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Expanding the Understanding of the Social Determinants of Health to Support Community Readiness for Change

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EXPANDING THE UNDERSTANDING OF THE SOCIAL DETERMINANTS OF HEALTH
TO SUPPORT COMMUNITY READINESS FOR CHANGE

by

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Abstract

Addressing the Social Determinants of Health is critical if we truly want to achieve health equity. The World Health Organization's Commission on the Social Determinants of Health (2008) recognized the need to broaden the understanding of these determinants among the general public to facilitate change in communities. Using a concurrent transformative case study, this mixed methods design explored the potential increase in 1) awareness of the social determinants of health, 2) understanding of context and 3) organizational empowerment through the use of Photovoice and Action planning with a Rural Diabetes Community Coalition in Southeast Georgia. Engaging the coalition through these processes will potentially facilitate change in the county to impact long term diabetes outcomes. The qualitative inquiry included an in-depth document review, Photovoice (N=5), key informant interviews (N=8), action planning (N=8) and follow up interviews (N=5). As a secondary measure, the perceived control scale (N=12) was used as a pre/post-test to quantitatively measure the potential change in organizational empowerment. The qualitative results show an expanded view of context and the determinants that affect the health outcomes. The quantitative results are inconclusive. Recommendations for future research will be discussed.

INDEX WORDS: Social Determinants of Health, Photovoice, Context, Community Readiness Model, Community Coalition, Action Planning, Diabetes Prevention and Management

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TO SUPPORT COMMUNITY READINESS FOR CHANGE

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DEDICATION

This dissertation is dedicated to six people who have had a tremendous impact on my life. Without them, who knows where my life would be. They have believed in me when I didn't believe in myself, supported me when I thought it was impossible, and loved me when I didn't love myself. Thank you.

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INTRODUCTION AND LITERATURE REVIEW

Introduction

In 2008, the World Health Organization's Commission on the Social Determinants of Health released a report addressing the social determinants and provided recommendations for public health practitioners (and the public) to address these determinants. One of the recommendations was the need to increase or broaden the understanding of the social determinants of health (SDH) among the general public (World Health Organization (WHO), 2011). The SDH are the conditions in which people are born, grow, live, work and age, including the health system (WHO, 2011). These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The SDH across the ecological model are responsible for health inequities {health disparities} - the unfair and avoidable differences in health status seen within and between countries (WHO, 2011). In addition to WHO, The Centers for Disease Control and Prevention (CDC) highlights the difference between the determinants of health and the social determinants of health (CDC, 2011). The CDC defines the determinants of health as factors that contribute to a person's current state of health and may be biological, socioeconomic, psychosocial, behavioral or social in nature. The SDH are then defined as the complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world (CDC, 2011). The definition provided by WHO and the

CDC provide a global and local perspective of the SDH. Understanding the social determinants and their effects on health is the core of the (socio) ecological model. The social ecological paradigm is rooted in core principles or themes concerning the interrelations among environmental conditions and human behavior and well-being (Stokols, 1996). As such, the (socio) ecological model allows public health professionals to communicate the influence of attitudes, community and social structures on health (Stokols, 1996) and is used in this case study as the theoretical guide to collaborating with a community based coalition.

Based in rural southeast Georgia, the community coalition was established in 2009 to address diabetes prevention and management in their county. Comprised of ten community members, led by a faculty member from Georgia Southern University, the coalition received a $28,000, one year grant from the South Eastern African American Center of Excellence (SEA-CEED), through the Centers for Disease Control and Prevention's (CDC) Racial and Ethnic Approaches to Community Health U.S. (REACH U.S.) program (SEA-CEED, 2009). The purpose of the initial funding was to develop a sustainable community coalition with the ultimate goal of translating evidence-based diabetes prevention and management strategies for use in the County, Georgia (Arroyo & Lawrence, 2008). After receiving the grant, the coalition facilitator and community coalition members worked to determine the community's needs related to diabetes management and prevention. With the initial funding, a preliminary community needs assessment was conducted and the coalition members also participated in diabetes trainings and local community events. Continuing the partnership with Georgia Southern, in 2010 the coalition then secured $250,000 over five years from the CDC through the Society for Public Health Education (SOPHE) in a partnership with Georgia SOPHE (GASOPHE). The award enabled the community coalition to focus on developing and expanding capacity for policy, system, and

environmental change through continued coalition building (SOPHE, 2010). The coalition was also expanded to include local businesses and representation from various sectors of the community. Because of this funding, the community coalition has participated in a coalition development workshop which led to the development of their vision, mission and bylaws. In addition, they have continued their participation in community events, are working to create a healthy living cookbook and have applied for additional funding (GA SOPHE, 2010; SOPHE, 2010). Present day, the coalition roster has 31 members which include the original ten. The members represent nurses, retired educators, local law enforcement, clergy, elected officials, students and unemployed persons. The age of the coalition members ranges from 18-85.

Since its inception, the coalition has met monthly with the exception of a short period. This lapse of time occurred between the completion of the first grant and the initiation the second. By this time, the county was experiencing the backlash of the great recession and was devastated by the significant loss of employment by its residents. A rural county with beautiful green plains that was once a thriving agricultural and railroad hub and a booming factory town, once provided jobs for over 75% of the Adult population in the main town. Filled with local businesses and vibrant working people, the main district and its shops provided additional financial stability for their economy (MSNBC, 2011). In December 2007, the recession changed everything. Factories are abandoned, businesses begin to close and many jobs were lost in the community. Typically, when jobs are lost on a large scale in a community, small businesses also begin to fail because the unemployed residents have no money to spend in those stores. Imagine the impact on a community when a company as large as Jockey International, for instance, closes its door and abandons the community. Between 2007 and 2009, all factories closed and/or moved overseas leaving 1300 people without jobs (MSNBC, 2011). The recession hit the county so

profoundly that it was classified as being ranked #1 in unemployment in the state of Georgia. Dateline NBC brought national attention to the area in its profile done in August 2011, "The Town that Jobs Forgot". The county has since seen some growth and is now ranked #3 in unemployment in the state (Georgia Statistics Center, 2012) as a result of a 2,500 bed prison having been built in the county creating some 200 jobs (MSNBC, 2011).

The aforementioned county, located in Southeastern Georgia, has 24.0 people per square mile (U.S. Census Bureau, 2011). According to the 2010 U.S. Census, the county's population was 8,340 representing .08% of the state's total population. In the same year, 40.5% of the county population was recorded as Black as compared to 30% in the entire state. According to the U.S. Census Bureau Quick Facts, from 2006-2010 the median household income for the county was $27,686 as compared to $49,347 for the state of Georgia. Between 2000 & 2009 the change of employment in the county was -57.1% (U.S. Census Bureau, 2011). This massive loss in employment was a result of the closing and relocation of Millen's factories, leaving 1,300 people without jobs (MSNBC, 2011). From 2006-2010, 19.1% of the county population was below the poverty level which is higher than the overall poverty level (15.8%) for the state of Georgia. In 2009, the United States Census Bureau listed the poverty threshold for a two person household as $13,991 and $10,956 for a one person household (U.S. Census Bureau, 2012). The 2011 County Health Rankings report that 39% of children in the county are living in poverty and 65% of children in the county are eligible for the free lunch program (County Health Rankings, 2011). In addition to the economic hardship, the 2011 County Health Rankings data revealed 18% of adults under 65 lacked health insurance; 32% of the adult population was identified as obese; 30% of the population lived sedentary lifestyles; 50% of the population lacked access to healthy foods; and 14% of the county's population was identified as Diabetic (County Health

Rankings, 2011). In 2008, the death rate in the county for diabetes related cases was 81.9 as compared to 15.3 for the state of Georgia (Georgia Department of Public Health, 2008).

While the community coalition's focus is diabetes prevention and management in their county, this dissertation explored the participatory processes of Photovoice and Action Planning. Through case study inquiry (Yin, 2003), the potential increase in awareness of the SDH and broadened understanding of community context were explored. The coalition member's participation in data collection and analysis provided the outlet to engage in this exploration.

Purpose

The purpose of this case study is to examine the potential increase in 1) awareness of the SDH, 2) understanding of context and 3) organizational empowerment through use of Photovoice and Action planning with a Rural Diabetes Coalition. Engaging the coalition through these processes will potentially facilitate change in the county to impact long term diabetes outcomes. Going through these processes will enable us to learn how Photovoice can be used to expand the coalition's awareness of the SDH and the impact of context on change.

Significance of the study

Of concern was the paucity of documented processes increasing, broadening or expanding the understanding of social determinants and thus contributing to changing the determinants in a specific community context. This case study provides documentation of a process that has the potential of translation among diverse communities to raise or increase awareness of the social determinants of health and broaden the understanding of community context among the general population. In addition, the lessons learned through this research can provide further insight into working with community coalitions and in the significance of participatory research.

Theoretical Framework

The ecological model describes the interpersonal, community, institutional and public-policy influences on individual health behaviors (Harris, 2010). The (socio) ecological model allows public health professionals to communicate the influence of attitudes, community and social structures on health. (Stokols, 1994). Thus, interventions and research can be more effective when targeting factors at multiple levels of the social ecology (Strack, 2010).

The ecological model has been used to improve health outcomes through the formation of research questions (Scott & Wilson, 2011), improvement of fruit and vegetable intake among low-income African Americans (Robinson, 2008), examination of influenza vaccine uptake (Kumar, et. al., 2011), explaining condom use among female sex workers (Larios, 2009) and to frame Photovoice using the model as a guide (Strack, 2010). Consequently, the model provides an excellent organizational structure for this applied research and for the social determinates of health.

Delimitations

1. Only members of the Diabetes Coalition will be eligible for participation, with the exception of the community key informants.

Limitations

1. Findings rely on the responses of the coalition members and community stakeholders.
2. The willingness of community coalition members to participate in Photovoice
3. The willingness of community coalition members to participate in brainstorming/action planning
4. The willingness of community coalition to participate in follow up interviews

Assumptions

1. Community coalition members are open and honest with the facilitator of the Photovoice process and the brainstorming and action planning;

2. Community stakeholders are open and honest with the facilitator of the key informant interviews

3. Community coalition members are open and honest when filling out the perceived control scale

LITERATURE REVIEW

Social Determinants of Health

The elimination of health disparities has been at the forefront of public health for over two decades. The elimination of health disparities was the second of two goals in the "Healthy People 2010" report released by Health and Human Services in 2000 (United States Department of Health and Human Services, 2000). In recent years, public health has shifted from focusing solely on the elimination of disparities in disease to uncovering and addressing their root causes (Watt, 2002; Koh, et. al., 2011). Along with the change in focus has emerged new terminology. The transition from "eliminating health disparities" to "eliminating health inequities" and creating "health equity," stresses the necessity of placing the issues of human rights, social justice and the right to access healthcare in the forefront of any discussion of the health status of population groups measurably worse than more privileged groups in the U.S. (Troutman, 2007). Health disparities, a term predominantly used in the United States (Bleich, et. al., 2012), are defined as the differences in the incidence, prevalence, mortality and burden of diseases and other adverse health conditions existing among specific population groups in the United States (NIH, 2000). Health inequities, commonly used in Europe (Bleich, et. al., 2012), are defined as

systematic, avoidable, unfair and unjust differences in status and mortality rates and in the distribution of disease and illness across population groups. They are sustained through generations and are beyond individual control (Carter-Pokras & Baquet, 2002; Troutman, 2007).

This paradigm shift reveals the SDH. This shift is evident in the release of "Healthy People 2020" which renewed its focus from "eliminating health disparities" to identifying, measuring, tracking and reducing health disparities using a determinants of health approach (Healthy People, 2011). The emphasis then is increasingly placed on reducing health inequalities through efforts to change the determinants (Watt, 2002).

According to the World Health Organization (2011), the SDH are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are mostly responsible for health inequities {health disparities} - the unfair and avoidable differences in health status seen within and between countries. Many authors have referenced this definition when discussing unanswered questions and future directions (Raphael, 2006), a historical perspective of the social determinants of health (Irwin & Scali, 2007), health disparities and health equity (Braveman, et. al., 2011) and the role of local government in addressing the social determinants of health (Campbell, 2010).

Ansari, et. al. (2003) synthesizes literature on the social determinants by describing three widely reported components. They are described as socio-economic determinants (e.g., age, sex, education), psychosocial risk factors (e.g., social support, self-esteem, chronic stress, isolation) and community and societal characteristics (e.g., income inequality, social capital including civic involvement, level of trust).

In addition to the mentioned components, it is critical to include the lived experience of the SDH or context of one's health outcomes. SDH include contextual factors such as features of neighborhoods or communities (income distribution, segregation) as well as individual factors (social support, disrespect) (Schulz, et. al., 2005).

The increased recognition of the SDH stimulates the dialogue: why is this shift important? As previously outlined, the SDH essentially determine the health outcomes of the population. Social and economic factors are linked to health and well-being, and inequalities in social and economic conditions contribute to inequalities in health (Schulz, et. al., 2005). Marmot (2005), illustrates policy changes in European countries and the positive effects they have had on health. While implemented changed weren't necessarily initiated to addressed the social determinants, Marmot indicated their relevance to health. These policies include taxation and tax credits, old-age pension, sickness or rehabilitation benefits, maternity or child health benefits, unemployment benefits, housing policies, labor markets, communities and care facilities. Sweden's public health strategy, comprised of 11 policy domains, is "create social conditions that will ensure good health for the entire population". As described by Marmot (2005), five of their domains are related to the SDH: 1) participation in society; 2) economic and social security; 3) conditions in childhood and adolescence; 4) healthier working life; and 5) environment and products. The United Kingdom has set reduction of health inequalities as a key aim of health policy and created an action plan for said reduction. Finally, Colombia and Mexico have similar programs focusing on children that provide financial support to poor families and support the child's education and physical growth (Marmot, 2005).

Global momentum is moving toward broad-scale, social-determinants approach to reducing disparities (Koh, et. al., 2010). The rising interest spans from national and international health organizations, governments, civil society, the private sector and academic disciplines who have long held that issues of social justice and the public's health are inextricably linked (Krieger, et. al., 2010).

Given the major push for addressing health inequities, or creating health equity through the SDH it is essential to determine what the next steps will be to foster action. The World Health Organization's Commission on the Social Determinants of Health suggested raising public awareness about the SDH as an action item in their recently released report, "Closing the gap in a generation: Health equity through action on the SDH" (CSDH, 2008). This suggested action is important because the social determinants approach also involves defining health disparities in a way that engages people to become advocates for change (Koh, et. al., 2010).

