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Utilizing a Community-Based Participatory Research (CBPR) Model to Enhance Health Promotion in a Rural African American Community

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Abstract: *This article describes the findings from a project focused on advancinghealth literacy through a community based and empowerment-focused research model. A culturally-tailored, church-based program served as the nexus of the intervention to encourage healthier lifestyles in a low-resourced rural community. The study details aninnovative faith-based community intervention that enhanced and supported healthy family functioning through physical activity, healthy food selection and alternative food preparation styles. The CBRP methodology emphasized developing a close, collaborative relationship among families, researchers, church and community leaders with a long-term engagement and commitment to the health and well-being of children and families. Preliminary findings revealed that participants were not exercising regularly, experienced unsuccessful attempts to modifytheir diet, and they acknowledged limited understanding of the benefits of a diet infused with daily servings of fruits and vegetables. As a result of the research team's involvement within the community, various programming efforts were initiated. These activities included exercise classes for seniors, healthy meals and snacks at community events, operating a fresh market once a week to provide organically grown foods, and health educational materials disseminated in church bulletins. The CBPR method allowed researchers to utilize the collective influence of faith-based leaders and community residents to promote healthy behaviors in rural African American families.*

Keywords: *Community-based participatory research, faith-based communities, health and wellness, rural communities, African American family systems, childhood obesity*

1. INTRODUCTION

Childhood obesity rates have tripled in the past 30 years and affect 18% of U.S. children and adolescents (Dietz and Robinson, 2008; McBride, 2010). There is an increasing trend towards obesity in children and adolescents that continues despite national campaigns designed to educate adults, adolescents and children of the dangerous effects of obesity (National Center for Health Statistics, [NCHS], 1999). Childhood obesity is a serious medical condition that affects children and adolescents. It occurs when a child is well above the normal weight for his or her age and height. Childhood obesity is particularly troubling because the extra pounds often start children on the path to health problems that were once confined to adults, such as diabetes, high blood pressure and high cholesterol (Ogden et al, 2006). Childhood obesity can also lead to poor self-esteem and depression. The prevalence of childhood obesity has risen dramatically in the United

States, with the rate increasing more than three-fold during the past three decades. Due to the disproportionate impacts of obesity and health diseases among African American children, there is a strong need to encourage physical activity and healthy eating in African American families.

Childhood obesity rates in the United States have continued to increase and raise awareness of the need to address this epidemic. One option for examining this phenomenon is to explore the eating habits while investigatingfamilial patterns of engagement related to health promotion. The identified study site is a county that has the 5th highest obesity rate in the state. The rural environment and lack of access to health promotive resources is a key concern of county residents. According to the Center of Disease Control (2008), North Carolina ranks 5th worst in the nation for childhood obesity. . For example, 15.2% of North Carolina children between the ages of 10-17 were classified as obese (CDC, 2008). Only 15% of youth eat fruits and vegetables five or more times a day and 35% of children eat a fast food meal two or more times each week. According to the North Carolina Nutrition and Physical Activity Surveillance System (NC-PASS, 2008), 15.3% of children age 2-4, 24.9% age 5 – 11 and 29.9% age 12 – 18 were overweight. The percentage of children at-risk for overweight was 15.7%, 16.9% and 17.7% for children in these age groups respectively (NC-PASS, 2008). According to The National Survey of Children's Health, 19.28% of children aged 10 – 17 in the state of North Carolina are obese. Obesity trends are increasing among children across most age, sex, racial/ethnic and socioeconomic strata. These trends have forged researchers and policy makers to recognize childhood and adolescent obesity as a major public health problem (Ogden et al, 2006).

