Emerging Leadership from Communities in the Lower Mississippi Delta (LMD)

Betty M. Kennedy, Ph.D.
The Pennington Biomedical Research Center

T. Elaine Prewitt, DrPH
The University of Arkansas for Medical Sciences

Earline Strickland, Ph.D.
The USDA, Agricultural Research Service

Kathy Yadrick, Ph.D.
University of Southern Mississippi

Paula Threadgill, Ph.D.
Mississippi State University

Catherine M. Champagne, Ph.D.
The Pennington Biomedical Research Center

Bernestine B. McGee, Ph.D.
Southern University and A&M College

Beverly McCabe-Sellers, Ph.D.
The USDA, Agricultural Research Service

Margaret L. Bogle, Ph.D.
The USDA, Agricultural Research Service

ABSTRACT

The Delta Nutrition Intervention Research Initiative (NIRI) team has conducted several research studies in the Lower Mississippi Delta (LMD) region employing the community-based participatory research (CBPR) model. Our collaborative work in the LMD focuses on interventions conducted in each of three communities across three states: Arkansas (Marvell NIRI), Louisiana (Franklin NIRI), and Mississippi (Hollandale NIRI). Our success in these communities has been the result of emerging key community leaders, members, and organizations assuming a lead role throughout the research process including conceptualizing and development of the research interventions, recruiting participants, data collection, hiring and training of staff to conduct the interventions, analyzing data, presenting the research to various

audiences, and assisting with grant writing. This commentary focuses on research interventions conducted in Franklin NIRI, Hollandale NIRI, Marvell NIRI, and how leaders from each of these communities have emerged as a result of the CBPR model.

INTRODUCTION

Working with a consortium of six Higher Education academic partners in Louisiana, Mississippi and Arkansas, a local community and the Cooperative Extension Service, Delta NIRI (Nutrition Intervention Research Initiative) funded by the USDA Agricultural Research Service, has characterized the nutritional health problems of the Lower Mississippi Delta (LMD) region and collaboratively identified opportunities for intervention. Geographically, we define the LMD as 36 contiguous counties and parishes in Arkansas, Mississippi and Louisiana along the Mississippi River. Among other things, we have found that economic and geographic obstacles challenge the LMD region. The economic indicators are impressively and persistently poor with almost ¼ of residents living in households with incomes below the federal poverty line (Stuff et al., 2004). Along with these economic woes, LMD residents face health problems that are known to be associated with poor nutrition, ranking near the top in cancer mortality and mortality from diabetes and cardiovascular disease (Stuff et al., 2004) with obesity at the root of the problem (Flegal et al., 2002; Mokdad et al., 2000).

The Delta NIRI team has conducted several studies in the LMD region that provide the basis for interventions. Through in person interviews with nearly 500 key informants, initial community outreach contacts were made in the 36 Delta NIRI counties and parishes (Yadrick et al., 2001). This study of Key Informants in the LMD region document perceptions of the most important nutritionally-related health problems including chronic diseases linked to obesity and poor diet: diabetes and hypertension. The Key Informants identified knowledge about appropriate food choices (fat foods and fast foods) and lack of exercise as being important areas for interventions. Subsequently, we conducted the Foods of Our Delta Study (FOODS), a validation survey (Bogle et al., 2001), and the FOODS 2000 survey (Champagne et al., 2004) of a representative sample of the Delta population which demonstrated that 22% were food insecure (15% food insecure without hunger and 7% food insecure with hunger). FOODS 2000 data also demonstrated an eating pattern characterized by low intake of fruits and vegetables and high intake of high fat, calorie dense foods (Champagne et al., 2004).

