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SHAKING AND RATTLING: DEVELOPING A CHILD OBESITY PREVENTION PROGRAM USING A FAITH-BASED COMMUNITY APPROACH

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Abstract

This article describes the creation of a faith-based, community action research intervention aimed at reducing childhood obesity among a vulnerable population. Of particular concern to the community was the prevalence of obesity among its minority children. Engaging parents in a childhood obesity initiative through faith-based organizations (churches, community organizations with a common religious focus) was a method to provide a research intervention. It is important for researchers to be culturally competent, employ community based participatory research methods, carefully plan interventions that have clear outcome criteria, and build evaluation of the process into every step of the research.

Keywords

obesity; children; African American; WIC; community-based participatory research; faith-based organizations

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This article describes the creation of a faith-based, community action research intervention aimed at reducing childhood obesity among a vulnerable population. The creation of the intervention occurred across two years through a series of structured meetings and activities with a community group whose origins are in the faith community. These experiences helped a researcher from outside the community to understand and appreciate the community perspective, and the community residents to understand and appreciate a structured, research-based approach to addressing a community problem.

Faith-based initiatives and approaches have been applied to social and health problems for hundreds of years. Usually the term is used to describe congregations, national networks of religious denominations and their social service agencies, or non-affiliated religious organizations which are not connected to congregations or denominations.[1] The organizations may be affiliated with a defined religious institution (church, mosque, synagogue, or temple), or be more loosely associated with a religion. The term faith-based may be used as a substitute for religious, or it can describe the origin of the group, as it does in the present case.

Childhood Obesity

Obesity during childhood is one of the major risks factors for the development of severe obesity and type 2 diabetes mellitus in adulthood, with all of its attendant risks for cardiovascular diseases.[2,3] In 2001, the United States Surgeon General stated that 13% of children aged 6–11 years and 14% of adolescents aged 12–19 years in the United States were obese.[4] Type 2 diabetes, previously considered an adult disease, has increased dramatically in children and adolescents. Eighty percent of persons with diabetes will develop cardiovascular disease, and type 2 diabetes characterizes nearly half of new cases of childhood diabetes.[5] Furthermore, childhood obesity has been shown to lead to obesity in adulthood.[6,7] Accordingly, children who were obese between the ages of one and six years have twice the odds for obesity at age 35; children who were obese at ages 10–14 have five to ten times the odds for obesity at age 35.[7]

Of particular concern is the prevalence of obesity among minority populations. Data from the National Health and Nutrition Examination Survey (NHANES) III indicate that there is a nationwide trend of increasing obesity among children and adolescents, particularly among Native American and Hispanic children.[8] In 2000, more 6 to 11 year old Hispanic children (56%) and African American children (41%) were obese than were White children (28%).9 No difference by gender or income level has been documented: there is an 11% incidence of obesity in children whether they come from families with income below or above 130% of the poverty threshold. 8

Family focused interventions for weight management have been recommended for decades. [10] Parents shape the home environment, including children's toys, play locations and activities, and the food children consume. Parents' body mass indices (BMI) are highly correlated to their children's BMIs[11] and both shared environment and genetics contribute to obesity. Parents can take a number of steps to change their home environment so that it promotes a healthy lifestyle and reduces the incidence of childhood overweight.12،13 These steps include dietary and activity changes as well as modeling healthy eating behaviors.

Engaging parents in a childhood obesity initiative through faith-based organizations (churches, community organizations with a common religious focus) can be a method to recruit research participants. But a researcher from outside the faith-based organizations may not be trusted or granted access and support for recruitment. Collaboration with faith-based organizations to design a research study is ethical and empowering as the participants are evaluators of their own program and interpreters of their data.[14]

Faith-based institutions have played a particularly important role in many African American communities, particularly urban, inner-city communities. Tuggle, who provides a historical context of the African American Church in America from the 1600's, notes its roots and tremendous influence among this population.[15] After describing the context of racial health disparities, he writes to his pastor colleagues that "this is a crisis that the church cannot fight alone" and describes the rationale for the churches' alliances with public health projects. Tuggle also includes advice to organizations seeking two ways to work with churches: 1) self reflection to confront bias and misconceptions that may hinder reaching goals; and 2) a commitment to changing established perspectives. He also provides a step-by-step approach for working within Black church communities, including finding the right churches to work with, marketing messages to the faith community, finding funding to sustain programs, and health related songs and sermons.

