

# Health Promotion through a Community-led Participatory Design: Bridging the Gap between Need and Academic Research in African American Communities

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## Abstract

Whereas many health disparities interventions targeting African Americans (AAs) have been designed and implemented through collaborations between African American (AA) churches and academic institutions using principles of Community Based Participatory Research (CBPR), apparent disconnect between needs, resources, socio-cultural and socio-political church factors and research practices of collaborating institutions has hindered identification of best practices. This study investigated a collaborative framework that apportioned responsibilities of program design and implementation solely to church leaders of predominantly AA churches while restricting the collaborating institution to supportive roles.

15 church leaders completed 4 weeks of awareness/sensitization support training and thereafter independently created and implemented health promotion action plans in their churches. Post training evaluations confirmed that church leaders sensitized through pertinent trainings can independently design and implement viable health promotion programs in their churches. However, further studies are required to validate health impacts on church members and compare outcomes with other collaborative participatory designs.

**Keywords:** Community based participatory research; African Americans; Health disparities; Collaborations; Health promotion; Action plan; Training; Sensitization

## Introduction

Despite overwhelming evidence regarding health disparities of AAs, identifying suitable strategies for addressing their health issues has been very challenging. It has been argued that distrust and resentment of American health care system is one pivotal factor with surveys showing that AAs are more likely to report concerns about privacy and harmful experimentation [1]. Older AAs are also likely to view receiving health care as a degrading, demeaning or humiliating experience with some resenting health clinics because of long waits, medical vocabulary, loss of identity, feelings of racism, powerlessness and alienation from the system [2]. Distrust is believed to stem from awareness of past and historical health care events such as experimentations on slaves and the Tuskegee Syphilis experiments and is a major reason for the poor representation of AAs in clinical trials and limitations in access to and proper understanding of specific medical treatments than white Americans [3-11]. Other factors including poverty, health literacy, discriminations and culture among so many have been mentioned in literature as significant challenges to improving overall health outcomes of AAs and are therefore contributors to health disparities [12-15].

Over the years, church-based health promotion programs (CBHPP) have emerged as reputable and promising strategies for addressing health issues of AAs. The suitability of the African American church as venues for implementation of health programs is based on its traditional and historical relevance as gatekeeper and promoter of interests of AAs since the days of slavery serving as centers of education, business skills development, political activism and spiritual exhortation [16-18]. Additionally, having many members at risk for diabetes and other chronic conditions makes AA churches highly receptive to collaborations to treat and prevent diseases. Therefore, the African American church has a track record of involvement with health promotion activities [19-22,23]. Moreover, they are ideal for reaching large number of community members for health promotion activities

such as prevention, treatment and management of diabetes, high blood pressure, breast, prostate and cervical cancer, smoking cessation and HIV/AIDS [24,25-31].

CBHPP are typically designed according to several conceptual frameworks and models such as the socio-economic model [32]. Interventions that follow this model divide all the factors that may contribute to community problems into levels such as interpersonal/social interactions, organizational policies and resources, community and geographic resources, structures, systems and policies capable of impacting public health and may target one or multiple factors at a time [33]. Although, more challenging to conceptualize and implement, multiple factor designs are believed to produce lasting modifications in behavior which is the goal of most prevention programs [34]. Furthermore designs may follow a faith-based, faith-placed or collaborative paradigm using functional church agencies, outside agencies, or a partnership of both agencies for program design and implementation. Majority (40%) of CBHPP follow the faith-placed model and are implemented within the context of investigational researches that are conducted as community based participatory researches (CBPR) with external agencies such as health care professionals providing supervision and oversight while using the church as the research venue and members as subjects [35]. CBHPP may be classified as level I (church used only for participant recruitment),

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level II (church as the intervention site), level III (church members included in content delivery), or level IV (action plan has contents that reflects a connectivity between spirituality and physical health) programs. Authors of this style of classification advocate designs that follow level III and level IV approaches to assure cultural and spiritual appropriateness ideal for successful program implementation [36].