Our research thus far would not have been possible without identifying emerging leaders who have “stepped forward” in and for their communities. As academic partners we have provided training to increase understanding about research and what it entails. In addition, we have provided resources for capacity building so that emerging leaders are empowered to play influential roles in ensuring access to quality healthcare in their states and communities. This task has been accomplished through community-based participatory research (CBPR). CBPR is defined as “a collaborative process that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community with

the aim of combining knowledge and action for social change to improve community health and eliminate health disparities" (Stories of Impact, 2002; Minkler et al., 2003).

The collaborative work in the LMD focuses on interventions conducted in three communities across three states: Franklin Parish, Louisiana (Franklin NIRI), Hollandale, Mississippi (Hollandale NIRI), and Marvell, Arkansas (Marvell NIRI). Success in these communities has been the result of key community leaders, members, and organizations playing a lead role throughout the research process including conceptualizing and development of the research interventions, recruiting participants, data collection and analysis, hiring and training of staff to conduct the interventions, presenting the research to various audiences, and assisting with grant writing. This commentary focuses on research interventions conducted in Franklin NIRI, Hollandale NIRI, Marvell NIRI, and how leaders from each of these communities have emerged as a result of employing the CBPR model.

Franklin NIRI

Kennedy et al. conducted a church-based weight loss study with 40 randomized participants using church members trained as health educators to improve health in African American adults. The study retention rate was 90 percent, and after six months, a modest but significant mean weight loss was seen in all participants of 3.3kg. Though not published yet, Kennedy et al. conducted a second study with 40 randomized participants utilizing trained peer educators to teach nutrition education and physical activity classes, and a "Rolling Store" approach to provide fruits and vegetables to prevent weight gain in African American women. The program retention rate was 93%. The primary purpose of the study was to prevent weight gain however; participants in the treatment group lost an average of 1.9 kg, while the control group gained 1.1 kg. The "Rolling Store" was feasible, accessible, and economical in producing satisfactory health and behavioral outcomes. As a result of both studies, "People United to Sustain Health" (PUSH), a two-year study evolved. PUSH is currently being conducted in Franklin Parish, Louisiana and utilizes the church as the intervention site, and the "Rolling Store" as an economical model to maintain a healthy weight, increase fruit and vegetable consumption, increase food security, and increase physical activity in 100 study participants. The goal of PUSH is to improve the overall quality of diet and health in citizens of Franklin Parish.

The two-year PUSH research study is currently being implemented by trained peer educators from the Franklin Parish community. Though some have Master's and/or bachelor degrees none had any previous training in conducting a research study. Therefore, the peer educators were trained by the academic partners to conduct weekly nutrition education and physical activity classes, perform study measurements (height, weight, blood pressure, waist circumference) monthly, and to submit data collected in a timely manner to the partners. In addition, phlebotomist, and licensed practical nurses from Franklin Parish were hired and trained per the PUSH protocol to collect blood samples and perform analysis. Finally, a "Rolling Store" operator was hired and trained to pick-up preselected fruits and vegetables from a local grocery store each week. The operator was a licensed driver who owned a 16 feet truck with camper shell. The "Rolling

Store" is parked at the study-site for 3-4 hours to allow PUSH participants ample time to get their produce each week.

Throughout our organizations and communities we have and need individuals who may not be formally designated as leaders, but who exercise leadership (Size, 2006). The current Franklin NIRI chairperson fits that role, having no formal training other than high school, and 30 years of work experience. The recently elected chairperson of the Franklin NIRI community has assumed various leadership roles by assisting with Franklin NIRI community matters, PUSH, attending workshops and annual strategic planning meetings, and is responsible for bringing new research intervention ideas to the NIRI. This individual has received training in preparing study protocols, and has been certified in HIPAA privacy requirements to assist in recruiting and working with PUSH participants. These and several other duties are performed voluntarily.