Research in Faith-based Organizations

Researchers need to be sophisticated in the use of participatory research when working with faith-based organizations. The use of participatory research designs (also known as community based participatory research) enhances collaborative work with communities whose purpose is not focused on research or health interventions, such as faith-based organizations.[14] Sinha describes concerns which arose while implementing participatory research during a federally-funded, intensive ten-month long case study of a faith-based alternative education program for at risk youth. These included gaining trust, analyzing data, and reporting data that may be seen as unflattering. The project was funded through the Department of Health and Human Services, Administration for Children and Family.

Faith-based organizations have partnered with researchers in recent years to provide the link between researchers and recipients of intervention services. Reinert, Carver, Range, and Pike[16] found that faith-based interventions are ideal for health promotion, but difficulties emerge when data are required for evaluation purposes. Reinert et al. concluded that it is important to plan for evaluation in every step of the process, pilot-test all materials and procedures, personally collect data in a non-threatening manner, and make backup plans for every step.

The National Institutes of Health (NIH)-Diabetes Prevention Program (DPP) was implemented in an African American Baptist Church through a series of 16 sessions conducted over four months in a church-based setting.[17] Boltri et al. demonstrated significant improvements in blood pressure, fasting blood glucose, and weight. The positive changes were evident at six months and 12 month post-intervention as well. This research demonstrates the use of a defined intervention within one congregation using clear biological markers for outcome criteria.

A faith-based program serving African Americans who use heroin and cocaine and are at risk for HIV/AIDS was designed with a culturally relevant set of interventions.[18] The results demonstrated (through interviews) that risky behaviors were reduced through the use of the intervention. The authors stress that the faith-based approach emphasized spirituality rather than coercive, aggressive, directive, or authoritarian counseling techniques. This study emphasized the importance of building culturally competent interventions with the input from faith-based organizations.

The usefulness of three sources (health system, community, and faith-based organizations) of recruitment of African Americans with type 2 diabetes into a clinical trial demonstrated that the health system yielded the greatest number of recruits, but the recruits from the faith-based organizations were most likely to attend four or more sessions.[19] The health system yielded 61% of the participants, the community yielded 19%, and the faith-based organizations yielded 14% (source of recruitment was unknown in 6%). The combination of recruitment sources speaks to the necessity of considering all aspects of the lives of community residents when planning a community-based research study.

African Americans' church attendance and health care practices were examined in a cross-sectional analysis.[20] It was demonstrated that in a low-income, predominately African American neighborhood, 37% of the residents attended church at least monthly. Church attendance was positively related to dental visits, blood pressure measurements, and pap smear examinations, especially for uninsured women. Church attendance has a positive effect on health care practices, and partnering with churches to deliver health promotion is a valuable opportunity to improve the health care of low-income and minority populations.

These findings are echoed in a systematic review of published literature (n=386 articles) on health programs in faith-based organizations[21]. Only 28 articles reported program effects. The

programs focused on primary prevention, general health maintenance, heart health, or cancer. Significant reductions were found in cholesterol, blood pressure, weight, and disease symptoms, and the instances of mammography and breast self-examinations were increased. The authors note that faith-based programs can improve health, but such programs need to increase the rigor of their evaluations and dissemination of results.

In summary, existing research notes that when working with faith-based organizations, it is important for researchers to be culturally competent, employ community based participatory research methods, carefully plan interventions that have clear outcome criteria, and build evaluation of the process into every step of the research.