According to Gollust, et. al. (2009) experts have recommended that information pertaining to the SDH be disseminated to the general public to build support for policies that address the determinants and move policy interventions aimed at population health beyond medical care. If the general public begins to understand the impact of the SDH, that understanding will lead to the motivation to act to correct the many upstream (underlying causes of ill health) factors that represent widespread social and economic injustice (Gould, Mogford & DeVoght, 2010; Thunhurst, 2006). These upstream factors include the social and physical environment, health services, and both structural and societal factors (CDC, 2011).

Community Context

Knowing the definition of the SDH and how they lead to healthier communities is a start. It is essential, however, to understand how those determinants manifest in various contexts, to

truly make a difference. An understanding of the effects on health must include an understanding of how health problems are experienced by people living within these contexts and the neighborhood characteristics that affect their daily lives (Aronson, et. al., 2006; Cutrona, et. al., 2000). The best way for practitioners to gain this understanding, is to listen to and collaborate with the community. The community brings an understanding of the context, including issues of concern and knowledge of how the community "gets things done." In addition, the voices of community members will indicate the social issues that most significantly affect their lives and their health (Aronson, et. al., 2006). This is evident among studies that focus on the importance of examining context and its effect on health outcomes.

Woodhouse, et. al. (2001) demonstrated value of context through a mixed method quasi-experimental study focusing on the role of law enforcement and tobacco policy as it related to tobacco prevention among youth in Florida. The authors found that the strategies used by law enforcement varied and could not be understood outside of the context of which it was intended (Woodhouse, et. al., 2001).

L'Engle, et. al. (2006) studied mass media exposure as a contextual factor potentially influencing adolescents' sexual intentions and behaviors or "sexual socialization". Their findings reveal mass media exposure as important as other contextual factors (eg. family, peers, school and church) affecting adolescents' sexual socialization.

Vissenberg, et. al. (2012) describes the influence of social environments on diabetes self-management and the importance of addressing social support, social influence and social engagement which are all contextual factors. Their results show these influences have a major impact on diabetes self-management, especially those in lower socioeconomic groups. Examining the effects of context on diabetes prevention, Schulz, et. al. (2005) highlights the

importance of making the connection between social factors, such as racial and economic segregation and diabetes. They continue this discussing the importance of having a "dialogue and discussion that is respectful of diverse perspectives and priorities". A conversation such as this has the potential to identify social factors specific and/or unique to that community. Doing such, the authors believed that communities will then support efforts to change their social context thus addressing and potentially changing the factors creating health inequalities.

The knowledge and understanding of the communities "lived" context and how it affects its health should lead to consideration of broader approaches to improving the context of peoples' lives by working collaboratively with communities, the government and other sectors (Aronson, et. al., 2006). Community residents' participation is essential to this process, as is community organizations and professional networks that can provide coherence and continuity in efforts for sustained community change (Schulz, et. al., 2005). Additionally, the examination of context can provide the needed direction for change specifically related to societal norms, structure and cultural barriers (Woodhouse, 2006) which all lie within the social determinants of health.

Context is a source of data, meaning and understanding. If context is ignoring the result will be incomplete or missed meaning and a misunderstanding of human phenomena (Hinds, 1992).

Coalitions and Community Change

One type of community organization known for demonstrating positive public health outcomes is a coalition (Wandersman, Goodman, & Butterfoss, 2008). Coalitions are "classically" defined as an organization of diverse interest groups that combine their human and material resources to effect a specific change that members are unable to bring about

independently (Butterfoss, 2007). For example, *Virginians for a Healtyh Future* whose focus and successes lie in addressing Virginia's low excise tax on tobacco (Butterfoss, 2007). Community-based coalitions are similar in structure, except they are made up of professional and grassroots members to influence more long-term health and welfare practices for their community. Additionally, community ownership tends to be higher in community based coalitions, but usually requires external funding for needed resources (Butterfoss & Kegler, 2012). A good example of this is the Consortium for Infant and Child Health (CINCH) which was created and funded to increase immunizations for young children (Butterfoss, 2007).

Coalitions are embedded in the community and thus, factors (i.e. history of collaboration, politics, social capital, trust between community sectors and organizations, geography and community readiness) currently existing or lacking in the environment can have significant impact on a coalition throughout all stages of its development (Butterfoss, 2007; Butterfoss & Kegler, 2009 & 2012). This is especially true with issue selection or community projects. Coalitions can also serve as conduits for community support or concern for issues (Butterfoss, 2007) by rallying around a specific topic or issue and fostering change in the community. Coalitions and their members have the potential to involve multiples sectors of the community and implement multiple interventions that focus on both the individual and the environment (Butterfoss & Kegler, 2009). In addition, coalitions have also proven to be effective in reducing health disparities. The Racial and Ethnic Approaches to Community Health (REACH) program, through the CDC, have shown coalition's effectiveness in the reduction of diabetes disparities among minority populations (Giachello, et. al., 2003; Jenkins, et. al., 2004 & 2011). Coalitions have also seen successes with early pregnancy prevention (Jewell & Russell, 2000) and disparities related to cardiovascular disease (Yancy, et. al., 2011).

Research has also shown that working through coalitions is effective in improving childhood immunization rates (Butterfoss, et. al., 1998), establishing policy and systems changes in childhood asthma (Clark, et. al., 2010), and in addressing violence (Hawkins, et. al., 2008). However, a coalition's success is dependent upon the engagement of its members. According to the Community Coalition Action Theory (CCAT), a set of constructs and practice-proven propositions based on sound public health practice, member engagement is best defined as the process by which members are empowered and develop a sense of belonging to the coalition (Butterfoss & Kegler, 2009). After thorough review of existing coalition models and theories, the authors created CCAT to provide a comprehensive theory that will enable others to understand the inner workings of community coalitions and their practices (Butterfoss, 2007). It provides the foundation for grounded theory focused on the development and maintenance of coalitions. Through this process, coalitions progress through four different stages: 1) Formation; 2) Implementation; 3) Maintenance; and 4) Institutionalization. However, Butterfoss and Kegler (2012) have since combined stages two (implementation) and three (maintenance) due to the overlapping nature of tasks in both stages; thus, stage two is maintenance. The formation stage includes the early beginnings of a community coalition and the necessary processes to operate as an organization. These include the formation of bylaws, clearly defined goals and the creation of the mission, vision and objectives. The maintenance stage includes the sustainability of membership involvement and collaboration. Additionally, this stage includes the implementation of strategies focused on short and long term outcomes. Lastly, during the institutionalization stage the community coalition has more than likely secured the needed resources and have affectively addressed ongoing needs using the strategies from stage two (Butterfoss & Kegler, 2012). As coalitions progress through the stages, the repetitious nature of planning and the need

to address new issues will cause coalitions to revisit previous stages (Butterfoss, 2007; Butterfoss & Kegler, 2009).

In addition to the defined stage of the theory, CCAT also provides 14 constructs and a set of 21 "practice proven propositions" (Appendix B) which help to build the rationale for the theory (Butterfoss & Kegler, 2009).

Ecological Model

The ecological model (Figure 1) describes the interpersonal, community, institutional and public-policy influences on individual health behaviors (Harris, 2010). The (socio) ecological model allows public health professionals to communicate that the health of individuals is influenced not only by their attitudes and behaviors but also by community and social structures. Thus, interventions are more successful when they target casual factors at multiple levels of the social ecology (Strack, 2010). Geographic methods that address neighborhood characteristics are recommended to understand and interpret these (socio-ecological) factors and their effect on health (Lee and Cubbin, 2002).

When using the ecological model to improve health outcomes, it can be used to form research questions (Scott & Wilson, 2011), to examine health behaviors such as improving fruit and vegetable intake among low-income African Americans (Robinson, 2008), influenza vaccine uptake (Kumar, et. al., 2011), condom use among female sex workers (Larios, et. al., 2009) or to frame Photovoice using the model as a guide (Strack, 2010).

Figure 1. Ecological Model

<u>*Photovoice*</u>

Photovoice is a process by which people can identify, represent and enhance their community through a specific photographic technique. The method has traditionally entrusted cameras to the hands of people to enable them to act as recorders, and potential catalysts for change, in their own communities (Wang & Burris, 1997). This tool was first used with rural Chinese women to discover their views of the world through large and small group discussions. The photograph focused conversations allowed them to find similarities and differences across their lifespan from growing up as girls to their lives as wives and mothers. The goal of these group dialogues was to cultivate people's ability to take individual and collective action for social change (Wang & Burris, 1994). During its initial use, the tool was referred to as photo novella and was changed to Photovoice in subsequent years to ensure Wang & Burris' technique was used correctly. Photo novella was commonly used to describe a process of using photographs or pictures to tell a story or to teach a language and literacy. Photovoice is a method used to produce knowledge and empower communities for change (Wang & Burris, 1994).

Photovoice has three main goals, as outlined by Wang and Burris (1997). The first goal is to enable people to record and reflect their community's strengths and concerns; the second goal is to promote critical dialogue and knowledge about important community issues through large

and small group discussions of photographs; and the third goal is to reach policy makers. This tool can be used for participatory research, seeks to empower participants, and has the ability to be adapted to the community's needs because it is problem-based and contextual, resulting in knowledge that is practical and directed towards strategic programming and policy action at the local level (Wang & Burris, 1994;1997; Catalani & Minkler, 2009; Nykiforuk, et., al., 2011).

Since its inception, Photovoice has been utilized by a wide array of communities and public health practitioners. This process has been used with rural breast cancer survivors (Lopez, et. al., 2005); African-American men to reveal their perception of racism (Ornelas, et. al., 2009); young adolescents engaging in social action and community building (Wilson, et. al, 2007; Wang, et. al., 2004; Necheles, et. al., 2007); spinal cord injury patients (Newman, 2010); a homeless community exploring the social determinants of health (Halifax, et. al., 2008); to address disparities among people with intellectual disabilities (Jurkowski & Paul-Ward, 2008); and with a community coalition assessing youth perceptions of alcohol and drug use (Brazg, et. al, 2011).

Using participatory strategies, like Photovoice, with disadvantaged communities can maximize the potential for individual and community learning, community empowerment and the initiation and sustainability for change (Aronson, et. al., 2006; Strack, et. al., 2010). According to Kramer, et. al., (2010), Photovoice has proven to be one of the most promising strategies for engaging both residents and policy makers in efforts to improve the health of their community. In fact, a Photovoice literature review in health and public health (Catalani & Minkler, 2009) reported that 96% of projects that included an action phase engaged the broader community and policy makers through organized public photo exhibitions. In addition, the outcomes from the reviewed articles described enhanced community engagement in action and

advocacy, improved understanding of community needs and assets and increased individual

empowerment as a result of communities' utilizing Photovoice (Catalani & Minkler, 2009).

While Photovoice is considered a social change "intervention", Strack, et. al., (2010)

points out that the social change achieved by Photovoice is mediated through the change in the

individuals' consciousness about root causes (SDH) and the individuals' willingness to take

action.

As a qualitative tool, the sample size of Photovoice studies alter the ability to make

generalizations based on the outcomes, but the information gathered will inform researchers

about the need for further inquiry around a specific issue in a specific context (Hergenrather, et.

al., 2009).

Qualitative research methods enable public health researchers to delve into questions of

meaning, examine institutional and social practices and processes, identify barriers and

facilitators to change, and discover the reasons for the success or failure of interventions (Starks

& Trinidad, 2007). According to Hergenrather, et. al. (2009), Photovoice expands the

representation and diversity of participant voices that assist to define and improve community

member's experiences which many times, are not heard. The Photovoice process is often valued

for its ability to uncover rich descriptive information. As a methodology, it is almost exclusively

used to answer descriptive research questions (Catalani & Minkler, 2009).

To advance the trustworthiness of qualitative research and the use of Photovoice in

communities, previous researchers have provided suggestions for future applications of the

methodology. Hergenrather, et. al., (2009) suggests that future Photovoice studies should: 1)

clearly present the researcher in a process-facilitation role; 2) report all components of

Photovoice methodology; 3) address the role of community members in identifying the

community concerns and photo assignments; 4) identify influential advocates; 5) provide

guidance on community forums and participant photograph exhibits; and 6) provide protocols to

develop and evaluate plans of action. Kramer, et. al., (2010) stress the importance of including

policy makers at an early stage of the Photovoice process to facilitate buy-in. Lopez, et. al.

(2005) suggest that Photovoice has, thus far, stopped short of engaging participation in

conceptualizing and participating in action steps toward addressing their needs (Wang, 1999;

Wang, Burris &Xiang, 1996). Thus, combining Photovoice with the community readiness model

would facilitate both "issue selection" and action planning for community change.

Community Readiness Model

The community readiness model is made up of two main components created to guide

community assessments and action planning. The first is the community readiness assessment,

which is completed through key informant interviews. These interviews, focused on the six

"dimensions of readiness for prevention," are then scored to determine the level of readiness for

action in that surveyed community. The six dimensions are community efforts, community

knowledge of the efforts, leadership, community climate, community knowledge about the issue

and resources related to the issue (Plested, et. al., 2006).The second is brainstorming and action

planning. Once the issues are selected, the community uses the brainstorming and action

planning sessions to determine how they will address those issues by taking the readiness level

score into consideration (Plested, et. al., 2006).

The community readiness model is designed to facilitate community change while

integrating the culture of a community, the existing resources and the level of readiness in order

to support the efforts of community members to effectively address an issue (Edwards, et. al.,

2000; Plested, et. al., 2009). This model is unique in its ability to be used to: address an array of

issues, allow the community to define its own issues and strategies, and increase the community's capacity for prevention and intervention. In addition, the model can be used as a guide to the process of community change (Plested, et. al., 2009).

While the first application of the community readiness model was focused on drug and alcohol abuse in the American Indian population, the authors note that the model can be applied to any community which can be defined by geography, an issue or organization (Jumper-Thurman, et. al., 2001; Plested, et. al., 2009; Plested, et. al., 1998). The community readiness model has also been successfully used to initiate childhood obesity prevention in a rural county in Oregon (Findholt, 2007), to understand rural community leaders' readiness for a leisure-based health promotion program in their town (Son, Shinew & Harvey, 2011), and to assess community readiness to participate in a community-wide obesity prevention program (Sliwa, et. al., 2011).

The purpose and significance of this study and literature review have provided the basis for the research questions associated with this case study, as discussed in the next chapter.

CHAPTER 2

RESEARCH QUESTIONS

The research questions for this case study aim to focus on the potential changes in: 1) awareness around the social determinants of health; 2) understanding of community context; and 3) perception of organizational empowerment. All five of the research questions were explored through qualitative inquiry. Additionally, questions 3-5 utilized quantitative methods. As such, the quantitative results are secondary and were not intended to be generalizable but to potentially provide complimentary data. The results discussed provide lessons learned, an assessment of the community coalition based on the community coalition action theory and potential research directions for community based participatory research and the social determinants of health.