Despite appreciable measures of success and acclaimed potentials as a health disparities reducing strategy of AAs, the design and implementation strategies of CBHPP in AA churches are still evolving as efforts to standardize approach and maximize outcome continue to be a subject of great research interest. However it is believed that interventions with the most potential for success are those that will utilize existing strengths and expertise within the church to build capacity for churches to be empowered to implement sustainable interventions [37]. This argument is the principal consideration for the church based health promotion strategy investigated in this study.

## Methods

### Faith Leaders for Healthy Living Community Project (FLHLCP)

**General Overview:** FLHLCP is a pilot ancillary project of Approaches to Practical Prevention (APP) for vulnerable communities, an African American health disparities reducing initiative of the Elizabeth City State University (ECSU), Elizabeth City, North Carolina. It investigated effectiveness of using non-traditional semi-structured training to sensitize, challenge, motivate, and engage church leaders of predominantly AA churches to lead chronic diseases prevention efforts in their local church organizations. This strategy purports that church leaders are best qualified to design and implement sensible, practicable, sustainable and culturally appropriate church initiatives because of excellent understanding of church dynamics and professional trainings to overcome internal challenges. The strategy demonstrates a marked deviation from traditional concepts of faith-placed programs with the external agency (ECSU) having very limited input for creation and implementation of intervention programs. The major role of ECSU was to design and administer a training support program whose major goal was to stimulate advocacy for health promotion by church leaders by using statistical data to orchestrate importance and need of prevention and wellness programs in African American communities and to provide guidance and support when and where necessary.

**Recruitment of church leaders:** Letters of invitation were sent to church leaders of predominantly (>50% of church members are AAs) AA churches in Elizabeth City and surrounding towns of northeastern North Carolina with no evidence of prior engagements in church wide continuous health promotion efforts and followed-up with telephone calls during which project details were further explained to leaders. 15 Leaders from the first 5 area churches to accept invitation (4 in Elizabeth City and 1 in Herford) were selected to participate. To qualify as church leader, an individual must hold an official title as pastor, assistant/co-pastor, deacon, elder, or a health programs associate. Letters sent to head pastors required them to nominate 2 of such additional leaders.

**Training/Sensitization:** Church leaders completed 4 weekly training sessions lasting 3 hours per session. Sessions addressed four major competencies:

**a. Analyzing problems and setting goals:** The focus of this session was using population health statistics as evidence of health disparities of AAs. Pros and cons of key strategies for reducing/eliminating health disparities of AAs were also evaluated.

**b. Developing strategies and action plans:** During this session, faith leaders learned about processes and protocols involved in developing actions plans with emphasis on connecting actionable items to overarching goals of every plan.

**c. Implementing action plans:** This session explained how to procure necessary tools, supports and resources needed to successfully implement action plans including personal disciplines and commitments.

**d. Addressing cultural elements:** This session highlighted special qualifications/endowments of church leaders in addressing issues of AAs and explained culturally sensitive issues that are commonly overlooked when traditional approaches to prevention are followed.

Sessions were adapted from the Community Tool Box Curriculum <http://ctb.ku.edu> and provided examples and contexts for preventing onset and progression of chronic diseases among those at risk. Lectures, group discussions, small and large group activities, and skills practices were included in all sessions. Training was conducted at ECSU by clinical faculty of the Department of Pharmacy and Health Professions and church leaders were compensated for time.

Pre and post assessments were used to evaluate effectiveness of training with pretest administered on first day of training and posttest at program completion. Differences in mean percentage scores from pre and post training assessments on all training goals were tested for statistical significance.

Immediately following completion of training, leaders independently created needs/resources-specific and culturally sensitive action plans describing health promotion and diseases prevention activities/programs to be implemented in their respective churches. Church leaders were encouraged to be very clear and elaborate in describing actionable items, provide implementation time line for every item listed, and methods for documenting performance/completion. Action plans were reviewed, corrected where necessary and adopted during post-training/pre-implementation meetings with the ECSU team.