Improving public health often entails moving beyond the conventional health care system to include integrated and innovative approaches. CBPR has emerged as an alternative research paradigm which integrates education and social action to improve health and deepen our scientific base of knowledge in the areas of health promotion, disease prevention, and health disparities. It is regarded as an effective method for transferring evidence-based research from clinical settings to communities that can most benefit thereby improving health. Social scientists have made significant strides in shedding light on the basic social and cultural structures and processes that influence health. Social and cultural factors influence health by affecting exposure and vulnerability to disease, risk-taking behaviors, the effectiveness of health promotion efforts, and access to, availability of, and quality of health care. Social and cultural factors play a role in shaping perceptions of and responses to health problems and the impact of poor health on individuals' lives and well-being. In addition, such factors contribute to understanding societal and population processes such as current and changing rates of morbidity, survival, and mortality. Social and behavioral science research related to health must be further developed and ultimately integrated into interdisciplinary, multi-level studies of health. Linking research from the macro-societal levels, through behavioral and psychological levels, to the biology of disease will provide the integrative health research necessary to fully understand health and illness. African Americans, Native Americans, and low socioeconomic status (SES) populations continue to experience substantial disparities in the burden of disease and death when compared to theWhite Americans and higher SES populations. The existence of racial/ethnic, social class, and rural-urban health disparities are to a large extent influenced by behavioral and social factors. The goal of health-related research is to improve the lives of people in the community studied. In traditional research, the community is not actively involved in designing the projects. Over time, when these problems occur, communities become suspicious of researchers. CBPR counters these suspicions by making the researchers and community groups partners from the early stages of the research.

2. INNOVATION

This research was motivated by the federal initiative titled, "Let's Move" that is led by First Lady Michelle Obama. Let's Move is a comprehensive, collaborative and community-oriented challenge to address the childhood obesity epidemic that has plagued our nation and is designed to solve the epidemic of childhood obesity within a generation (California Endowment, 2010). Let's Move recognizes childhood obesity as a global problem that should be addressed by parents, community officials and all levels of government with a focus on raising a healthy generation of children by encouraging healthy nutrition and physical activity. Children who are at-risk for health problems and obesity are more likely to model unhealthy behaviors and practices within

their families. Also at the national level, the USDA has revamped a new food pyramid to include healthier food options as well as physical activity. This model emphasizes those making healthy choices "today" will make for a healthy "tomorrow" in the reduction of obesity and other health-related diseases such as diabetes.

The percentage of overweight children in Halifax County was 3.6% higher than the state and the percentage of children living in poverty in Halifax County was 12.1% higher when compared to the state average. General observations in rural North Carolina (Brogan & Partners, 2006) found African American children considered watching television, playing video games and playing on the computer as "active" indoor activities. Brogan and colleagues (2006) also found that children understood the importance of exercise but indicated that they are not motivated and actually do not have a clear understanding of how much exercise is needed to be healthy.

In Halifax county, many barriers to accessible health care services have been identified for minorities, including cultural barriers, inability to pay for services, lack of transportation and child care, decreased understanding of health lifestyle benefits, and mistrust of health care providers. Factors related to social inequality, race/ethnicity, language barriers, physical environment and residence (rural versus urban) play a major role in health-related disparities (Satia, 2009). A Community Health Assessment identified two of the top 12 health concerns in the county as lack of recreation and youth activities and overweight and obesity. Therefore, it is critical to identify and understand the factors contributing to health disparities and that affect health-care beliefs and practices from African American children and parents living in Halifax County.

3. PARTICIPANTS

The sample consisted of 25 African American families from a rural North Carolina County. The ages ranged from children as young as 5 years old to adults aged sixty. The majority of the adults were women who headed single family households. The sample was comprised of low resourced participants withonly a few adults with more than a high school education.

4. MEASURES

The study utilized a mixed methods approach to ascertaininformation about our participant's beliefs related to health and diet, and perceptions of their levels of wellness. The quantitative nutritional measurement tools were the NHANES (2013) and the FRDHQ. The National Health and Nutrition Examination Survey (NHANES) and the Fat-Related Diet Habits Questionnaire (FRDHQ) are standardized instruments designed to assess the health and nutritional status of adults and children in the United States. Theseinstruments assessed daily consumption of fruits, vegetables, dairy products, and water. Various qualitative methods were used such as focus groups and individual interviews to assess cultural beliefs that influenced food selection, preparation and portions. Children were interviewed separately from adults and asked about their food choices and preferences.