Research Questions

This study will address the following research questions:

1. Can Photovoice be used to raise awareness of the social determinants of health of a rural community coalition?

2. Does participation in Photovoice broaden the understanding of "context" for the members of the rural community coalition?

3. Does participation in Photovoice change the coalition member's perception of organizational empowerment?

4. Does participation in action planning change the coalition member's perception of organizational empowerment?

5. Does participation in both Photovoice and action planning change the coalition member's perception of organizational empowerment?

CHAPTER 3

METHODS

Arrangements for Conducting the Case Study

Located in rural southeast Georgia, the community coalition is currently funded by the

Society for Public Health Education's (SOPHE) Health Equity Project through a partnership with

Georgia SOPHE. Assisting with the grant application, working closely with the ongoing

coalition facilitator and the project coordinator, and having close contact with the coalition

during their progression have afforded the researcher a sense of rapport with the coalition. As a

result, the coalition has discussed the possibility of using Photovoice as a tool for action planning

and voted to use Photovoice as a means of identifying barriers in their community regarding

diabetes prevention/management and overall health. Both the community coalition (Appendix C)

and the Society for Public Health Education (Appendix D) have provided letters of support.

Selection of Participants

Participants for the perceived control scale, photovoice, brainstorming/action planning

and the in-depth interviews were all active members in the community coalition. The

membership is made up of nurses, retired educators, local law enforcement, county elected

officials, childcare providers, city government employees and unemployed persons. The ages

represented in the coalition rage from 18-85 years. The majority of the active members, however,

fall in the higher end of the age range.

The community coalition provided ten recommendations for individuals who should be

considered for key informant interviews. The coalition viewed these individuals as leaders in the

community who can provide valuable insight into the community climate and available

resources. These informants represented the fields of education, medicine, senior care and clergy.

<u>*Informed Consent*</u>

Five distinct informed consent forms were used throughout the data collection process. Forms were administered to participants completing the perceived control scale, those participating in Photovoice, the key informant interviews, the community coalition action planning and the coalition in-depth interviews. Participants were required to complete and sign the assigned informed consent for each corresponding activity to ensure that they were fully aware of the risks associated with each activity.

<u>*Ethical Considerations*</u>

Participants were required to fill out the corresponding informed consent forms prior to participation. For those individuals participating in more than one activity (i.e. Photovoice, Coalition In-Depth Interviews and Action Planning), a separate informed consent form was filled out to ensure that the participant was fully knowledgeable of the depth of their participation and any associated risk. All publications and presentations will exclude individual identifying information. Furthermore, Data associated with this dissertation will remain confidential and will not be linked to individual coalition members. The data are only accessible by the researcher via password protected files. All information will be safeguarded for at least seven years.

<u>*Research Methods*</u>

Described as a comprehensive research strategy (Yin, 2003), the case study design was chosen as the exploratory framework for this dissertation. The case study design is illustrated as an all-encompassing method that includes the logic of design, data collection techniques and specific approaches to data analysis (Yin, 2003). Of the two technical case study definitions provided Yin (2003), this research lies with the (single embedded) case study inquiry. As such, this study explores a distinct situation in which the variables out-number the data

points; relies on multiple sources of data to achieve triangulation; and benefits from previously developed propositions that guide data collection and analysis (Yin, 2003). The case study research design is comprised of five main parts: 1) Study (research) questions to provide clarity to the purpose of the research; 2) study propositions to direct the focus, unless the research is exploratory; 3) the unit of analysis to define what the actual "case" is; 4) linking the data to the propositions or the criteria for analysis; and 5) criteria for interpreting data (Yin, 2003).

Guided by the ecological perspective, this case study gathered qualitative and quantitative data concurrently to explore the processes of Photovoice and Action Planning, as seen in figure 2 (Creswell, 2009).

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Figure 2: Concurrent Transformative (embedded) Strategy

The following methods were used to answer the research questions outlined in Chapter 2:

Qualitative

1. Two Phases of document review

    a. Phase I consisted of the coalition's meeting minutes, progress reports, transcripts, grant applications and other relevant documents; and

    b. Phase II consisted of a coalition evaluation report submitted by an external evaluator hired prior to the initiation of this study.

2. Photovoice

3. Key informant interviews with county residents and leaders

4. Creation of an action plan with the community coalition and documenting the process; and

5. In-depth interviews with coalition members who participated in Photovoice and/or action planning.

Quantitative

6. Two Phases of the perceived control scale was used to collect two phases of quantitative data to measure the potential change in perceived organizational, community and personal control and empowerment (Israel, et. al, 1994).

   a. Phase I was administered prior to the initiation of Photovoice

   b. Phase II was administered at the culmination of action planning

Document Review Phase I

Documents pertaining to the community coalition were requested from the coalition's Interim Chair and Secretary, Project Coordinator (PC), Ongoing Coalition Facilitator (OCF) and the student grant assistant to assess the coalition's awareness of the SDH. Over 500 files from 2008-2012 were received, representing four years of documentation. The documents were reviewed to remove all duplicates prior to uploading into the qualitative software, ATLAS.ti 6.2. The total number of distinct documents reviewed was 256. Documents were renamed, compartmentalized by year (eg. 2008_GrantProposal) and saved into file folders with the corresponding year. The file folders were then uploaded into the software.

Memos were created for each document during a second review. These memos provided a succinct summary describing the document and any initial thoughts. The final review of phase I included a content analysis to identify themes based on pre-determined codes (Woodhouse, 2006). The codes used were: KSDH – Knowledge of the Social Determinants of Health; CKSDH

– Change in Knowledge of the Social Determinants of Health; USDH – Understanding of the Social Determinants of Health; CUSDH – Change in Understanding of the Social Determinants of Health; OEM – Organizational Empowerment; and MISC – Miscellaneous. The code MISC was added during the review for items that appeared to be relevant, but didn't fit pre-existing codes. During the coding process, memos were updated if the document remained un-coded.

After coding, the information was transferred to a matrix word document to further examine the themes identified in the qualitative software.

Perceived Control

The *perceived control scale* (Appendix D) was created by Israel, et. al (1994) to quantitatively measure a multilevel concept of community empowerment (personal, social, economic and political forces). After pilot testing the scale, the authors tested the internal reliability of each of the indices and the overall community empowerment scale using Cronbach's alpha. The perceived control at the individual, organizational and community level was .66, .61 and .63 respectively. The entire scale's alpha coefficient was .71. As a result, the authors note that the scale appears to assess three levels of perceived control (personal, organizational, and community) and provides a measurement of community empowerment (Israel, et. al., 1994). The scale will help to determine the three levels of perceived control prior to initiating Photovoice and the key informant interviews and after the community coalition action plan is created (Israel, et. al., 1994; Schultz, et. al., 1995; Billings, 2000; Malec, et. al, 2010; B. Israel, Personal Communication, February 2012). This will help to determine if the chosen methods have fostered increased perceived control and organizational empowerment to create change in their county.

For this study, the smog readability test (McLaughlin, 1969) was used to determine the reading level of the survey prior to administering to the community coalition. The results of the test indicated a score of 88; 12th grade reading level. According to Gazararian, et. al. (2005), the average American reads at the 8th grade reading level. Subsequently, this scale was revised to the 9th-10th grade level. The repeated use of the word "coalition" hindered the scale from scoring at the 8th grade level. The revised survey was piloted with a group demographically similar to the coalition. Additional revisions were completed based on the pilot test feedback.

Perceived Control Phase I

The revised perceived control scale (Appendix F), and corresponding informed consent, was administered during a coalition meeting and was completed by 12 participants. The data were entered and coded in the Statistical Package for the Social Sciences (SPSS). The frequencies for the "pre" survey were run and reviewed.

Photovoice

Six members volunteered to participate in Photovoice during a coalition meeting. Immediately following the meeting, the Photovoice training was scheduled. The original date was rescheduled due to area tornado sightings. Participants were trained to use the provided cameras, reviewed policies associated with the project (eg. Photo release [Appendix G] and camera agreement form [Appendix H]) and discussed the two assignments for their Photovoice project (Appendix I). Assignment one's focus was the challenges and barriers related to preventing diabetes and/or managing diabetes. The focus of the second assignment was county resources and opportunities with the potential to help prevent and/or manage diabetes. In addition to the cameras, participants were also provided a journal to record the "what and why" for each submitted picture.

The participants requested a 2-½ week period for assignment one, but requested the option of completing the assignments simultaneously. The facilitator allowed this adjustment. There was no limit set as to the number of pictures that could be submitted.

At the conclusion of the first assignment, four of the six participants met individually with the trainer/facilitator to submit and discuss their photos using the photo journals as guides. Two of the original volunteers were unable to complete the assignments due to personal situations. The participants opted to submit both assignments after the initial 2-½ weeks. The participants were offered additional time to take more photos, but they declined. Two of the Photovoice volunteers did not submit photos.

Four of the original six volunteers participated in the culminating group discussion, including one of the participants who was not able to submit photos. Using the SHOWeD methodology (Wang, et. al., 2004; Wilson, et. al., 2007; & Hergenrather, et. al., 2009), -80 photos were reviewed over two sessions. The SHOWeD acronym guided the Photovoice discussion by asking the following questions: What do you **S**ee here? What's really **H**appening Here? How does this relate to **O**ur Lives? **W**hy does this problem or this strength exist? What can we **D**o about this? (Wang, et. al., 2004; Wilson, et. al., 2007; & Hergenrather, et. al., 2009). All sessions were digitally recorded.

Community Readiness Assessment and Planning

The community readiness model provides potential questions for the key informant interviews, as well as a guide for brainstorming and action planning (Plested, et. al., 2009).

Key Informant Interviews: A meeting with the ongoing coalition facilitator, the Interim Chair and the project facilitator was held to determine the potential need for additional questions that might benefit the coalition's future activities. Two questions were added to the key

informant survey: 1) How does your organization market (advertise) its services? and 2) Would you, or someone from your organization, be interested in serving on an advisory board for the [removed] County Diabetes Coalition? These questions were added to the existing set of interview questions provided by the community readiness model and modified for applicability (Appendix J). The questions available through the community readiness model have the capability of being adapted for any "issue" and were edited to focus on diabetes prevention and management in the county. This information was used for the community readiness assessment and to provide contextual information for the action planning process.

The coalition provided ten names of potential key informants for the county. After initial contact, interviews were scheduled with eight of the ten names provided. Two of the recommended informants declined the interview. One of the informants that declined did so because their supervisor was also recommended to be a key informant and agreed to be interviewed. As a result, the decision was made by the supervisor and potential key informant to only interview the supervisor. The other informant that declined expressed that they knew nothing of diabetes in the county and declined the interview. Six of the interviews were held in person with two additional interviews held via separate phone calls. All of the interviews were recorded, transcribed and entered into the qualitative software. The codes used to analyze these transcripts represented the areas measured in the interview: ECE – Existing Community Efforts; CKE – Community Knowledge of Efforts; L – Leadership; CC – Community Climate; CKI – Community Knowledge about the issue; RDPM – Resources related to the issue (Diabetes Prevention and Management); P – Prevention & MISC – Miscellaneous. Prevention and Miscellaneous were added during the coding process. After coding, the information was

transferred to a matrix word document to further examine the themes and quotes identified in the qualitative software.

The transcripts were then assessed by two reviewers to identify the community readiness score for each interview. Interview responses, categorized by six "dimensions of readiness for prevention", were scored using a step-by-step process which provided an overall readiness level for the County. The reviewers independently scored the interviews, compared and tallied the scored, and determined the community's readiness level. The readiness level contributed to the activities included in the community coalition action plan (Plested, et. al., 2006).

Brainstorming and Action Planning: Information received from Photovoice and the key informant interviews were used to create the planning materials for this section. Brainstorming and action planning began with brief summaries of the key informant interviews and Photovoice. The themes presented were used as the starting point for the action plan. The coalition suggested challenges and opportunities that were not previously identified in addition to strategies to address the challenges and optimize the resources and opportunities.

As the group discussed each challenge and resource, they also determined who should be reached, what would be provided to them, why this group was important and how the coalition would make an impact.

The coalition action plan was created using the notes from the planning session (Appendix K). The action plan was presented to and reviewed by the coalition. After a brief discussion of the action plan, the coalition adopted the community coalition action plan by a majority vote.

Perceived Control Phase II

An additional question was added to track the participant's involvement (e.g., Photovoice, Brainstorming/Planning, Both or Neither). The updated survey (Appendix L), and corresponding informed consent form, was administered at a coalition meeting and was completed by 11 participants. The data were entered and coded in SPSS. The frequencies for the "post" survey were reviewed and compared to the "pre" survey. An additional dataset was created to include all quantitative data for additional analysis.

Coalition In-Depth Interviews

Coalition members were asked to participate in follow up interviews (Appendix M) to gain a deeper understanding of their experience with Photovoice, brainstorming and action planning. Organized as informal conversational interviews as described by Johnson and Taylor (2003), each interview lasted approximately 20-30 minutes. There were a total of five volunteers who participated in the recorded phone interviews, one of which did not participate in the activities but wanted to provide feedback on her experience in the coalition. All of the interviews were digitally recorded, transcribed and coded in the qualitative software. The codes used to analyze this data were as follows: PVE – Photovoice Experience; APE – Action Planning Experience; LL – Lessons Learned; PC – Process changes; CT – Change in thought process; and MISC – Miscellaneous. After coding, the information was transferred to a matrix word document to further examine the themes and quotes identified in the qualitative software.

Document Review Phase II

In September 2012, an external evaluator contracted by the coalition's funder, provided an evaluation of the community coalition's progress from 2010-2012. The document was presented in a closed meeting to the coalition and reviewed an additional two times. The purpose

of adding this phase to the document review was to explore the potential effects of this case study on the coalition and its growth.

Data Analysis

    The data analysis for this research consisted of both computer software and participatory analysis as outlined in Table 1. Qualitative data analysis and research software was used for ongoing context, content and thematic data analysis (Miles & Huberman, 1994). Data analysis was ongoing throughout qualitative data collection and the document review. Triangulation of data was completed as a validation strategy to support the findings by potentially showing data agreement (Creswell, 2009; Miles & Huberman, 1994).