**Implementation:** Action plans were thereafter implemented in respective churches following pre-determined time lines. Performance/completion logs were provided to the ECSU support team at scheduled intervals via fax or hand delivery and were used for performance evaluations.

Implementations were evaluated after 9 months (39 weeks) from January 1 through September 29.

**Outcome Variables and Metrics:** 2 groups of targeted goals were evaluated. The first group measured training outcomes and evaluated how faith leaders were impacted by training assessed by extent to which 3 major goals of training were accomplished. The second group measured impacts of training and was assessed by readiness of church leaders to independently design and implement relevant action plans.

*Group 1 goals.* Increase knowledge of health disparities of AAs, increase understanding of impacts of health knowledge on lifestyle and behavior and increase understanding of impacts of lifestyle and behavior on health outcomes of AAs by faith leaders.

*Group 2 goals.* Develop and successfully implement relevant action plans in churches.

## Results

**Training outcomes:** Figure 1 and Table 1 summarizes pre and

post training data for faith leaders. The results indicate significant improvements ( $p < 0.0001$ ) on all 3 knowledge-based goals.

### Action plans

Five action plans each having 3-9 health promotion activities and programs were created for implementation by church leaders. Contents of action plans while reflecting unique needs and cultural sensitivities of various church groups were also similar in many ways.

Contents were grouped into 5 peculiar subcategories: a) Routine Educational Type 1 (RET1) programs comprising educational campaigns whose contents were disseminated on display boards, in periodicals such as weekly service bulletins or flyers. More than half of all programs listed in the 5 action plans (52%) are of this subcategory. b) 4% of listed programs are Routine Educational Type 2 (RET2) programs which basically are organized formal education and training sessions such as seminars or lectures facilitated by individuals with content expertise. c) Programs with physical activities contents or Routine Physical Activities Type (RPAT) programs represented 13% of all programs. d) 22% of all programs included assessments for disease risks such as blood pressure and blood sugar screenings and are therefore Routine Risk Assessment Type (RRAT) programs. e) Corporate Policy Related Programs (CPRP) or programs with contents that addressed health related corporate policies represented 9% of all programs (Table 2).

Complete listing of these activities/programs and their respective implementation rates for 9 months (39 weeks) are summarized in Table 3.

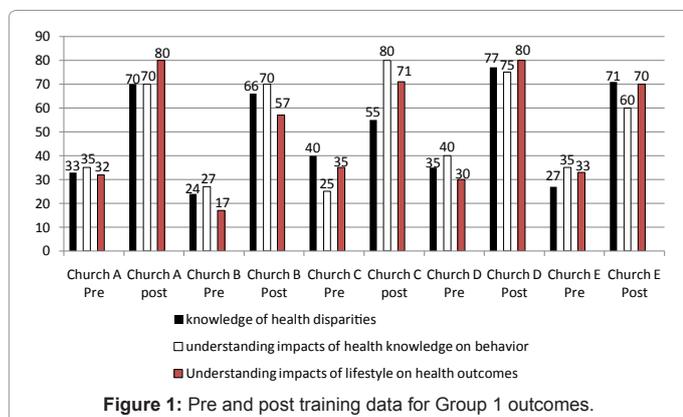


Figure 1: Pre and post training data for Group 1 outcomes.

Criteria	Pre			Post			p
	Highest	Lowest	Mean ± SD	Highest	Lowest	Mean ± SD	
Knowledge of Health Disparities.	40	24	31.8 ± 6.37	77	55	67.8 ± 8.16	<0.0001
Impacts of health disparities.	40	25	32.4 ± 6.22	80	60	71 ± 7.41	<0.0001
Impacts of lifestyle on health outcomes.	35	17	29.4 ± 7.16	80	57	71.6 ± 9.44	<0.0001

Student's t test. Values expressed as percentages; SD=Standard Deviation; P=P value

Table 1: Pre & post training knowledge-based assessments for 15 church leaders.