Hollandale NIRI

Tim Size defines leadership as the capacity to help transform a vision of the future into reality. Leaders therefore recognize that none of us are called to always lead, that sharing or conceding leadership to others is also a key role. Finally, no one is called to lead on every issue; all are called to interact and support the vision and ideas brought by others (Size, 2006). For example, the Hollandale NIRI desired a soccer program to encourage young children to engage in some form of physical activity. The community, Hollandale NIRI, and academic partners hired two professional soccer coaches from an adjoining community to train Hollandale's community outreach worker as head soccer coach. In addition, twelve college and high school students were trained to implement the soccer program for community kids age 5-12 years. Hollandale's community outreach worker took the initiative to coach young children to not only be the best they can be in soccer, but to stay physically active in general to maintain a healthy weight. As a result of the training, Hollandale's community outreach worker emerged into becoming the first community member to gain expertise in soccer and thus, provided an opportunity for sustaining the program in the community.

Another example of emerging leadership in the Hollandale NIRI is seen in the administrative staff at T. R. Sanders Elementary School. This school supports any outreach and research programs offered by Hollandale NIRI, and provides assistance when needed. In addition, the administration has encouraged research within the school through the School Advisory committee consisting of teachers, school nurse, and food service director. Unlike Franklin NIRI, the Hollandale NIRI exemplifies leadership from an organization perspective, such that the administration at T. R. Sanders Elementary School was responsible for the design and implementation of the "School Kids Access to Treat to Eat" (SKATE) research intervention. SKATE consisted of 191 kids in grades 4 through 6, approximately 160 parents, and 11 teachers. The administrative staff is actively involved with the Hollandale NIRI, and is helping to organize and implement the SKATE intervention on a larger scale.

Marvell NIRI

Marvell NIRI provides perspective regarding the diverse roles and responsibilities assumed by community leaders to identify research topics relevant to the community and to carry out appropriate interventions. These roles include leadership of research working groups, support in preparing grants for research funding, and advisory committee memberships. Specific examples of local community leadership that have emerged include (1) Chairpersons and members of research working groups, including Healthy Eating, Walking Trail, Worksite, Garden and Walking Club. These involved leadership and collaboration in identifying research topics, setting priorities, selecting research design, developing research protocols, conducting the research, analyzing data; (2) Advisory Committee membership for a community research skills workshop and participation in review and interpretation of research data; (3) Co-presenters at research meetings, co-authors for scientific presentations at local, national, and international meetings; (4) Co-investigators for grants—assisted with grant writing and successfully obtained state and federal funding to improve community infrastructure for walking (i.e. refurbished the community walking trail); submitted grant for community-based participatory research for national funding to address health disparities in the community; (5) Group leaders trained intervention delivery and research data collection; and (6) Participation in CBPR skill building workshops.

SUMMARY

The significant challenges we face today in rural health require a form of leadership that is less authoritative and more collaborative (Size, 2006). CBPR increasingly is being recognized by health scholars and funders as a potent approach to collaboratively studying and acting to address health disparities (Minkler et al., 2003). Our collaborative work in the LMD with research interventions conducted in three states mirrors the CBPR potent approach in addressing the health disparities found within each of the three communities. Our success in these communities has been and remains the result of key community leaders, members, and organizations playing a lead role throughout the research process.

The academic partners and communities in each of the three states have worked together to create an atmosphere of collaboration and harmony in Franklin, Hollandale, and Marvell NIRI through basic leadership training and workshops to help develop and enrich community members taking on leadership roles in each of their respective communities. John Gardner notes six characteristics that should be common to individuals who exercise leadership, three of which sums up our emerging community leaders:

- They think longer term—beyond the day's crises, beyond the current fiscal year.
- They reach and influence constituents beyond their immediate area of responsibility.
- They think in terms of renewal for sustaining the partnerships.

Strong leadership will continue to be needed to achieve significant improvements in health disparities in poor rural communities, especially in those using the CBPR model to address health disparities inherent within each.