    Quantitative data analysis tool, SPSS, was used for the perceived control survey data {N=12 (pre-12; post-11)}. The survey data were analyzed using a non-parametric independent test, Mann-Whitney U, to compare how coalition members responded before and after participation in the study activities. The Kruskal-Wallis test was chosen to focus on the post survey data to examine if the participants responded differently depending upon the activities in which they participated (eg. Photovoice, brainstorming/action planning, both or neither). After running the Mann-Whitney U and Kruskal-Wallis tests, additional variables were computed. The three additional variables were representative of the sections measuring empowerment within the perceived control scale: *Coalition*, *Community*, and *Individual*. The section specific to organizational empowerment was comprised of five questions. The remaining seven questions were specific to individual (two questions) and community (five questions) empowerment. These new variables were created by adding the responses of the questions within each section of the survey. They were then compared to determine if there was a significant difference between the pre- and post-test based on the sections rather than the individual questions. Finally, the means

for the pre- and post-test were computed and compared to examine if there had been a change. Although the survey participant numbers were low, the decision was made not to conduct a power analysis for this study due to the size of the coalition membership, which was the population, used for the survey data.

Additional qualitative analysis was conducted based on the foundation of the perceived control scale, empowerment. Shultz, et. al. (1995) refers to empowerment as the development of the understanding and influence over personal, social, economic and political forces impacting life situations. The level of empowerment explored through this study was organizational empowerment. Empowerment at the organizational level is focused on organizational efforts that increase individuals' perception of power, control, and ability to influence the larger system of which they are apart (Peterson & Zimmerman, 2004; Griffith, et. al., 2008). Israel et. al. (1994) identifies two main constructs of organizational empowerments: 1) Processes that enable individuals to increase their control within the organization; and 2) organizations ability to influence policies and decisions in the larger community. Additionally, empowerment at the individual level as it is linked with empowerment at the organizational level through personal development (Israel, et. al., 1994; Shultz, et.al., 1995; Peterson & Zimemrman, 2004; Griffith, et. al., 2008). As a result, the additional analysis focused on the individual empowerment components outlined by Israel, et. al. (1994): personal efficacy and Competence (coded as PE); sense of mastery and control (coded as SC); and a process of participation to influence institutions and decisions (coded as PP). All of the qualitative data, including the acquired documents, were reviewed in the qualitative data software using the additional codes to further explore perceptions of organizational empowerment.

Table 1. Data Analysis

Instrument	Participants	Analysis Tool
Document Review	Facilitator/Researcher	ATLAS.ti
Photovoice	Coalition Members	Participant Guided Thematic Analysis
Key Informant Interviews	Community Leaders	ATLAS.ti
Action Planning	Coalition Members	Process & Overall Summary
Coalition Interviews	Coalition Members	ATLAS.ti
Perceived Control Scale	Coalition Members	SPSS: Mann-Whitney U Kruskal-Wallis Additional Variables Compare Means
Foundations of Perceived Control	Facilitator/Researcher	ATLAS.ti

Through the use of participant guided analysis and both qualitative and quantitative

analysis software, the results illustrated in the next chapter address each research question.

CHAPTER 4

RESULTS

This case study was designed to explore the heightened awareness and the social

determinants of health and the broadened understanding as a result of participation in Photovoice

and Community Action Planning with a rural Diabetes Community Coalition. In addition, this

case study explored the changes in organizational perceived control and empowerment as a result

of participation in the aforementioned activities.

Social Determinants of Health and Context

Can Photovoice be used to raise awareness of the social determinants of health of a rural

community coalition?

Q1. Establishing awareness of the Social Determinants of Health. Phase I of the

document review provided an understanding of the coalition's awareness of the SDH prior to the

coalition members participating in any activities associated with this study. Establishing the

coalition's awareness of the SDH was determined based on the coding of the documents.

Exploring the potential existence of knowledge and the potential change of knowledge as well as

the understanding and the potential change in understanding of the SDH over time created an

awareness baseline. A majority of the references to the SDH (eg. Policy, systems and

environmental change) were provided by the project coordinator and ongoing coalition facilitator

through the coalition's community action and evaluation plans, grant applications and monthly

reports submitted to the coalition's funder. Both of these positions are funded through the

GASOPHE grant and are public health PhD level researchers. All other references to

determinants appeared in an interview transcript with one of the coalition members and one of

the coalition meetings. The references to SDH, provided through the documents created by the

lead staff, included the actual use of the terms "social determinants of health" "elimination of health disparities" and "policy, systems and environmental change" as well as contextual factors that lie within those terms (ie. education). The references to the social determinants of health, provided by the coalition transcripts, were solely contextual factors such as unemployment, education and access to fresh produce. During the coalition meeting previously mentioned, the social determinants were discussed as part of a conversation led by the national funder. The facilitator specifically asked about social determinants, but used the terms "transportation", "Housing", and "employment" to discuss these factors in their community. Based on the transcript, some of the coalition members provided most of the input, but this encounter definitely added to the base awareness of the social determinants of health among the community coalition members.

During the initial review, there were no clear changes in the knowledge of the SDH among the coalition. Further review of the documents revealed an increase in the mentioning of social determinants, particularly access to care, and the term "social determinant" as the years progressed. However, in most scenarios, this language was provided by the project coordinator and the ongoing coalition facilitator. Their continuous input regarding system level changes and what is perceived to be an ecological approach, has potentially influenced the coalition and their thinking, even if only minimally. In addition, the coalition has participated in diabetes and coalition development trainings providing them with education and tools to create change in their community. Based on these documents, the coalition members appeared to have minimal knowledge of the social determinants.

Perception of increased awareness of the Social Determinants of Health. As a result of the Photovoice process, the perception of increased awareness of the SDH among the coalition

members was identified. Of the six original volunteers, four of the community coalition members submitted a total of 80 photographs. Each participant also submitted a complimentary photo journal whose intended use was to record why each picture was taken, what the picture represented and if it was a challenge/barrier or resource/opportunity for diabetes prevention and management in their county. However, the participants did not provide the level of detail that was expected for each photo. Rather the photovoice participants used the photo journals only to record what the photo represented and if it was a challenge/barrier or resource/opportunity for diabetes prevention and management; leaving out the information pertaining to why the chosen picture represented the assignment. For example, the journal entries focused on why the pictures were taken [eg. Abandoned Playground – Challenge (Appendix N: 1); Park for family relaxation – Resource (Appendix N: 2)], but didn't provide an explanation as to why the photos exhibited a challenge or resource. It was through the concluding group discussions of the photos that participants began to explore issues surrounding access and quality and how that might affect the health of the community. This occurred through the discussion of the two playgrounds. The first playground photo was of the abandoned playground (Appendix N:1) located near an apartment complex. The participants viewed this playground as a challenge because the playground was not operable and would not provide exercise opportunities for the children in the neighborhood. While the photo journal submission listed this photo as a challenge, it was through the discussion that the participants explored why it was a challenge for diabetes prevention and management. The second playground photo was of a well maintained playground (Appendix N:2) in one of the county parks. The photo journal entries associated with this picture identified this playground as a resource for preventing diabetes by providing a place for children to play. While the same was said in the group discussion, the participants also addressed access issues related to the

playground. The well maintained playground is almost three miles from the main town in the county where most of the residents live. There is also, no public transportation to the park. Additionally, there is a fee associated with entry into the park. Through the discussions of the two pictures, it was the perception of the facilitator that the participant's awareness of the social determinants (ie. Quality and access) was increased as a result of participation in Photovoice.

Increased awareness of the Social Determinants of Health. The in-depth interviews with community coalition members supported the facilitator's perception of increased awareness of the SDH. The interviewees' experiences with Photovoice challenged their mental processes, allowing them to see their community in a different way. One participant (community member), who had served in leadership roles within the coalition and is now a retiree, described her experience saying,

> "Well, it basically…gave me an opportunity to look at my town through…with a different eye. A lot of this we see daily and we take it for granted, but when we put the microscope on and that is basically what we did, you see things differently."

Another participant who is also a retiree, but volunteers with another organization in town, described her experience as, "a different way of thinking…kind of enlightening and educational." The deliberate focus on the county enabled them to focus on the advancement of diabetes prevention and management and creation of potential community resources for improved health outcomes. One of the participants, who also serves on the coalition leadership and is a leader in the county (county representative), further described Photovoice as,

> "a very interesting experience to have a more deliberate focus on the community and how the resources in the community are contributing to overall community health. And so, to be able to chronicle that or document that with photos to tell a story was an exciting experience. And to know that my contribution will be part of a bigger picture that will help to make our community better was a kind of thrilling thing to do."

One of the interviewees continued by saying that she wished that she had taken more pictures as it may have uncovered other things that she didn't know about the county.

The feedback provided by the interviewees, who participated in Photovoice, reflected their raised awareness of the underlying causes of health. Their mentioning of "put[ting] the microscope on" and "how resources [or lack thereof] contribute to community health" illustrate an increased awareness of the social determinants and their link to health outcomes.

Participants expressed their appreciation, excitement and new outlook on working to prevent diabetes in their community. Their participation in this study has facilitated conversations focused on partnering with and educating those with county influence (ie. Elected officials, etc). The coalition members were also able to recognize the importance of the coalition continuing to build relationships and partnerships in the community to have better health outcomes for the county.

Q2. Does participation in Photovoice broaden the understanding of "context" for the members of the rural community coalition?

Establishing community context. The key informant interviews, guided by the community readiness model, provided the context through which the coalition would create their community action plan. These interviews served as a community readiness assessment and were shared with the community coalition as part of their brainstorming and action planning process. The readiness score, discussed later in this chapter, was determined through a pre-determined scoring procedure. As such, the results gave the coalition insight into the specific needs of the wider community as it relates to diabetes prevention and management.

The key informant interviews were completed by eight community leaders over the course of one month. Based on their responses, the existing community efforts focused on

diabetes prevention and/or management in the County includes the community coalition, primary

care physicians and fee for service blood sugar screenings available through the local health

department. The key informants, however, believed that while these few services were available,

not all of the community is aware that these services exist, with exception of the primary care

physicians. In addition, the key informants indicated that there is basic information regarding

diabetes prevention and management in the county, but the community is either uninformed or

misinformed. When the issue of prevention of diabetes in the county was mentioned during a key

informant interview, several of the key informants did not believe the community understands

that diabetes can be prevented. The issues seems to be twofold: 1) the community members don't

realize that diabetes is an issue in their community; 2) for those that are aware of diabetes,

especially due to a family member having the chronic condition, there is a an expectancy that

they will incur the same condition through genetics. One of the key informants who is the

director of a community based organization (female) in the county said,

> "Prevention…I don't know that they even grasp the concept unless you are directly
> related to someone or a child with diabetes, you don't even know it's a problem".

There was also an overall feeling by the key informants that the community views

diabetes and associated complications (eg. loss of limb or blindness) as inevitable. One physician

(male) in the community who has seen their patients lacking a sense of urgency in their diabetes

care notes,

> "It's almost like everybody has it so it's not that big of a deal. Everybody has just been
> kinda desensitized to it. So many people too have complications and stuff here that is
> almost expected."

Beyond that, the key informants suggested that the leadership of the county (mainly elected

officials) is not concerned with this issue, mainly because of their lack of awareness of its

existence and/or its severity in the county. What the key informants do believe in is the "home town" feeling of this community and potential support the leadership and community would provide if they were educated in the matter. However, due to the economic hardships this county is currently facing, the informants did not think that support would include funding. The general consensus of the informants was that as a result of the county having the #1 unemployment rate for the state of Georgia {ranked #3 in unemployment as of August 2012 (Georgia Statistics Center, 2012)], the county is essentially low on financial resources. In addition to the economic climate of the county, the key informants identified other challenges such as low literacy {23.8% County; 16.76% State (County Health Rankings, 2012)}, lack of support, lack of follow through to obtain services and being unable to reach everyone in the rural county.

It is important to note most of the key informants thought that there should be more done in the county to focus on Diabetes prevention and management and that the county's large "Church Community" (over 47 churches in the county) would be supportive in disseminating information and educating their congregations. One informant who is a physician (male) and provided prior input related to his patients diabetes care stated,

> "I'm sure most churches or businesses and community leaders are willing to volunteer space or something like that. It's just a small town thing. People want to help and do right for others."

Another informant (female), who is associated with the school system, specifically touched on the value of reaching out to the county's congregations and the impact it can have on program attendance,

> "But I do know uh when things are brought through the churches the attendance is higher…Sometimes you have to go to the church where people attend and put on a seminar. You know, a lot of times people want to know but they just don't know because they haven't been reached."

Finally, one of the key informants, who is a pastor and happens to be diabetic, offered his church as an option for a wellness program.

As previously discussed, the overall purpose of the key informant interviews was to provide the context of the larger community and serve as a community readiness assessment. As a part of the assessment process, the key informant interview transcripts were studied and scored by two reviewers. Using the scoring guide provided by the community readiness model, the reviewer separately scored each section of every interview. Once scoring was completed, the reviewers assigned an overall score to each separate interview. The two reviewers then met to review the scores they provided for each interview to determine the combined score for each interview. Following that procedure, the overall readiness score for the community was calculated at 2.52. This score fell within Stage 2 of the Community Readiness Model, which encompassed scores ranging from 2-3 points. Communities in this stage are identified by the model as being in denial or resisting the issue. This means that there is recognition of the issue as a problem, but no ownership of it has been taken as a local problem. Even with this recognition, there was a feeling that nothing needs to be done about it locally (Plested, et. al., 2006). This was apparent through some of the responses provided by the key informants. There was recognition of the need for a personal connection to understand that diabetes is a problem in the community and that the community is at risk. One of the interviewed physicians (male) said,

> "Until people realize on a personal level that something can happen, it's always, 'oh, that isn't going to happen to me'."

However, the key informants also recognized the need for additional education around diabetes in the community. A nurse (female) who is passionate about the prevention of chronic disease, especially diabetes, notes,

"Unfortunately, again the educational level is at the point that people really don't understand how bad it can be. They kind of see it like blood pressure, it's something else. They know its widespread and a problem, but I don't think they grasp the disparity and the long term implications of it."

According to the Community Readiness Model, when planning for a community in this stage, the main goal should be to "Raise awareness that the problem or issue exits in this community".

Broadening the understanding of community context. The contextual information acquired through the community readiness assessment provided a holistic view of the county from various sectors within the community. The community assessment was used to guide the action planning process as discussed later in this chapter. The contextual information gathered in this section was a result of participation in Photovoice.

Following the completion of the photovoice assignments, each participant submitted their photographs during one on one sessions with the facilitator. In reviewing each photograph with the corresponding photographer, it was evident that most of the photos focused on resources and opportunities in the county rather than on the challenges and barriers. Challenges and barriers presented in the individual sessions were listed as education and training (Appendix N: 3 & 4), access to physical activity/increasing exercise (Appendix N: 7) and the lack of sidewalks in the community (Appendix N: 8). Opportunities and resources discussed were the family enrichment center (a safety net organization), the county health department (Appendix N: 7), the city/county parks (Appendix N: 8 & 9) and the county's church community (Appendix N: 10).

