowerment Expo, Oxford, MS, April
Preparing Respective Individuals by Nurturing Character and Encouraging Service and Scholarship (PRINCESS): Speaker and presenter of the Healthy Body, Healthy Environment workshop, which focused on the importance of physical activity and exercise to improve overall health and self-perception/ self-esteem for 6-9th grade girls.

2009 Anheuser Busch Annual Grantee Meeting, Orlando, Fl, January
Annual Grant Research Presentation

POPULAR PRESS

Woodyard, CD. The Sun- Sentinel – Tallahatchie County Paper – Article "Community Health Advocates" Published on Thursday September 20, 2012.

Woodyard, CD. The Sun- Sentinel - Tallahatchie County Paper – Article "YOU Should Join Wellness Challenge" Published on Thursday August 2, 2012.

Professional Conferences/ Meetings Attended
2012 Society of Behavioral Medicine, New Orleans, LA, April
2011 Healthy Communities and Healthy Families Training Seminar, Hernando, MS, December
2011 American Public Health Association, Washington, DC, November
2011 Mississippi Public Health Association Conference, Tunica, MS, September
2011 5th Empowering Communities for a Healthy Mississippi Conference, Jackson, MS, May
2011 American Academy of Health Behavior, Hilton Head, SC, March
2010 American Academy of Health Behavior, Clearwater Beach, Fl, February
2009 American Alliance for Health, Physical Education, Recreation and Dance, Tampa, Fl, April
2009 American Academy of Health Behavior, Hilton Head, SC, March
2009 Anheuser Busch Annual Grantee Meeting, Orlando, Fl, January
2008 American Public Health Association, San Diego, CA, October
2008 National Social Norms Association Conference, San Francisco, CA, August