

Lessons Learned from a Collaborative Community-Based Diabetes Education Program

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Background

- Individual health behaviors associated with or influenced by lifestyle choices are some of the most prominent contributors to the development of lifestyle-related chronic disease
 - The total prevalence of diabetes in the United States is currently estimated at 19.8 million and is projected to be 29 million by 2050 ^{1, 2}
- Minority communities (i.e. racial minorities, women, low income) experience disproportionate burden of adverse health outcomes related to these diseases
 - 12.6 % of African Americans had been diagnosed with diabetes in comparison to 7.1% of non-Hispanic whites (2009) ³
 - African Americans are at 77% higher risk to be diagnosed with diabetes and are 1.8 times more likely to have diabetes (2011) ⁴
- Collaborative partnerships with faith-based organizations (FBO) present a unique platform to improve program, partnership, and health outcomes ^{5, 6}
 - Faith-based health programs have been shown as a promising strategy to address diabetes along with other lifestyle-related chronic disease
 - Established credibility in vulnerable communities
 - Commitment to community health
 - Programmatic resources
 - Social support networks



Significance

- Limited studies have
 - Identified, explored, and compared capacity and readiness factors unique to FBO
 - Identified and explored these factors within the context of varying types of FBO
 - Identified and explored these factors within the complex context of FBO, particularly in collaborative partnerships to implement faith-based health programs
 - Utilized evaluative strategies (formative and process research) to identify and understand the processes and factors that influence programmatic, partnership, and health outcomes
 - Inclusive of capacity and readiness measures
- Exploring the influence of capacity and readiness within this context can further reveal FBO role in shaping health behaviors and outcomes

Innovation and Overall Purpose

- **Develop and implement a process evaluation that will further reveal the processes and capacity and readiness factors influential in programmatic and partnership outcomes within a lifestyle-related chronic disease program (Balanced Living with Diabetes) that utilizes collaborative partnerships (FBO, community, academic organizations) to implement and evaluate the program**

Project Aims

Primary Aim

- Identify and explore capacity and readiness factors unique to FBO implementing lifestyle-related program that addresses lifestyle-related chronic disease, particularly in partnership with community, health, and academic institutions

Secondary Aims

- **Capture the FBO perspective implementing Balanced Living with Diabetes (BLD).** Develop and conduct a process evaluation aimed to identify and better understand perceived facilitators, barriers, challenges, and opportunities experienced implementing BLD
- **Capture the FBO perspective implementing BLD in partnership with community, health, and academic organizations.** Develop and conduct a process evaluation aimed to identify and better understand perceived facilitators, barriers, challenges, and opportunities experienced implementing BLD contextualized within a collaborative partnership of varying community-focused organizations using a community-based approach

Tertiary Aims

- **Capture the community and academic partner's perspective's implementing BLD.** Develop and conduct a process evaluation aimed to identify and better understand perceived facilitators, barriers, challenges, and opportunities experienced implementing BLD
- **Capture the community, health, and academic partner's perspective's implementing BLD in partnership with FBO.** Develop and conduct a process evaluation aimed to identify and better understand perceived facilitators, barriers, challenges, and opportunities experienced implementing BLD contextualized within a collaborative partnership of varying community-focused organizations using a community-based approach

Balanced Living with Diabetes

- Balanced Living with Diabetes (BLD) is a type 2 diabetes education program that targets medically underserved areas in Virginia
 - Program developed and coordinated by Virginia Cooperative Extension
 - Community-based participatory research approach is used to tailor, deliver, and evaluate the program
 - Program delivered in collaboration with the health ministry program of Baptist General Convention of Virginia, local Cooperative Extension Agents, churches, Virginia Tech researchers, and healthcare professionals (registered dietitians/certified diabetes educators)
- Program purpose
 - Better manage diabetes
 - Learn how to choose and prepare healthier foods
 - Become more physically active
 - Lower blood sugar
 - Reduce health complications related to diabetes
- Target population
 - People with type 2 diabetes and their families
 - African American churches (3 churches per geographic location)
 - Medically underserved areas of Virginia with highest rates of diabetes
 - Accomack County
 - Amelia/Nottoway
 - Brunswick/Mecklenburg
 - Caroline County
 - Chesterfield County
 - Danville
 - Petersburg City
 - Richmond City
 - Spotsylvania County