This commentary is limited to the three communities in which the USDA-Agricultural Research Service supports nutrition intervention research in the LMD, and may not characterize experiences across the LMD as a whole. Nevertheless, it is our hope that this commentary will further inform those pursuing research utilizing the CBPR model that community members are capable of emerging into leaders after empowering them with the resources at hand. Working together collaboratively in a rural and impoverished community can be very challenging and therefore, having key leaders emerge to assist with the research process is of great benefit to the academic partners and to the community. The CBPR model provides an opportunity for emerging community leaders and academic partners to develop collaborations that successfully address the compelling health risks confronting communities.

REFERENCES

Bogle M, Stuff J, Forrester I, Strickland E, Casey PH, Ryan D, Champagne C, McGee, B, Mellad K, Zaghloul S, Yadrick K, Horton J. (2001). Validity of a telephone-administered 24-hour dietary recall in telephone households in the rural Lower Mississippi Delta region. J Am Diet Assoc. 101, 216-222.

Champagne CM, Bogle ML, McGee BB, Yadrick K, Allen HR, Kramer TR, Simpson P, Gossett J, Weber J. (2004). Dietary intake in the Lower Mississippi Delta Region: Results from the foods of our Delta study. J Am Diet Assoc. 104, 199-207.

Flegal KM, Carroll MD, Ogden CL, Johnson CL. (2002). Prevalence and trends in obesity among US adults. JAMA, 288: 1723-1727.

Gardner J. (1989). On Leadership. New York: Free Press, 4.

Kennedy BM, Paeratakul S, Champagne CM, Ryan DH, Harsha DW, McGee B, Johnson G, Deyhim F, Forsythe W, Bogle ML. (2005). A pilot church-based weight loss program for African-American adults using church members as health educators: A comparison of individual and group intervention. Eth Dis. 15, 373-378.

Kennedy BM, Alfonso A, Champagne CM, Harsha DW, Levy EJ, Conish BK, Ryan, DH, Bogle ML. The “Rolling Store”: An economical approach to the prevention of weight gain. Unpublished.

Minkler M, Blackwell AG, Thompson M, Tamir H. (2003). Community-based participatory research: Implications for public health funding. Am J Public Health, 93(8), 1210-1213.

Mokdad AH, Serdula MK, Dietz WH, Bowman BA, Marks JS, Kaplan JP. (2000). The continuing epidemic of obesity. JAMA, 284:1650-1651.

Size T. (2006). Leadership development for rural health. N C Med J. 67, 71-76.

Stories of Impact. (2002). Ann Arbor, Michigan: Community Health Scholars Program.
Stuff JE, Horton JA, Bogle ML, Connell C, Ryan D, Zaghloul S, Thornton A, Simpson P, Gossett J, Szeto K; Lower Mississippi Delta Nutrition Intervention Research Consortium. (2004). High prevalence of food insecurity and hunger in households in the rural Lower Mississippi Delta. J Rural Health, 20(2):173-180.

Yadrick K, Horton J, Stuff J, McGee B, Bogle M, Davis L, Forrester I, Strickland E, Casey PH, Ryan D, Champagne C, Mellad K, Neal E, Zaghloul S. (2001). Perceptions of community nutrition and health needs in the Lower Mississippi Delta: A key informant approach. Lower Mississippi Delta Nutrition Intervention Research Initiative Group. J Nutr Educ. 33(5), 266-277.

ACKNOWLEDGEMENT

The author would like to thank the citizens of Franklin Parish, Louisiana and the representatives of that community specifically the late Mrs. Josie D. Lain, MS (Peer Educator), and Mrs. Bessie L. Baker (Franklin NIRI Community Chairperson), for their assistance and contributions to Franklin NIRI and the PUSH study. The author would like to also thank the citizens of Hollandale, Mississippi and Mr. Demetric Warren, Community Outreach Worker of Hollandale NIRI; and Mrs. Dianne Sims (Community Outreach Assistant) of Marvell NIRI, and the Marvell, Arkansas community at large for their continued support and collaboration with each research study implemented in their respective communities.