During the culminating group session, each of the photographs was discussed using the SHoWED method (Wang, et. al., 2004; Wilson, et. al., 2007; & Hergenrather, et. al., 2009) as described in Chapter 3. Through this discussion, additional themes specific to challenges and

barriers emerged: 1) how to identify those who needed the information most; 2) how to reach the entire county's population; and 3) how to maintain coalition visibility in the county. In addition, other topics emerged providing key contextual information that was useful for community action planning. These topics were the county hospital (Appendix N: 11) that had recently been purchased by a private company, the county's fast food restaurants (Appendix N: 12), "Bi-Hi" (Appendix N: 13) and community ownership (Appendix N: 1). The following section provides examples of quotes that give depth to the analysis.

1. Newly privatized Hospital

    The now private hospital was seen by the participants as a resource for the county, especially for diabetes prevention and management. The participants seem to value the presence of the hospital in their county and recognize the potential sustainability provided to a county that has such a resource. During the group discussion, one of the retired participants (community member) who was born and raised in the county says,

    "It's a strong resource. Because a town without a hospital dies…at one time it was county owned but it just got to be too much of a financial burden. It was bought by a company."

    When asked if they had seen a difference in services provided since the hospital became private, the same participant described their perception:

    "We have more doctors. It used to be when you went to the emergency room, you had to wait till the doctors on call came in. But now when you walk in, you know other than it being a typical hospital, someone is there to see you. They don't have to call it in. We even have a doctor from Atlanta that comes in every weekend."

2. County's Fast Food

    The transition into the fast food focused conversation was as a result of a photo of Subway Restaurant. While the participants viewed Subway as a health option in the

community, there were varying opinions around the other fast food places in the county. One of the participants who is a retiree (community member) and has lived in the county her entire life said, "We have one restaurant in town that's not open every day. We've got several fast foods now." As the discussion progressed, they listed five of the county's fast food places. When asked if they viewed the fast food restaurants and challenge/barrier or resource/opportunity for diabetes prevention and management one of the participants (community member) said, "Depends on how you view it." Weighing in with an unsure point of view, another participant (county representative) responded,

> "I don't know. If you don't have sufficient income, you probably can't go to the fast food places. If you got food for your family at Dairy Queen, you would spend about as much money as you would...."

Continuing the conversation, a third participant (community member) viewed the presence of the fast food restaurants in their county as a resource and opportunity to increase the revenue for the county: "we're glad we got em. Again, it's a draw in card for businesses, industries and stuff".

3. "Bi-Hi"

As the Photovoice discussion progressed, a picture of the Bi-Lo (chain supermarket), which is the only supermarket in the county, was in the slides. Immediately, as if on cue, one of the participants jokingly said, "Bi-Hi". When asked why she called the chain, "Bi-Hi" she responded, "That's what everybody calls it. We just call it 'Bi-Hi'. About the prices." This initial comment sparked a conversation focused on the pricing in the supermarket. One particular participant had strong views and shared her opinion on whether or not the supermarket is a resource as well as her thoughts as to why the prices are so high. As a lifetime resident (community member), she has noticed the prices of the supermarket but also

acknowledged the benefit of having the supermarket in the community. She continued the

conversation by saying,

> "We complain about it, but it is definitely a resource…my thing is, by the time I drive to [names removed] to buy something, I can get it from Bi-Los. Spend time, money and a lot of times you get there they ain't got what you want. That is a resource. The prices are ridiculous. It is what it is."

As the conversation progressed, she provided her thoughts as to why the prices were high in

the supermarket,

> "The problem [that] has caused the prices to be so high is that a lot of the stuff now in the grocery stores is on WIC…the WIC program, uh pregnant women and infants. They got fruits on there now, they got vegetables, frozen food on there and it used to be they didn't have all of that. So quite naturally, when they can get this government money they shoot up the prices and forget about us."

Curiosity related to the above statement led to the discovery of a study sponsored by the

United States Department of Agriculture (USDA) that reviewed the issue of supermarkets

potentially marking up "WIC items" due to governmental reimbursement (Oliveira and

Frazao, 2009). The study showed that some WIC (Women, Infant and Children) vendors,

especially those whose based include both WIC and non-WIC customers, take advantage of

the "price sensitivity" and charge higher prices for WIC foods (eg. Milk, beans, eggs and

juice) (Oliveira and Frazao, 2009). This study is not indicative of the Bi-Lo supermarket

chain or supermarkets in Southeast Georgia, rather it supports the possibility of higher

pricing due to the presence of WIC items in the store.

4. Community Ownership

The final discussion related to key contextual factors involved a photo previously

discussed; the abandoned playground. The photograph displays a piece of playground

equipment that has been neglected and is not fit for children to utilize. This "abandoned

playground" is on the property of populated housing complex in the county. Coincidentally, two of the Photovoice participants were past residents of the complex. One of the photos displayed a playground in a housing complex without playground equipment. As past residents, the participants provided insight into the current state of the property. They described the once thriving neighborhood as a place now occupied with people who have "different values" and weren't concerned with the same things of which their generation had been concerned (eg. an operating playground). When asked if there was anything the coalition could do to help build the playground, this was the response provided by one of the former residents (community member):

> "The people in the community has (sic) to want to do something and they are satisfied…the people that live in the community, they have to take an interest and then others will come in and help. But we can't go over and say, 'well y'all need to do this, this and this', they would tell me to take my you know back cross where I live at."

This input provided another point of view related to the community climate in the county. Additionally, it illustrated the importance of working with communities to identify their needs rather than entering a community with an agenda and forcing it upon the residents.

All of the contextual data gathered from the community needs assessment and the Photovoice process were used to guide the coalition action planning process.

Application of the Broadened Understanding of Community Context. Contextual data gathered from the community readiness assessment and the Photovoice process, were used to guide the coalition's brainstorming and action planning. Prior to the planning session, the facilitator organized the issues selected through Photovoice by the participants and the contextual considerations for the coalition action plan. As a result, brainstorming and action planning focused on capacity building for the community coalition, building partnerships in the county

and state and providing educational programming for the community at large. The facilitator

used the notes from the brainstorming and action planning session to create a Community

Coalition Action Plan (Appendix K). The action plan was reviewed by the coalition and passed

via majority vote.

        Context within the Community Coalition. Phase II of the document review consisted

of an external evaluation of the Community Coalition utilizing documents from January, 2011

through August, 2012. The Coalition's evaluation included the recognition of the Photovoice

project and a summary of the key informant interviews associated with this research. The

objective of the evaluation was to assess, reflect, and inform the Coalition of its strengths,

identify areas of challenge and weakness, and provide feedback to empower the Coalition to

implement coalition structural and process changes to improve quality performance (Coalitions

Work, 2012). Guided by CCAT (Community Coalition Action Theory), the evaluation results

reported that the Coalition is approaching the completion of the formation stage and have

simultaneously begun the implementation stage. The evaluation specifies that most of the

implementation tasks occurred in 2012, including the assessment of the community through key

informant interviews and coalition action planning (Coalitions Work, 2012). The increase in

implementation tasks in 2012, may be responsible for the increase percentages in the comparison

of the Coalition's effectiveness inventory completed in January, 2011, and again in August,

2012. The coalition members used this inventory to rate their staff, leaders, lead agency,

members, coalition structures and processes (Coalitions Work, 2012).

    The review of the external evaluation provided additional contextual information for

consideration of organizational empowerment.

Perceived Control and Organizational Empowerment: Qualitative

As previously mentioned the perceived control scale assesses three levels of perceived control (personal, organizational, and community) and provides a measurement of community empowerment (Isreal, et. al., 1994). In this section of the results, the following information will be reported: 1) the remaining research questions will be addressed; 2) the frequencies for pre- and post- survey demographics and activity participation will be illustrated; and 2) the quantitative survey results will be discussed.

Establishing Levels of Organizational Empowerment. Organizational empowerment cannot be achieved in a short period of time. Rather, it takes commitment to a long-term process (Israel, et. al., 1994). The process of empowerment at the organizational level, however, is linked with empowerment at the individual level through personal development (Israel, et. al., 1994; Shultz, et.al., 1995; Peterson & Zimmerman, 2004; Griffith, et. al., 2008). By examining the documents provided for this study using the three components of empowerment at the individual level (Personal efficacy and Competence; Sense of Mastery and Control; and a Process of Participation to Influence Institutions and Decisions), a baseline was considered. Using the baseline information along with the feedback from photovoice and action planning participation has provided an understanding of process through which empowerment is to be achieved and the coalition member's perception of organizational empowerment.

Based on the document review and the individual components of organizational empowerment, the community coalition's empowerment level has increased since its inception through the end of 2011. In some areas, there is more of an increase than others. Reviewing the three individual level components, the coalition has made the most improvement in having a participatory process for members to influence decisions. Through the years, they have created

and adopted bylaws, elected leadership, participated in the planning of events and provided the support for their coalition facilitator to assist the school system with a grant application. The coalition member's personal efficacy and competence has also improved. The coalition facilitator and project coordinator provided numerous trainings for the coalition member's development of their leadership skill and their knowledge of diabetes prevention and management. Most the trainings were focused on diabetes which is evident when examining the individual empowerment component of sense of mastery and control. While a sense of ownership has increased, the coalition members have not reached the point where they express or display full ownership of the coalition.

Q3. Does participation in Photovoice change the coalition member's perception of organizational empowerment?

Photovoice Participation and Organizational Empowerment. Through the follow-up interviews, the coalition members provided their feedback on the Photovoice experience. Through this feedback, the participants shared what they learned, what they thought was important and what they would have changed in the process. One of the coalition members (county representative) who participated in both the Photovoice and the coalition's action planning said that her experience was,

> "Not necessarily hard, but a different way of thinking about it since I hadn't really…it's not something that I have any experience with before. So it was kind of enlightenment and educational."

Another coalition member (county representative) who has been active since the formation of the coalition, has had leadership roles within the organization and participated in both photovoice and action planning focused on the idea that as a result of the processes they will be able to provide needed services to the community.

"…just to be able to see there are good things in the community that we can build on, but there are things in the community we need to work on in order to make the strategy affective for people, you know…and to know that my contribution will be part of a bigger picture that will help to make out community better was a kinda thrilling thing to do. I was glad to participate."

The responses from the coalition members are examples of empowerment at the individual level, thus leading to empowerment at the organizational level. Their comments illustrated their perception of personal efficacy and mastery through a participatory process.

Q4. Does participation in action planning change the coalition member's perception of organizational empowerment?

Action Planning and Organizational Empowerment. The experience with brainstorming and action planning was seen by interviewees as beneficial. Having the opportunity to make decisions and be a part of the Coalition's planning process was viewed as a great learning opportunity and an experience that increased the awareness of the need for additional resources in the county. One of the participants (county representative) who participated in both activities and whose husband is diabetic responded,

"I think it [brainstorming/action planning] was beneficial because it's kind of like Photovoice. It made me think about what kind of resources we have in the community and things that we don't have and especially the public awareness of the need for more education about diabetes."

Another participant (community member) who participated in both activities, but only participated in the discussion portion of Photovoice, provided feedback on her experience with brainstorming and action planning as a coalition. She shared that she enjoyed the planning experience. When asked why she enjoyed it, she provided the following response:

"Uh, because it was fun. I had never been in nothing like that before so it was fun to me, making plans and I really enjoyed. You know, sitting there discussing it and making the decisions we made."

Based on the components of empowerment at the individual level, these responses support the perception that participation in action planning increases organizational empowerment. This activity was a planning participatory process where the coalition members made all of the decisions. This process facilitated both a sense of mastery and control and personal efficacy and competency in action planning.

Q5. Does participation in both Photovoice and action planning change the coalition member's perception of organizational empowerment?

Organizational empowerment. The coalition members suggested that they were able to identify the good in their community (eg. previously identified county resources and opportunities) upon which they could make strides toward preventing diabetes and providing resources for diabetes Management in their county. One of the coalition members (county representative) who is a leader in the community and the organization provided additional feedback on her overall experience.

> "A great learning experience, you know. And having gone through it and seeing how the process was organized gives you insight into and background for making other changes for doing other things to make the community better. So, I think it was a learning experience for us all and that the skills that we learned we can apply to other problems in our communities and other aspects of our lives."

She continued by giving her opinion on the need for the coalition in the community:

> "We have a contingent in our community that needs some assistance that we've not really been able to provide before and that there are some possibilities for help out there, but we are going to have to pursue it ourselves."

The feedback provided by this participant illustrated all three components of individual empowerment which will potentially support the potential increase in and perception of organizational empowerment.

Perceived Control and Organizational Empowerment: Quantitative

Frequencies: Pre-Test Demographics. At the completion of the pre-test, 12 surveys were collected. Of those surveys, 100% of the survey participants were female with 83.3% self-identifying as Black or African-American and 16.7% as non-Hispanic White. 41.7% of respondents reported they had a High School diploma/GED, 50% of the respondents had a Master's degree or less than a high school education (25% & 25%, respectively) and 8.1% reported some college. 41.7% of the participants were retired, 33% unemployed, 16.7% full-time and 8.3 part-time. The largest age group was 66-74 at 41.7%. The second largest age group was 56-65(33.3%), followed by those over 75 (16.7%). The smallest represented group was ages 26-35 (8.3%). Refer to table 2.

Frequencies: Post-test Demographics. Following the post-test, 11 surveys were collected. As with the pre-test, 100% of the participants were female. 90.9% of the respondents self-identified Black or African-American, while 9.1% self-identified as non-Hispanic White. 72.8% of respondents reported the age groups of 56-65 or 66-74 (36.4 & 36.3, respectively), 18.2% reported over age 75 and 9.1% between ages 36-45. Those who had attained a High School diploma or GED represented 45.5% of respondents; those who held master's degrees represented 27.3% of the respondents; 18.2% reported less than high school; and 9.1% reported some college. 63.6% of the respondents were retired and the remaining 36.4% reported their current employment status as part-time (9.1%), full-time (9.1%), student (9.1%) or unemployed (9.1%). Refer to table 2.

Table 2: Pre- and Post-test demographics

Demographic	Pre-Test (n=12)	Post-Test (n=11)
Sex		
Female	100%	100%
Age		
26-35	8.3%	9.1%
56-65	33.3%	36.4%
66-74	41.7%	36.4%
Over 75	16.7%	18.2%
Education Level		
Less than High School	25.0%	18.2%
High School/GED	41.7%	45.5%
Some College	8.3%	9.1%
Master's Degree	25.0%	27.3%
Employment Status		
Part-Time	8.3%	9.1%
Full-Time	16.7%	9.1%
Retired	41.7%	63.6%
Student	---	9.1%
Unemployed	33.3%	9.1%
Race/Ethnicity		
Black of African-American	83.3%	90.9%
Non-Hispanic White	16.7%	9.1%

Frequencies: Activity participation. Included on the post-test was a question asking the participants to identify which activities they participated in throughout the study. The responses were as follows: Brainstorming/Action Planning 18.2%; Photovoice and Brainstorming/Action Planning 36.4%; and Neither 36.4%.