Routine Education Type 1 (RET1)	Routine Education Type 2 (RET2)	Routine Physical Activities Type (RPAT)	Routine Risk Assessment Type (RRAT)	Corporate Policy Related Programs (CPRP)
Health facts in church bulletin Boards.	Seminars and health education.	Weekly corporate aerobic physical activity.	Annual health screenings for risk factors.	Develop a health mission statement for the church.
Health nuggets on display boards.		Monthly corporate aerobic physical activity.		Review of all health-related corporate policies.
Health literature in church library		Ride-A-Thon (men's monthly bicycle riding event)		
1×5=5	1×1	1×1=1	1×5=5	1×1=1
1×5=5		1×1=1		1×1=1
1×2=2		1×1=1		
n=12 (52.17%)	n=1 (4.35%)	n=3 (13.04%)	n=5 (21.74%)	n=2 (8.70%)

Table 2: Program and Activities Distribution by Types (N=23).

Activities	Church A	Church B	Church C	Church D	Church E			
<b>Weekly:</b>	y/n %	y/n %	y/n %	y/n %	y/n %			
Health facts in bulletin boards	y 100	y 100	y 100	y 100	y 100			
Health nuggets in church bulletin	y 100	y 100	y 100	y 100	y 100			
Corporate aerobic physical activity	y 92.3	n	n	n	n			
<b>Monthly:</b>								
Aerobic physical activity	n	n	n	n	y 89			
Seminars and health education	y 44.4	n	n	n	n			
Ride-A-Thon (men's bicycle riding event)	y 67	n	n	n	n			
<b>Annually:</b>								
Corporate health screenings for risk factors.	y 100	y 100	y 100	y 100	y 100			
<b>Other:</b>								
Health mission statement for church.	y 100	n	n	n	n			
Review of health-related corporate policies.	y 100	n	n	n	n			
Health literature in church library.	y 100	n	n	n	y 100			
<b>Total # of items &amp; average % completion rates</b>	<b>9</b>	<b>89.3</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>	<b>5</b>	<b>97.8</b>
Total # of actionable items=10; average % cumulative completion rate=97.42								
Y/n=Item included in church's action plan? y=yes, n=No								

Table 3: Contents of Action Plans and Percentage (%) Implementation Rates.

## Discussion

### Effect of training

This study reveals that relevant education and training can motivate church leaders to independently identify, design, and implement appropriate health promotion programs in their local church communities. Significant improvements recorded by church leaders on all major training goals namely improving knowledge and awareness of current health disparities experienced by AAs, elevating appreciation for need of pertinent health education in AA communities by improving understanding of interdependent relationships between personal health literacy and health-impacting behaviors, and improving understanding of effects of daily choices on individual health outcomes

prompted independent creation and implementation of health promotion action plans by church leaders in their various churches.

These results suggest that absence of leadership-driven corporate health promotion initiatives in predominantly AA churches may be attributable to improper perception of burden of need and inadequate understanding of impacts of behavior on many preventable chronic conditions from which AAs are impacted disproportionately thereby affirming leadership trainings and education as an ideal sensitization protocol for initiating church leadership-driven life-saving health promotion programs in AA churches.

A community-led participatory design is specie of CBPR that emphasizes community needs and capacity above research interests thereby strengthening research partnerships. It addresses a basic deficit of traditional CBPR practices that stems from apparent dichotomy between mainstream academic research methods and operational realities of social communities which has hindered adequate description of practicable and culturally appropriate community-based interventions by these concepts. Furthermore, the need to keep study designs within the rigid confines of academic research practices often leads to lack of considerations for unique church-related factors such as availability of resources, level of commitment of church members and other internal socio-political/socio-cultural factors that contribute immensely to program implementation and sustainability. These factors coupled with evidence of lack of trust of healthcare providers and researchers by AAs emphasize the urgent need of a paradigm shift from current church-based health promotion practices to strategies that empower AA church leadership to independently design and implement programs that are based on properly determined community needs and are within contexts of available resources and support. This ground-up approach facilitates ownership and responsibility for programs, eliminates conflicting questions and doubts about possible undisclosed intentions of researchers and is an affirmation to church leaders that collaborative programs are not mere academic research exercises that are primarily for professional advancements of researchers.