Local faith-based organization

The Galveston Island Community Research Advisory Committee (GICRAC) is an existing community academic partnership that has grown out of a longstanding relationship between a faculty member concerned with sustainable health improvements in the African American Community and a group of local pastors. Initial interactions in 1998 created a Walking for Wellness Program within a local congregation which later became an externally-funded, year-long physical activity and nutrition intervention within four congregations, the JesusFIT (Fitness, Instruction and Training) Program. At the conclusion of this Texas Higher Education Coordinating Board funded intervention, university-affiliated researchers began working with leaders of the African American community to continue and expand the program. Consisting of representatives of the medical, research, social service and faith-based communities, GICRAC members have as their mission being “gatekeepers of health for African Americans in Galveston County” who work in an equitable partnership with researchers to collaboratively address such issues as problem selection, research design and implementation, data analysis, and dissemination of findings.

Over a period of more than two years, GICRAC has established a mission statement, by-laws, elected officers, and used the Community-Campus Partnerships for Health’s *Developing and Sustaining CBPR Partnerships: A Skill Building Curriculum (*http://www.cbprcurriculum.info/) to acquire skills in community-based participatory research. GICRAC has developed a policy for working with university researchers in the proposal development process, established a GICRAC Proposal Coordinator position, and systematically evaluates its progress as an organization. GICRAC’s subcommittees, called Intervention Work Groups (IWGs) have developed research proposals on depression, ex-offender re-entry into the community, active living, partnership building with the local health science center, and childhood obesity. GICRAC members sit on two key university committees, the Institutional Review Board and the President’s Community Outreach Board.

Community Engagement

Community engagement is defined as the process of working collaboratively with groups of people who are affiliated by geography, similar interests, or similar situations in regards to issues affecting their well-being.[22] The art of community engagement comes from the human interaction and sensitivity that is used to apply and adapt science in ways that fit the community and the purposes of specific engagement efforts.[22] These approaches go by many names, including community-based participatory research, action research, and participatory learning methods to name a few. The science comes from sociology, political science, cultural anthropology, nursing, organizational development, psychology, social work, and other disciplines with organizing concepts drawn from the literature on community participation, community mobilization, constituency building, community psychology, cultural influences, and other sources. [22] These sciences shape how community engagement is constructed, performed and evaluated. As the research findings from these additional sciences are applied

through translation into clinical findings that will benefit the groups of people who are affected by the research results, the health sciences and the basic sciences are key stakeholders in community engagement. The translation of science can thus form a complete circle with findings proceeding from bench to bedside to community, and then from the community back to the bench.

It is especially important to ensure that researchers are culturally competent as the population of the United States is becoming more multicultural. Presently 28% of the US population is non-white, but that percentage will increase to 32% by 2010 and to 47% by 2050.[23] Almost 11.5% of US residents were born in a foreign county, and that rate is growing by approximately one million per year.[24] The birth rate of recent immigrants and the US non-white population is approximately 50% higher than the birth rate of the US white population.[25] Texas as a whole is 39% non-Hispanic White, 32% Hispanic, 11.5% African American, .06% American Indian, and 2.7% Asian. [24]

Overall, the literature emphasizes that successful interventions are not only multi-factorial and client-centered, but developed with knowledge of the client, local and regional conditions/ culture, and other community programs. While the challenges may seem daunting, carefully planned intervention programs, whether using media or face to face meetings, can lead to successful outcomes.[26]

Methodology

Overview-Members of GICRAC who were interested in childhood obesity volunteered to form Intervention Work Group (IWG) to work with the first author, who was developing a research proposal to create a community based intervention for local child obesity. Group members decided that the name of their group would be the Shakers and Rattlers, because in order to reverse the trend towards increasing child obesity, ‘a lot of shaking and rattling’ was needed in the community. The importance of reduction of child obesity was evident to the members of the IWG as they are parents, grandparents, local teachers, and active church members who are concerned about the high rates of obesity among children in their community. Group members were apprised that between 31% and 37% of the African American three year olds in the Galveston County Health District Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) clinics are above the 95% BMI (body mass index) for gender. These numbers galvanized GICRAC and helped childhood obesity become the first focused research target. The child obesity research focus helped GICRAC develop the steps of creating intervention working groups, meeting with researchers to understand how the research can benefit the community, setting up guidelines for working with researchers in proposal development, and writing a strong letter of support to the funding agency that clearly demonstrates that the research proposal has the stamp of approval from the GICRAC.