Perceived Control Survey Results: As previously noted in Chapter 2, this research was qualitative in nature thus primarily exploring the research questions through qualitative inquiry. Due to the relevance of the survey tool to this study, it was used as a secondary method despite the low sample size. Exhausting all appropriate statistical testing, the sample size for this study lead to inconclusive results for the quantitative measures.

CHAPTER 5

SUMMARY DISCUSSION AND CONCLUSIONS

Summary

The purpose of this mixed methods case study was to examine the potential increase in 1) awareness of the social determinants of health, 2) the understanding of context and 3) organizational empowerment within a Rural Diabetes Coalition in Southeast Georgia. Engaging the coalition through these processes will potentially facilitate change in the county to impact long term diabetes outcomes. This case study was conducted by engaging the diabetes community coalition with Photovoice and coalition action planning; completing a community assessment through key interviews; and documenting these processes through quantitative and qualitative methods. The overall results showed an expanded view of context and the determinants that affect the county's health outcomes.

The quantitative methods, a four part likert scale pre/post-test, were used to measure the change in perceived control at the personal, organizational and community levels. The pre-test was completed by 12 community coalition members prior to the initiation of Photovoice. The post-test was completed by 11 community coalition members at the culmination of qualitative data collection, with the exception of the coalition follow up interviews. The qualitative methods: document review of 256 distinct documents, Photovoice implementation with six community coalition members, eight key informant interviews, brainstorming/action planning with ten community coalition members and five follow up interviews were used to gain a perspective on context and the community's readiness for change. Additionally, this study examined the impact of Photovoice and planning on the coalition's perceived control and sense of empowerment.

The qualitative data were analyzed using participant guided thematic analysis and content analysis which was supported by statistical analysis software ATLAS.ti and matrices. The quantitative data were analyzed using four statistical procedures: the Kruskal-Wallis test, the Mann-Whitney U test, computing variables and computing and comparing means. The Kruskal-Wallis test was chosen to focus on the post survey data to examine if participants' responses were dependent upon their participation in study activities. The Mann-Whitney U test was used to compare the differences between two non-paired or independent samples and the pre- & post-test. After running the initial tests, two additional variables were computed to test whether there was a significant difference between the pre- and post-test based on the coalition or community focused questions. Finally, the means for the pre- and post-test were computed and compared to examine if there was a change.

Discussion

Social Determinants of Health and Context. Findings from this study show an increased awareness of the SDH and a broadened understanding of context among the community coalition members as a result of participation in Photovoice and community action planning.

The increased awareness of the SDH is illustrated through the document review, the Photovoice group discussions and the coalition members' in-depth interviews. Phase I of the document review provided the context of and baseline for the coalition member's awareness of the SDH. The Photovoice group discussions revealed an increased awareness which was supported by the responses provided through the in-depth follow up interviews. This is important because of the potential impact the community coalition and its members can have on addressing the SDH associated with diabetes prevention and management in their county. According to the

literature, understanding the impact of the SDH will lead to the motivation (or empowerment) of communities to address the underlying causes of health and potentially affect policy change (Thunhurst, 2006; Gould, Mogford & DeVoght, 2010). This increased awareness will not only encourage communities to act, but will also build the support needed for policy interventions such as Health in All Policies (HiAP) that address population health rather than only individual health (Ministry of Social Affairs and Health, 2006; Puska, 2007; Kickbusch, et. al., 2008; Gollust, et. al, 2009).

The broadening of the understanding of context was demonstrated through the key informant interviews, the Photovoice group discussions and the brainstorming and action planning session. The key informant interviews provided the context for this rural community through the common thread of responses focused on the county's devastating economic decline and loss of industry, high illiteracy rates and lack of Diabetes knowledge. Photovoice provided the opportunity for the coalition members to observe the same rural community through a different lens. This enabled the participants to gain new perspectives and understanding of their community or their "lived" context. This information was then used, along with the photovoice themes, to create the coalition's community action plan thus demonstrating the importance of addressing health outcomes based on context.

Perceived Control and Empowerment. Based on the qualitative findings, this study has shown an increase in perceived control and organizational empowerment, similar to the individual empowerment described in the literature (Wang & Burris, 1994; 1997; Aronson, et.al., 2006; Strack, et. al., 2010; Catalani &Minkler, 2009). While the quantitative findings were inconclusive, other studies have shown the significant findings with larger sample sizes. Romero, et. al. (2006) combined 10 items from the perceived control scale (Israel, et. al., 1994) with

additional questions creating a pre/post-test measuring empowerment (perceived control), collective efficacy, self-efficacy and political efficacy among 308 women. Their statistically significant results suggest the potential for different outcomes based on sample size. An additional contrasting view of the quantitative results is the probability of previously existing high levels of perceived control and empowerment among the coalition members and the Coalition. Over the course of three years, the coalition members have participated in capacity building and diabetes trainings as outlined in their external evaluation. This may have increased their sense of perceived control and organizational empowerment. If the perceived control was high prior to participation in Photovoice and brainstorming/action planning, then statistically insignificant findings are conceivable.

Evaluation through the Community Coalition Action Theory (CCAT)

To further understand how the coalition functioned and its implications for organizational empowerment and community change, the CCAT will be used to discuss the coalition associated with this study (Butterfoss & Kegler, 2009; Luque, et. al., 2011; Butterfoss and Kegler, 2012).

Stages of Development. Since its inception, this community coalition has focused on Diabetes Prevention and Management in its community. They have created bylaws, a mission statement, visions and objectives. Additionally, they have created an action plan as a result of the participation in this study. Prior to involvement in this study, the coalition had goals and an action plan but they were created by staff based on their perceptions of what the coalition wanted. The coalition is currently implementing short term strategies and are working to potentially address long term outcomes, thus placing them in the maintenance stage (Butterfoss & Kegler, 2012).

Lead Agency or Convener Group. When the organization was convened, the leading agency was Georgia Southern University. One of the professors who was active in the county applied for a one year grant through the South Eastern African American Center of Excellence in the Elimination of Disparities in Diabetes (SEA-CEED). As a REACH U.S. (Racial and Ethnic Approaches to Community Health) location, the purpose of SEA-CEED was to eliminate health disparities related to diabetes prevention and control and to prevent and reduce risks and complications related to hypertension, stroke and amputations in African Americans at risk or with diabetes in Alabama, the District of Columbia, Florida, Georgia, Maryland, Mississippi, North Carolina, South Carolina, Tennessee and Virginia with African American populations greater than 20% (SEA-CEED, 2012). In 2010, the Georgia Society for public Health Education, a chapter of the Society for Public Health Education (SOPHE), assumed the role as lead agency through the receipt of a five year SOPHE grant to build chapter and coalition capacity. GASOPHE's mission is Advancing the health education profession in Georgia through professional development, advocacy, collaboration, and networking. Through the grant, the lead agency provides funding for coalition activities and two staff members.

Coalition Membership. The coalition was formed with 10 grassroots members and has expanded to 31 members who include the addition of professional members and other members from the community. The number of active members in the coalition tends to fluctuate, but overall remains low compared to the actual roster. The coalition member's sense of ownership and control and of the organization has improved since the coalition's founding, but the success of the coalition is reliant upon the members and their actions. Thus, the need for continuous membership capacity and leadership skill-building as well as the use of participatory processes is clear.

Coalition Operations and Processes. The coalition members try to include all present members in all decision making. At times this is difficult because some members opt to just attend the meeting and not provide their opinions. They utilize a modified form of Roberts Rules of order in that they have a voting structure, hold elections and record minutes. Additionally, the coalition members complete a meeting check-up to inform the staff of their perceptions on the operation of the coalition meetings. Currently, the staff analyzes the meeting check-up forms and sends monthly meeting reminders to the members. In order to support the sustainability of the coalition, the members need to be involved in all of the organization's processes.

Leadership and Staffing. The staff associated with the coalition have been provided through both of the grants associated with the coalition. The first grant provided the coalition facilitator. Through the GASOPHE grant, there were two additional staff members; a project coordinator and a grant assistant. Due to funding requests by the grantor, the coalition facilitator and project coordinator positions were collapsed into one position, now referred to as the program coordinator. The staff provides administrative support and technical assistance. The leadership of the coalition is currently made up of an Interim Chair and a Secretary. The roles to be filled in the bylaws are Chair, Vice-Chair, Secretary and Assistant Secretary. The coalition will have an election for new members in January 2013 and will fill the voids in their leadership team.

Coalition structures. The members have clearly defined documents outlining the leadership responsibilities. GASOPHE has provided job descriptions for each of the positions provided by the grant.

Pooled Member and External Resources. All of the members bring individual skills and invaluable knowledge of the community in which they are based. Additionally, there are

professional members who bring other resources to the table such as meeting space, storage facilities, marketing products and educational materials. The current funding for the coalition will end in September of 2013. The coalition is currently working to become a sustainable organization and is looking for additional funding opportunities.

Assessment and planning. As a result of participation in this study, the coalition members have recently gone through the action planning process and are currently implementing their 2012-2013 action plan. The coalition members seem to be satisfied with current functioning of the coalition, but would like to see the coalition have a bigger impact in the community.

Implementation of Strategies. The coalition is currently implementing their 2012-2013 action plan which has strategies that will potentially affect long and short term health outcomes in their community.

Community Change and Health Outcomes. The coalition's main focus, in the past, had been the annual fair in their community where they have provided educational materials focused on diabetes prevention and management. They coalition hopes to have a larger impact on their community by including support groups and educational consulting.

Community Capacity. Since its inception, the members have participated in coalition development trainings and diabetes prevention and management focused trainings. A few of the members have also attended national conferences focused on health education. This has provided additional capacity building opportunities.

Using the CCAT to evaluate the coalition is an opportunity to identify its strengths and weakness to help facilitate their sustainability. In addition to some of the opportunities described above, this coalition should also consider re-establishing their previous partnership with the local university. Working with the academic community can provide additional resources including

financial support and research and evaluation expertise. While there is a universal history of academic institutions exploiting communities thus leading to lack of trust (Abdulrahim, et. al., 2010) if the collaboration is a true partnership, it can be beneficial to all partners involved.

Strengths and Limitations

The strengths of this study are:

1. This study used participatory methods and actively engaged the community coalition members throughout the processes

2. This study afforded coalition members the opportunity for their voices to be heard

3. This study was based in rural southeast Georgia, thus adding to the rural health literature

The limitations of this study are:

4. Lack of participation on the pre- & post-tests from the entire coalition. During the time of data collection, there were 31 members on the roster for the coalition.

5. The pre- & post-test were tested as independent samples rather than paired samples

6. The photovoice assignments did not have specific completion dates, nor did they require a minimum number of photos

7. Low participation from the community coalition members during brainstorming and action planning due to low attendance during the time this was completed.

Public Health Implications

The findings from this study can be used to actively engage communities through dialogue focused on context, the SDH and community change using participatory methods such

as Photovoice and the methods designed within the community readiness model. By using the participatory methods from this study, communities could be empowered but will have the knowledge and understanding of how context affects health (Aronson, et. al., 2006). Empowering organizations can provide opportunities for individual growth and access to the decision making process. Additionally, empowered organizations have influence over their environments and the ability to affect the distribution of social and economic resources (Schulz, et. al., 1995).

Documenting this process may also provide an opportunity for partnership building with community groups, academia, and government agencies to utilize innovative strategies such as Health in All Policies (Kickbusch, et. al., 2008) and create sustainable programming to positively affect long term public health outcomes.

The findings from this research will also provide additional support for community coalitions and their role in working towards healthier communities. As an organization comprised of grassroots and professional members, community coalitions create opportunities for collaboration with public health agencies and foster a higher sense of community ownership (Butterfoss & Kegler, 2012).

Recommendations for Future Research

1. Using Photovoice to teach communities about the social determinants of health
2. Using Photovoice to explore and identify needed policy change in communities
3. Further study the use of Photovoice Action Planning as a tool to empower organizations

4. Compare community coalitions (eg. large vs small; rural vs; urban) and their use of participatory methods such as Photovoice and the Community Readiness Model and its effects on organizational empowerment

5. Further study the impact of participatory methods on organizational empowerment and the potential impact on health outcomes (short term and long term)

6. Additional studies should focus on measuring perceived control on individual, community and organizational levels within low resourced communities and rural areas

7. More studies should focus on the intersection of the social determinants of health and context to efficiently address health needs in rural communities

Conclusions

The quantitative results were inconclusive thus making it difficult to draw concrete conclusions to support the research questions. The qualitative results, however, did support the literature and indicate that the chosen participatory methods have increased organizational empowerment in this community coalition and have described a process which expanded the understanding of context and the social determinants to support the readiness for change. On a larger scale, community based participatory research such as this will benefit from focusing on the SDH and their manifestation in a multitude of communities across the nation and the world. The deliberate focus of the SDH could potentially build the support and human power necessary to reverse the unjust and unfair policies and practices revealed through the SDH across the social ecology; thus creating situations that can support equity in health.

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APPENDIX

APPENDIX A

DEFINITION OF TERMS

Coalition – An organization of diverse interest groups that combine their human and material resources to effect a specific change that members are unable to bring about independently (Butterfoss, 2007).

Community-based Coalitions – {For the purpose of this dissertation} [This type of coalition is made up] of professional and grassroots members are formed to influence more long-term health and welfare practices for their community, for example the Smoke Free tobacco coalitions. Community ownerships is higher in these groups, but external efforts are more likely to provide needed resources (Butterfoss, 2007).

Community Readiness Model: Creates community change while integrating the culture of a community, the existing resources and the level of readiness in order to move effectively address an issue (Plested, et. al., 2009).

Determinants of Health: Factors that contribute to a person's current state of health. These factors may be biological, socioeconomic, psychosocial, behavioral, or social in nature. Scientists generally recognize five determinants of health of a population: Biology and genetics (Examples: sex and age); Individual behavior (Examples: alcohol use, injection drug use (needles), unprotected sex, and smoking); Social environment (Examples: discrimination, income, and gender); Physical environment (Examples: where a person lives and crowding conditions); and Health services (Examples: Access to quality health care and having or not having health insurance) (CDC, 2011).