### Action plans

After completing 4 weeks of semi-structured education and training, church leaders independently created 5 action plans each containing between 3-9 actionable items that have well researched health benefits. Contents of each action plan are based on objective assessments of respective church needs and availabilities of program-supporting resources and are therefore unique and distinct from one another irrespective of occasional similarities in contents. Notably, most of the programs and activities in the action plans are RET1 programs such as sharing of health facts on church display or bulletin boards. These types of program were listed in all 5 action plans as weekly events. This is in sharp contrast to RET2 programs with only one listed monthly program in one action plan, RPAT programs with one weekly and two monthly programs in three action plans, and CPRP with two listings in one action plan. Additionally, action plans that contained both RET1 and RPAT programs remarkably have more of RET1 programs than RPAT programs (2 versus 4 in Church A and 1 versus 3 in Church E).

The variation in distribution and frequency of activities and programs in action plans suggests that not all health promotion ideas are appropriate for church-based interventions and adequate considerations must be given not only to suitability of programs but also to church's individual capacity to successfully implement them without significant interference with current church routines. Therefore strategies that recommend same program types for all

church groups irrespective of church sizes and other pertinent church-specific factors are inappropriate for church-based health promotion programs. Moreover the fact that majority of listed programs were RET1 programs suggests that church leaders favor programs that wouldn't necessarily add to or conflict with on-going church routines.

### Implementation

Implementation data (Table 1) compiled from completion logs shows a direct relationship between relative ease of implementation and implementation rates with programs/activities requiring least investments in time, and other resources including adaptability to current church routines recording best implementation rates. Conversely, activities requiring additional resources or planning or are structurally more complex than others had poor implementation rates. The best implemented programs therefore were RET1 programs with perfect implementation in all the churches. Furthermore, RPAT programs which were notably fewer in number than RET1 programs (a total of three activities in two action plans) and requires strategic planning, additional resources and supervision had imperfect implementation rates. Church A is the only church that included two CPRP in their action plan (developing a health mission statement for the local church and reviewing all health-related corporate policies completely to identify and eliminate unhealthy policies and practices).

A possible explanation for poor representation of corporate policy programs in action plans is that programs that target amendments or changes to long standing corporate policies may not be well received by church members who may view such acts as drastic/fundamental deviations from traditional church concepts especially among those who believe that church activities and programs should be limited to issues of spirituality (winning souls and preparing members for the afterlife) and nothing more. Finally, there was an inverse relationship between number of items listed on action plan and overall implementation rates. Church A with the most items (9) had 89%, church E with 5 items had 98% and churches B, C and D all with 3 items each had 100% implementation rates.

### Conclusion

Overall, church leaders were very receptive to the idea of leading health promoting initiatives in their local church communities when they are adequately sensitized to see the need for doing so. They also understand that health promotion initiatives designed by and delivered by trusted leadership is crucial to addressing risk factors of chronic conditions that contribute to health disparities of AAs. However, they are most likely to support and promote programs and initiatives that will neither add excessively nor remove drastically from current church practices and protocols.

Evidence from this study shows that this ground-up approach is essential for successful church-based health promotion programs designed for AAs because only programs that are adequate for addressing health issues of church members and are also sufficiently supported by prevailing church resources will be selected by church leadership for implementation thereby increasing probabilities for continued adoption and sustenance. Moreover issues of trust and suspicions of outside agencies and organizations that are among current hindrances to health promotion research in AA communities could be avoided through this approach.

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