Detailed Steps in Community Engagement in the Research Process

Proposal Preparation—The proposal was initially written without input from GICRAC. A letter of support was requested to accompany the proposal when it was sent to the funding agency. The letter of support was received and did accompany the proposal. Although positive comments were received from the reviewers, the proposal was not approved by the funding agency. By the time the proposal revision was discussed with GICRAC, the concept for the intervention work groups had been developed and the first IWG was created to address child obesity. The Shakers and Rattlers and the researcher had numerous meetings that occurred at the researcher’s work place and local churches. The Shakers and Rattlers discussed critical elements of the intervention: cultural awareness of the local food preferences, realities of family life, restrictions on physical activity based on lack of safe parks and recreation facilities, and school food menus.

Meeting with community members led to additional meetings with other community stakeholders. The researcher met with the local school district nutrition manager and discovered that school district's interest in changing school menus to comply with the guidelines from the Federal Child Nutrition Programs, which have strict limits on the use of foods of limited nutritional value during the school day. In addition, members of Shakers and Rattlers were familiar with a community program focusing on increasing physical activity. This program was located in a church not associated with, but accessible to GICRAC members as well as other community residents. Representatives from that program were invited to participate in creating the activities for the intervention. As the intervention program is designed for low income three year old children, the local WIC agency was involved to determine how the intervention could be delivered in their system without disrupting their goal of providing nutrition assistance and education.

The revised proposal was sent to all members of the Shakers and Rattlers, who read the proposal and met with the researcher to suggest final changes before submission. The Shakers and Rattlers requested that all program participants (subjects) receive compensation for their time in completing research forms and activities; that members of Shakers and Rattlers be part of interviewing and selecting research staff; and that the Shakers and Rattlers approve all intervention content before use. All requested changes were integrated into the proposal; the revised proposal was submitted, along with a detailed and strong letter of support from the larger GICRAC organization. The revised proposal was approved for funding. Reviewers noted the strength of the association between the researcher and GICRAC was a major strength of the proposal.

Post-Award Planning and Implementation—The collaboration continued during the planning and implementation phases of the research process. Members of the Shakers and Rattlers fully participated in interviewing potential research assistants, and the candidates that they endorsed were hired as research assistants. Members of the Shakers and Rattlers were able to query candidates about their knowledge of the local community and its residents in much greater depth than could the research faculty. This ensured that the research assistants were knowledgeable about the community and had access to research participants. The research assistants also had access to the local faith-based organizations to a greater extent than did the researchers.

The creation of the intervention was also participatory. The research assistants queried community contacts about the components of the intervention, which was designed around nutrition, physical activity, and parenting. The intervention content was also guided by the members of the Shakers and Rattlers who reviewed and modified the intervention to fit with the cultural perspectives of members of their faith-based organizations. The intervention is currently being delivered to participants enrolled in the study and is reviewed by the Shakers and Rattlers, who then report to the larger GICRAC committee on a quarterly basis.

Program Evaluation—The evaluation is designed to be participatory as well. Sinha[14] recommends that evaluation of faith-based programs be based on data collected through multiple approaches: individual interviews, focus groups, surveys, and observation checklists. Surveys will be collected periodically throughout the study, observations of the intervention delivery will be collected, and focus groups are planned to obtain feedback on aspects of the intervention that are helpful or not helpful. The Shakers and Rattlers will co-lead focus groups as well as participate in the observations of the intervention. Through this collaborative process, it is expected that the voice of the faith-based community that supports GICRAC will be respected and honored, and the research will be integrated into the community in a manner that would not otherwise occur.

Summary

Conducting community-based research with faith-based organizations is a valuable method to reach vulnerable populations who may not trust traditional researchers. However, such collaborations are not built overnight, and faith-based organizations are rightfully wary of researchers who only want access to subjects. It is important to build collaborations across time, through mutual projects such as health fairs, volunteer health talks to congregations, provision of needed health materials, and providing other such support as needed by congregations. Then when either the researcher or the faith-based organization is interested in conducting research, the collaboration is based on established trust and mutuality, rather than convenience. A successful completion of the research project is much more feasible when both the researchers' and the faith-based organizations' needs are met.

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