Ecological Model: Recognizes the influence of social and environmental factors on health by describing interpersonal, community, institutional and public-policy influences on individual health behaviors (Harris, 2010).

Health Disparities – Health disparities are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States (Carter-Pokras & Baquet, 2002).

Health Equity – Health equity is the realization by ALL people of the highest attainable level of health. Achieving health equity required valuing all individuals and populations equally, and entails focused and ongoing societal efforts to address avoidable inequalities by [ensuring] the conditions for optimal health for all groups, particularly for those who have experienced historical or contemporary injustices or socioeconomic disadvantage (Jones, Hatch & Troutman, 2009).

Health Inequities – *S*ystematic, avoidable unfair and unjust differences in status and mortality rates and in the distribution of disease and illness across population groups. They are sustained overtime through generations and beyond the control of the individual (Troutman, 2007).

Photovoice – A process by which people can identify, represent, and enhance their community through a specific photographic technique. It entrusts cameras to the hands of people to enable them to act as recorders, and potential catalysts for change, in their own communities (Wang, 1997).

Social Determinants of Health (Centers for Disease Control and Prevention) – The complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world (CDC, 2011).

Social Determinants of Health (World Health Organization) – The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries (WHO, 2011).

Community Stake Holders/Key Informants- These individuals are able to provide information regarding issues in the community and may have special insight because of their professional expertise or their specific tie to the community. Informants may include elected officials, institutional representatives, public service organizations leaders, professionals in a specific service area or volunteer leaders (Butterfoss, 2007).

Upstream vs. Downstream – Upstream addresses the underlying causes of ill health; Downstream addresses the consequences of ill health (Thunhurst, 2006).

APPENDIX B

COMMUNITY COALITION ACTION THEORY:
CONSTRUCTS AND PROPOSITIONS

CONSTRUCT	DEFINITION
Stages of Development	The specific stages or phases that a coalition progresses through from formation to implementation to maintenance to institutionalization. Coalition may recycle through stages more than once or as new members are recruited, plans are renewed, and or new issues are added.
Community Context	The specific factors in the community that may enhance or inhibit coalition function and influence how the coalition moves through its stages of development. These factors include: history of collaboration, politics, social capital, trust between community sectors and organization, geography, and community readiness.
Lead Agency or Convening Group	The organization that response to an opportunity, threat or mandate by agreeing to convene the coalition; provide technical assistance, financial or material support; lend its credibility and reputation to the coalition; and provide valuable networks/contacts.
Coalition Membership	The core group of people who represent diverse interest groups, agencies, organizations, and institutions and are committed to resolving a health or social issue by becoming coalition members.
Processes	The means by which business is conducted in the coalition setting by developing clear processes that facilitate staff and member communication, problem solving, decision making, conflict management, orientation, training, planning, evaluation, and resource allocation. These processes help create a positive organizational climate in which the benefits of participation outweigh the costs.
Leadership and Staffing	The volunteer leaders and paid staff with the interpersonal and organizational skills to facilitate the collaborative process and improve coalition functioning.
Structures	The formalized organizational arrangement, rules, roles and procedure that are developed in a coalition to maximize its effectiveness. These include: vision and mission statements, goals and objectives, an organizational chart, steering committee and work groups, job descriptions, and meeting schedules.
Pooled Member and External Resources	The resources that are contributed or elicited as in-kind contributions, grants, donations, fund-raisers, or dues from member organizations or external sources that ensure effective coalition assessment, planning and implementation strategies.
Member Engagement	The satisfaction, commitment, and participation of members in the work of the coalition.
Collaborative Synergy	The mechanism through which coalitions gain a collaborative advantage by engaging diverse members and pooling member, community and external resources.
Assessment and Planning	The comprehensive assessment and planning activities that make successful implementation of effective strategies more likely.
Implementation Strategies	The strategic actions that a coalition implements across multiple ecological levels that make changes in community policies, practices and environments more likely.
Community	The measureable changes in community policies, practices, and environments that

Change Outcomes	may increase community capacity and improve health or social outcomes.
Health/Social Outcomes	The measure changes in health status and social conditions of a community that are the ultimate indicators of coalition effectiveness.
Community Capacity	The characteristics of communities that affect their ability to identify, mobilize, and address social and public health problems. Participation in a coalition may enhance these characteristics which include citizen participation and leadership, skills, resources, social and interorganizational networks, sense of community and power.
CONSTRUCT	**PROPOSITION**
Stages of Development	1. Coalitions develop in specific stages and recycle through these stages as new members are recruited, plans are renewed, and or new issues are added. 2. At each state, specific factors enhance coalition function and progression to the next stage.
Community Context	3. Coalitions are heavily influenced by contextual factors in the community throughout all stages of development.
Lead Agency or Convening Group	4. Coalitions form when a lead agency or convening group responds to an opportunity, threat, or mandate. 5. Coalition formation is more likely when the lead agency or convening group provides technical assistance, financial or material support, credibility, and valuable networks/contacts. 6. Coalition formation is likely to be more successful when the lead agency or convening group enlists community gatekeepers to help develop credibility and trust with others in the community.
Coalition Membership	7. Coalition formation usually begins by recruiting a core group of people who are committed to resolving the health or social building. 8. More effective coalitions result when the core group expands to include a broad constituency of participants who represent diverse interest group and organizations.
Processes	9. Open and frequent communication among staff and members helps make collaborative synergy more likely by engaging members and pooling resources. 10. Shared and formalized decision making helps make collaborative synergy more likely by engaging members and pooling resources 11. Conflict management helps make collaborative synergy more likely by engaging members and pooling resources.
Leadership and Staffing	12. Strong leadership from a team of staff and members improves coalition functions and makes collaborative synergy more likely by engaging members and pooling resources. 13. Paid staff make collaborative synergy more likely by engaging members and pooling resource.
Structures	14. Formalized rules, roles, structures, and procedures improve collaborative functioning and make collaborative synergy more likely by engaging members and pooling resources.
Member Engagement	15. Satisfied and committed members will participate more fully in the work of the coalition.
Pooled	16. The synergistic pooling of member and external resources prompts

Member and External Resources	comprehensive assessment, planning and implementation of strategies.
Assessment and Planning	17. Successful implementation of effective strategies is more likely when comprehensive assessment and planning occur.
Implementation of Strategies	18. Coalitions are more likely to create change in community policies, practices, and environments when they direct interventions at multiple levels.
Community Change Outcomes	19. Coalitions that are able to change community policies, practices and environments are more likely to increase capacity and improve health/social outcomes.
Health/Social Outcomes	20. The ultimate indicator of coalition effectiveness is the improvement in health and social outcomes
Community Capacity	21. By participating in successful coalitions, community members and organizations develop capacity and build social capital that can be applied to other health and social issues.

APPENDIX C

LETTER OF SUPORT FOR THE COMMUNITY COALITION

Jenkins County Diabetes Coalition

November 17, 2011

Nandi Marshall
Doctoral Candidate
Jiann-Ping Hsu College of Public Health
Georgia Southern University
Statesboro, GA 30460

Dear Mrs. Marshall:

On behalf of the Jenkins County Diabetes Coalition (JCDC), I am pleased to provide this letter in support of your dissertation work with our coalition. The coalition is looking forward to working with you and is excited about your proposed project.

We believe that your proposed project to create an action plan using *Photovoice* and community interviews fits in line with the next steps of the coalition. This project will introduce us to new tools that we can use in the future and will help us to continue to identify health issues in our community.

As the interim Chair for the JCDC, I am looking forward to working with you and the coalition to make this a success.

Sincerely,

Pamelia Dwight

dwightpam@bellsouth.net
478.494.7217

APPENDIX D

LETTER OF SUPPORT FROM THE SOCIETY FOR PUBLIC HEALTH EDUCATION

SOCIETY FOR PUBLIC HEALTH EDUCATION

Global Leadership for Health Education & Health Promotion

October 25, 2011

Georgia Southern University Institutional Review Board
Office of Research Services and Sponsored Programs
Georgia Southern University
P.O. Box 8005
Statesboro, GA 30460-8005

Dear Georgia Southern University Institutional Review Board:

I am writing this letter in support of Nandi Marshall, MPH, CHES, DrPH(c) and her dissertation IRB application at Georgia Southern University. It has been my pleasure to work with Ms. Marshall during the last several years on initiatives at the Society for Public Health Education (SOPHE), which have helped advance SOPHE's mission and the overall health education profession.

Ms. Marshall has made significant contributions to the field of environmental health promotion as an member, fellow, and leader. We are particularly indebted for her professional service in advancing SOPHE's health disparities initiatives. For the last three years, she has served as chair of SOPHE's Health Disparities Community of Practice. In this role, she provided leadership to SOPHE members in catalyzing the exchange of research, resources, and best practices to bridge the gap between health disparities and health education, both through online portals (e.g. webinars, blogs, listservs) and through face-to-face roundtables at SOPHE conferences. In 2009, Ms. Marshall was awarded the SOPHE's Vivian Drenckhahn Scholarship, which provides support to full-time students in their pursuit of educational and professional development in health education. Ms. Marshall also has served on the Georgia SOPHE Chapter Executive Board as the Membership chairperson.

Founded in 1950, SOPHE provides leadership to the profession of health education and contributes to the health of all people and the elimination of disparities through advances in health education theory and research; excellence in professional preparation and practice; and advocacy for public policies conducive to health. With more than 4,000 National and chapter members, SOPHE is the only independent professional organization devoted exclusively to health education and health promotion.

In summary, Ms. Marshall continues to build a legacy of outstanding professional and scholarly contributions that benefit the health education profession and advance the public's health. Her service to SOPHE in health disparities promotion has been exceptional. We appreciate Ms. Marshall's interest in the Jenkins County Diabetes Coalition and Georgia Southern University for your support in allowing Ms. Marshall to lend her time and talents to SOPHE Health Equity Project.

Sincerely,

M. Elaine Auld, MPH, MCHES
Chief Executive Officer

APPENDIX E

PERCEIVED CONTROL SCALE

Table 1. Perceived Control Scale Items: Multiple Levels of Empowerment Indices

For the first five items, the interviewer asked the participants to "please answer the following questions thinking about the organization that you identified as most important to you. Do you agree strongly, agree somewhat, disagree somewhat or disagree strongly?"

1. I can influence the decisions that this organization makes.

2. This organization has influence over decisions that affect my life.

3. This organization is effective in achieving its goals.

4. This organization can influence decisions that affect the community.

5. I am satisfied with the amount of influence I have over decisions that this organization makes.

The interviewer then commented that "I have been asking about your participation in specific organizations. I am also interested in how much influence you think you have in your life and in your community. I am going to read you a list of statements. For each one, please tell me how strongly you agree or disagree."

6. I have control over the decisions that affect my life.

7. My community has influence over decisions that affect my life.

8. I am satisfied with the amount of control I have over decisions that affect my life.

9. I can influence decisions that affect my community.

10. By working together, people in my community can influence decisions that affect the community.

11. People in my community work together to influence decisions on the state or national level.

12. I am satisfied with the amount of influence I have over decisions that affect my community.

Indices

Perceived control at the individual level includes items 6 and 8 above (alpha = .66).

Perceived control at the organizational level includes items 1 through 5 above (alpha = .61).

Perceived control at the community level includes items 7, 9, 10, 11, and 12 above (alpha = .63).

Perceived control at multiple levels includes all 12 items above (alpha = .71).

subscales correspond to perceived control at the individual level (the sum of items 6 and 8 in Table 1, alpha = .66), the organizational level (the sum of items 1 through 5, alpha = .61), and the community level (the sum of the values for items 7, 9, 10, 11, and 12, alpha = .63). A multilevel scale that includes all 12 items was also created (alpha = .71). Correlations among the three subscales

APPENDIX F

PERCEIVED CONTROL SCALE SURVEY (Pre-Test)

Thank you for taking this survey. There are <u>three (3) parts</u> to this survey. Please answer the questions to the best of your ability. Please remember, there is no right or wrong answer for these questions.

PART 1

Please circle one answer for the following questions:

1. Are you Male or Female?

   Male   Female

2. What is your age?

18-25   26-35   36-45   46-55   56-65   66-74
        Over 75

3. What is the highest level of education you have completed?

Less than High School   High School/GED   Some College   2-Year Degree
(Associates)

4-Year Degree (Bachelors)   Master's Degree   Doctoral Degree

4. What is your current employment status?

Part-Time   Full-Time   Retired   Student   Unemployed

5. What is your Race/Ethnicity?

American Indian or Alaska Native   Hawaiian or Other Pacific Islander   Asian or Asian
American

Black or African American   Hispanic or Latino   Non-Hispanic White

PART 2

Please answer the following questions thinking about the Jenkins County Diabetes Coalition.

1) I can guide the choices that the coalition makes

   Strongly Agree   Somewhat Agree   Somewhat Disagree   Strongly Disagree

2) The coalition has influence over choices that affect my life

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

3) The coalition is successful in achieving its goals

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

4) The coalition can impact changes that affect the county

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

5) I am happy with the amount of power I have over choices that this coalition makes

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

(PART 3 is on the back)

PART 3

Please answer the following questions thinking about your life and your community.

6) I have control over the choice that affect my life

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

7) My community has influence over choices that affect my life

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

8) I am happy with the amount of control I have over choices that affect my life

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

9) I can impact choice that affect my county

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

10) By working together, people in my county can influence choices that affect the county

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

11) People in my county work together to influence decisions on the state or national level

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

12) I feel good about the amount of power I have over choices that affect my county

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

APPENDIX G

PHOTO RELEASE FORM

Consent to Publish Photos on **the Society for Public Health Education (SOPHE); Georgia Society for Public Health Education (GASOPHE); and Jiann-Ping Hsu College of Public Health's** *web site; use in* **publicly presented presentations; poster presentation or community meetings**

I/We give Nandi Marshall of Georgia Southern University permission to publish group or individual photos of me /my child on the Society for Public Health Education (SOPHE); Georgia Society for Public Health Education (GASOPHE); and Jiann-Ping Hsu College of Public Health's web site, in publicly presented presentations; poster presentation or community meetings. The purpose of the presentation will be to discuss the Photovoice process and other aspects of the associated research. I understand that my name or my child's first name will not appear in the presentation.

Photo ID _____
Name of individual photographed _____
☐ I am over the age of 18   ☐ I am 18 years old or younger

Signature _____

Parent or Guardian Signature(s)_____

Photo ID _____
Name of individual photographed _____
☐ I am over the age of 18   ☐ I am 18 years old or younger

Signature _____

Parent or Guardian Signature(s)_____

Photo ID _____
Name of individual photographed _____
☐ I am over the age of 18   ☐ I am 18 years old or younger
Signature _____

Parent or Guardian Signature(s)_____

APPENDIX H

CAMERA AGREEMENT FORM

Camera Agreement
Photovoice

I _____ acknowledge receipt of camera _____. I fully understand that this camera is to be used strictly for the Photovoice project. I agree to use the camera according to the instructions provided and will keep the camera in its protective case when not taking pictures. I will return the camera in perfect condition on _____. If I break or lose the camera, I understand that I am responsible for replacing the camera.