5. PROCEDURES

Participants were recruited face-to-face in an open forum. Additionally, the researchers utilized the snowball technique and distributed flyers in the targeted rural community. The National Health and Nutrition Examination Survey (NHANES) and the Fat-Related Diet Habits Questionnaire (FRDHQ) were administered to a sample size of 25 in a community resource center. Focus groups were conducted five times within a 24-month period to yield insight into the cultural norms that supported the lifestyle habits of the participants. Focus group topics related to food preparation and habits of consumption.

6. NUTRITION

Sedentary lifestyles, along with diets low in fruits, vegetables, and complex carbohydrates, and high in fat and total energy are increasing among youth (Allen et al, 2008). Despite the evident health benefits associated with consuming fruits and vegetables, national data indicate that less than half of girls and boys ages 4 – 18 years consume less servings of fruits and vegetables a day (Guenther et al, 2006). These unhealthy behaviors contribute to an increase in childhood overweight, which is associated with type 2 diabetes, hypertension, and heart disease. Hoelscher

et al, (2010) reported that "because the association between childhood obesity and morbidities, as well as the tracking of excess weight during childhood into adulthood prevention of childhood obesity has become a primary goal of many governmental, state and private organizations.

7. CULTURE

Reducing and eliminating racial and ethnic health disparities have become a national research priorities. Health disparities for African Americans reflect a "form of institutionalization, structural racism that links education, employment, social economic status, health insurance coverage and housing segregation with the accumulation of daily assaults that surmises the dignity of a person" (Carlson and Chamberlain, 2004). Discrimination and racism can directly and/or indirectly influence African American children who are disproportionately at-risk for major health problems including childhood obesity, compared to their non-Hispanic White counterparts (Singh et al, 2008). Moreover, obesity is more prevalent among African American children and disproportionately affects limited-resourced minority children (Davis et al, 2002). Nationally, among non-Hispanic Black children, 23.45% were obese; this percentage is greater than any other ethnic group and nearly doubled for non-Hispanic Whites (Singh et al, 2008).

8. RESULTS

According to the results from the standardized quantitative measurements, less than 25% of the sample consumed the recommended daily allowances of fruits and vegetables. The diet of more than 75% of the sample was high in saturated fats and sugar based snacks. Moreover, participants shared that they are not engaged in regular physical activity. Participants reported during focus groups a historic tendency to prepare meals in fatty and meat based solutions. They revealed a lack of access to fresh produce due to the demographic isolation of their community. They also noted a lack of recreational facilities to participate in exercise or to increase mobility options for adults. In summary, the participants have made significant changes in dietary habits and levels of physical activity. Moreover, community participants revealed that they have an increased awareness of healthy food selections. They self-reported more knowledge of diseases and illnesses impacted by obesity that disproportionately affect African Americans. They have also made strides to increase physical activity.

9. CONCLUSIONS

This result of this study confirm lower-resourced communities have limited access to recreational facilities and food stores with healthful, affordable options and areat higher risk of obesity (Rahman et al, 2011). Although poorer neighborhoods have more fast food restaurants, convenience stores and fewer supermarkets (Morland et al, 2002), this study demonstrated that an intervention methodology such as the CBPR increases awareness and participation in healthier lifestyles. The CBPRmethod was effective in enhancing and supporting healthy family functioning through physical activity, healthy food selection and alternative food preparation among participants. As a result of using the CBPR method, authentic partnerships were formed simultaneously with research activities. The findings of the study have been disseminated back to the community and to other constituents. The research outcomeshave the potential to influence changes in policy and practice related to health promotion in African American communities.

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