_____   _____

Participant's Name (please print)   Date

_____

Participant's Signature

_____   _____

Facilitator's Signature   Date

APPENDIX I

PHOTOVOICE ASSIGNEMTNS

Photovoice Assignment Sheet   Nandi Marshall – [contact information removed]

This Photovoice Project will have two (2) assignments and two (2) group discussions that will be completed by Tuesday, July 3, 2012. Below you will find instructions for each assignment as well as places to write in their due dates. Group discussion days will be the same date as the end date of that assignment. Please allow 1.5 hours for group discussion days.

Assignment #1

Challenges and Barriers

Assignment #1 will begin on Tuesday, May 29th and will end on _____.

During this assignment, you are asked to take pictures in Jenkins County of challenges and barriers related to preventing diabetes and/or managing diabetes. As you take pictures, be sure to write in your journal a description of what the photo looks like and why you took this picture. This will help when we select pictures to be presented to the entire coalition.

Assignment #1 Discussion Day and Time: _____

Notes:

_____

_____

_____

Assignment #2

Resources and Opportunities

Assignment #2 will begin on _____ and will end on _____.

During this assignment, you are asked to take pictures in Jenkins County of resources and opportunities related to preventing diabetes and/or managing diabetes. As you take pictures, be sure to write in your journal a description of what the photo looks like why you took this picture. This will help when we select pictures to be presented to the entire coalition.

Assignment #2 Discussion Date and Time: _____

Notes:

_____

_____
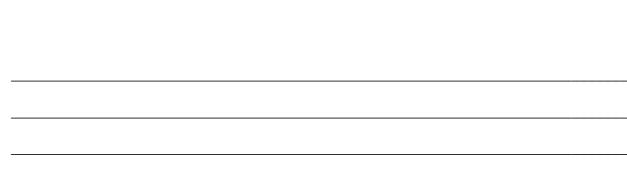
_____

APPENDIX J

KEY INFORMANT INTERVIEW QUESTIONS

A. COMMUNITY EFFORTS (programs, activities, policies, etc)
   AND
B. COMMUNITY KNOWLEDGE EFFORTS

1. Using a scale from 1-10, how much of a concern is Diabetes Prevention and Management in Jenkins County? Please Explain.

2. What services or efforts are available in Jenkins County to address Diabetes Prevention, Management and Treatment?

3. How long have these services or efforts been in Jenkins County?

4. What are the strengths of these services?

5. What are the weaknesses of these services?

6. How have these services been supported by the community?

7. Generally, does the community use these services? Please explain.

8. Using a scale from 1-10, how aware are people in Jenkins County of the services (1 being "no awareness" and 10 being "very aware")?

9. Please explain what the community knows of these services, such as what they provide and how to access them.

C. LEADERSHIP

10. Using a scale from 1-10, how much of a concern is Diabetes Prevention and Management to the leadership of Jenkins County? Please Explain.

11. How do the leaders in Jenkins County support current efforts? Please Explain.

12. How have leaders assisted in implementing these efforts?

13. Would the leadership support additional efforts? Please explain.

D. COMMUNITY CLIMATE

14. What is the community's attitude about Diabetes Prevention and Management?

15. What are the primary obstacles to obtaining services in Jenkins County?

E. KNOWLEDGE ABOUT THE ISSUE

16. How knowledgeable are community members about Diabetes prevention and Management? Please explain.

17. In Jenkins County, what type of information is available about Diabetes Prevention and Management?

18. Is local data on Diabetes Prevention and Management available for your community? If so, from where?

19. How do people obtain this information for your community?

F. RESOURCES FOR PREVENTION EFFORTS (time, money, people, space, etc)
20. What is the community's attitude about supporting efforts with people volunteering time, making financial donations and providing space?

21. Are you aware of any proposals or action plans that have been written to address the issues in your community?

22. Do you know if there are any evaluation efforts? If yes, on a scale from 1-10, how sophisticated is the evaluation effort? (with 1 being "not at all" and 10 being "very sophisticated")?

G. Additional Questions
23. How do you advertise your services to the community?

24. Would you be willing to serve as an advisory board member for the coalition?

APPENDIX K

COMMUNITY COALITION ACTION PLAN

GOAL#1	To reduce diabetes disparities in Jenkins County, Georgia through the development of a viable and active community based coalition.				
OBJECTIVE#1	Maintain active coalition participation as defined by the Jenkins County Diabetes Coalition bylaws and strategic plan.				
Strategies/ Activities Action steps must address: Who (Lead Role), What, How, Where (within Geographic Scope).	**Evaluation Indicators/Plan**	**Time Line** Time line speaks to When.			**Priority Area** (Capacity, Partnerships, policy, evidence, dissemination, evaluation)
Strategy 1: To actively recruit, engage and retain representatives from all sectors of the community (religious, government, schools, social services, private industry, media, etc) as active members of the Jenkins County Diabetes Coalition		10/ 1/12 to 2/28/13	3/1/13 to 5/31/13	6/1/13 to 9/30/13	
Action Step 1: Program Coordinator will facilitate the partnership development between GASOPHE and the JCDC.	• Monthly calls between GASOPHE ED & PC	X	X	X	Collaborative Partnerships
Action Step: 2. Program Coordinator will assess ongoing coalition needs through intermittent distribution and analysis of coalition effectiveness.	• Coalition needs documented • Year 3 Evaluation Report • Meeting checkup • Meeting minutes	X	X	X	Capacity building Evaluation
Action Step 4: Coalition, Program Coordinator, Advisory Group, GASOPHE Leadership will assist JCDC in ongoing identification and recruitment of coalition members.	• Baseline: September Roster and Active Members • Maintain Coalition Membership Workgroup	X	X	X	Collaborative Partnership Capacity

	• Additional coalition members identified and recruitment plan implemented. • Meeting minutes • Increased participation documented through sign in sheets and roster				Building
Action Step 5: Program Coordinator and GASOPHE Leadership will facilitate and maintain an Advisory Group for JCDC project made up of experts in GA public health, local health providers, business leaders and community members.	• Group members identified • Advisory group established • Meeting minutes • Sign in sheets and rosters	X	X	X	Collaborative Partnership Capacity Building
Action Step 6: The JCDC, with the assistance of the Program Coordinator and the Grant Assistant, will conduct regular monthly meetings and maintain active coalition efforts.	• Sign sheets and roster • Meeting minutes • Meeting checkup • COALITION EFFECTIVNESS INVENTORY • Documentation of coalition activities • Membership Survey	X	X	X	Capacity Building Evalution
OBJECTIVE#2	To increase the capacity among the Jenkins County Diabetes Coalition for diabetes prevention and management.				
Strategy 1: To train and educate Jenkins County Diabetes Coalition and advisory board members using a variety of tools and processes.		10/ 1/12 to 2/28/13	3/1/13 to 5/31/13	6/1/13 to 9/30/13	
Action Step 1: Program Coordinator will coordinate training of coalition and community workers with the Road to Health Toolkit .	• # of trainings held • # of Community workers trained to become Community Health Workers using RTH toolkit • Video and audio recording of training	X	X	X	Best Practices/ Evidence Based Evialuaton

	• Meeting minutes • Pre and post test				
Action Step2: Program Coordinator and GASOPHE Executive Director will coordinate an advisory board training.	• Participation in planned programs and events • Sign-in sheets • Meeting minutes • Video/audio recording of training • Using Coalitions Work training materials, Coalition Steering Committee created and officers selected, workgroups created	X	X	X	Capacity Building
Action Step 3: Program Coordinator will support the coalition's ongoing efforts to implement a leadership development program to assist with sustainability.	• Leadership succession process implemented JCDC Steering Committee selected • Leadership Development program implemented • Road to Health toolkit Community Health Worker training	X	X	X	Capacity Building
Action Step 4: JCDC, with assistance from the Program Coordinator and Grant Assistant, will disseminate information about Diabetes prevention/management and the JCDC's progress to the community and other interested parties.	• Monthly letters to coalition members • # of press releases in Millen News • # of flyers • # of education materials distributions • Church announcements • Social Media Plan (Website, Facebook, Twitter) • Monthly Column	X	X	X	Dissemination

	(Website, potentially Millen news) • Identify and Submit to local Newsletters				
Action Step 5: JCDC, with the assistance of the Program Coordinator and Grant Assistant, will develop reports on the coalition's progress.	• Reports developed and distributed.	X	X	X	Evaluation Dissemination
Action Step 6: The coalition will continue to build governance capacity	• Leadership training • Review and refine bylaws and mission statement • Review and implement governance recommendations from the Year 3 evaluation				
OBJECTIVE#3	The Jenkins Diabetes County Coalition will begin implementation of strategic plan to address diabetes prevention and management using evidenced based and best practice strategies.				
Strategy 1: JCDC will conduct activities utilizing Road to Health Toolkit and Community Readiness Model within the community to increase awareness of risk factors and the prevention and management of Diabetes as outlined within the strategic plan.		10/ 1/12 to 2/28/13	3/1/13 to 5/31/13	6/1/13 to 9/30/13	
Action Step 1: The JCDC, with support of the Program Coordinator will provide educational opportunities that increase the awareness of diabetes in the Jenkins County community.	• Resource guide developed. • Information placed in at least two locations in the county • Road to health toolkits • Reach out to Community Groups • Reach out to at least one key community	X	X	X	Dissemination Best Practices/ Evidence Based

	• stakeholder • Pedometer tracking • Educational Materials (eg. Brochures)				
Action Step 2: JCDC will expand and establish partnerships with local agencies and organizations to support activities and programs in the community.	• Baseline: Current # of existing partnerships • # of partnerships developed. • Strengthen at least 25% of current partnerships	X	X	X	Collaborative Partnership
Action Step 3: Program Coordinator with the JCDC will target policies for change or development, based on the results from implementation of the community readiness model	• Priority areas for policy/guideline development identified • Plans to guide year 5 activities	X	X	X	Policy, System & Environmental Change
Action Step 4: The JCDC, with the assistance of the Program Coordinator and Grant Assistant, will work to increase the coalition's visibility at the local, state and national level using their media plan	• Baseline: Assessment of current visibility • JCDC Website • JCDC on Social Media • Google Voice account • Branding Materials • Utilization of JCDC email • Attendance/Participation at local, state and national events • Connect with Jenkins County key stakeholders • Monthly Column	X	X	X	Dissemination
Action Step 5: JCDC will plan and implement programs and activities on diabetes prevention and management in the community in alignment with the strategic plan with the	• # of programs and activities conducted • # of press releases for programs and activities	X	X	X	Best Practices/ Evidence

support of the Program Coordinator and Grant Assistant.	• Program and activity attendance sheets • Program and activity evaluations using Road to Health toolkit and Community Readiness Model				Based
Action Step 6: JCDC with the support of the Program Coordinator and Grant Assistant will conduct quality improvement activities at all coalition programs, meetings and community activities.	• Meeting check ups • Event evaluation forms • Use of PDSA cycles (minimum of two times by 9/2013) • Documentation of process • Grant writing activities • Quality improvement reports	X	X	X	Evaluation
Action Step 7: JCDC with the support of the Program Coordinator will implement evaluation tools for coalition activities and programs.	• # of tools identified • # of tools developed • Documentation of process • Road to Health Toolkit Community health Worker implementation • Community Readiness Model activities	X	X	X	Evaluation
Action Step 8: Through the quality improvement process, make recommendations for revision of coalition programs, activities and evaluation for year 5.	• Meeting minutes • Develop lessons learned • Develop "how to" guide • Recommendations made to revise the logic model • Recommendations to revise performance indicators	X	X	X	Evaluation

APPENDIX L

PERCEIVED CONTROL SCALE SURVEY (POST-TEST)

Thank you for taking this survey. There are <u>four (4) parts</u> to this survey. Please answer the questions to the best of your ability. Please remember, there is no right or wrong answer for these questions.

PART 1

Please circle one answer for the following questions:

1.   Are you Male or Female?

Male   Female

2.   What is your age?

18-25   26-35   36-45   46-55   56-65   66-74
          Over 75

3.   What is the highest level of education you have completed?

Less than High School   High School/GED   Some College   2-Year Degree
(Associates)

4-Year Degree (Bachelors)   Master's Degree   Doctoral Degree

4.   What is your current employment status?

Part-Time   Full-Time   Retired   Student   Unemployed

5.   What is your Race/Ethnicity?

American Indian or Alaska Native   Hawaiian or Other Pacific Islander   Asian or Asian
American

Black or African American   Hispanic or Latino   Non-Hispanic White

PART 2

Which of the activity(ies) did you participate in? (Please circle one)

Photovoice   Brainstorming/Action Planning   Both   Neither

PART 3

Please answer the following questions thinking about the Jenkins County Diabetes Coalition.

13) I can guide the choices that the coalition makes

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

14) The coalition has influence over choices that affect my life

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

15) The coalition is successful in achieving its goals

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

16) The coalition can impact changes that affect the county

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

17) I am happy with the amount of power I have over choices that this coalition makes

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

PART 4

Please answer the following questions thinking about your life and your community.

18) I have control over the choice that affect my life

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

19) My community has influence over choices that affect my life

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

20) I am happy with the amount of control I have over choices that affect my life

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

21) I can impact choice that affect my county

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

22) By working together, people in my county can influence choices that affect the county

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

23) People in my county work together to influence decisions on the state or national level

Strongly Agree　　　　*Somewhat Agree*　　　　*Somewhat Disagree*　　　　*Strongly Disagree*

24) I feel good about the amount of power I have over choices that affect my county

Strongly Agree   *Somewhat Agree*   *Somewhat Disagree*   *Strongly Disagree*

APPENDIX M

COALITION IN-DEPTH INTERVIEW QUESTIONS

1. Did you participate in Photovoice voice?

   If yes, please describe your experience. (probing questions may be used)

2. Did you participate in action planning?

   If yes, please describe your experience. (probing questions may be used)

3. What is the most important thing you learning from this process?

4. What would you have changed about this process?

5. Is there anything else you would like to add regarding your overall experience?

APPENDIX N

PARTICIPANT PHOTOGRAPHS

N: 1

N: 2

N: 3

N: 4

N: 5

N: 6

N: 7

N: 8

N: 9

N: 10

N: 11

N: 12

N: 13