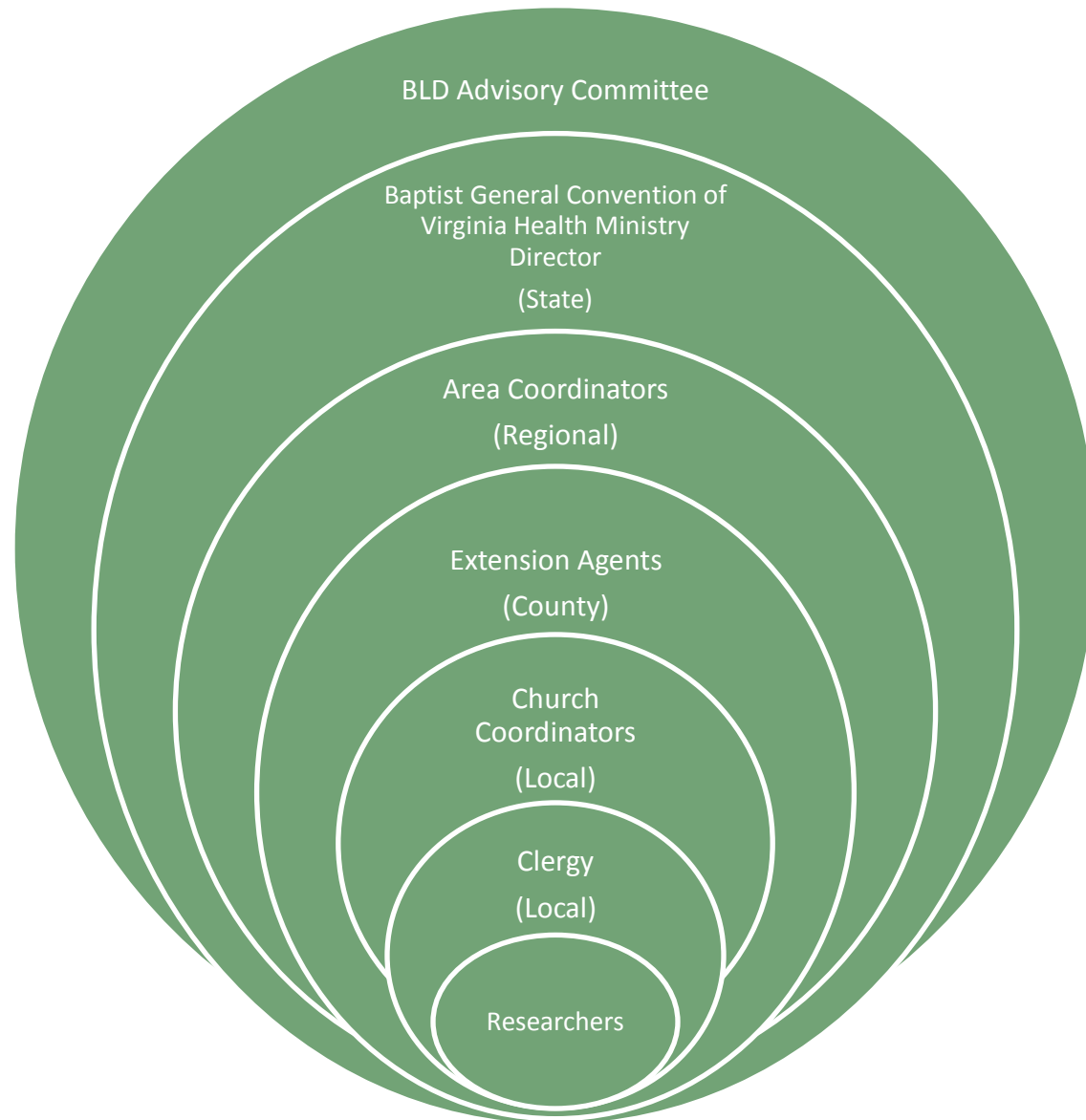


Balanced Living with Diabetes

- Program Design and Incentive
 - 4 week program
 - 1 group class per week, each class 2.5 hours
 - Each class consist of interactive learning modules about nutrition and food tasting
 - Support groups
 - Program participants receive incentives at each class (i.e. pedometer, cookbooks, resistance bands, plate, tote bag)
 - Research participants receive up to \$100 for participation
 - Church receives \$350
- Program Evaluation
 - 3 arm RCT evaluation design
 - Balanced Living with Diabetes, Balanced Living with Diabetes plus monthly support groups, or delayed Balanced Living with Diabetes (for a comparison group)
 - Blood sugar control (hemoglobin A1c), blood pressure, body weight, and nutrition and physical activity behaviors, step log
 - Baseline, 3, 6, 12 month follow-up



Balanced Living with Diabetes



Research Design

Research Design

- Non-experimental mixed methods study
- Approved by Virginia Tech IRB and Baptist General Convention of Virginia
- Participatory methods used to guide study design, methods, and tools
 - Advisory committee
 - Formative research
 - Member checks
 - Peer debriefing

Data Collection Methods

- One-time survey
 - Completed individually by participant
 - Orally administered detail instructions provided via telephone
 - Assistance available upon request
 - Completion follow-up prior to interview
 - Provided 1 week prior to interview (electronic and hardcopy)
 - Submitted electronically or brought to interview
- One-on-one in person interview
 - Date, time, and location convenient to participant
 - One hour
 - Audio recorded
 - Conducted by research assistants
 - Interview script provided to participant 24-48 hours prior to interview (electronic and hard copy)

Research Design

Target Population and Sampling Methods

- Purposeful criterion sample method to identify participants
 - Convenience sample method to recruit participants
- FBO, community, health, and research partners (n=27)
- State (n=1)
 - Administrative lead for BLD program within Baptist General Convention of Virginia
 - Actively participated in the development, organization, and implementation of BLD on state, regional, local, clergy, extension, and research levels
 - Regional (n=4)
 - Actively participated in the organization and implementation of BLD program in region
 - Two interventions sites within the region have completed the 4wk BLD program and completed at least 6 month follow-up
 - Attended at least 1 community advisory board meeting and/or BLD research program planning meeting
 - Local (n=11)
 - Identified at the regional level
 - Actively participated in the organization and implementation of BLD program in their church
 - Church has completed the 4wk BLD program and completed at least completed 3 month follow-up
 - Clergy (n=3)
 - Actively participated in the decision making and implementation process to participate in the BLD program
 - Assisted the local level to recruit participants and/or promote BLD program in the church and/or community
 - Extension Agent (n=4)
 - Attendance at 1 of 3 training workshops: BLD training workshop (2011), extension agent BLD implementation training workshop (2010), and extension agent BLD dissemination training workshop (2012)
 - Actively lead and coordinated food preparation and nutrition education component of BLD program for designated county location
 - Research Team (n=4)
 - Involved in identification, recruitment, and implementation of BLD program in half (minimum) of the location sites

Recruitment Strategy

- Email with official invitation letter
- Follow-up phone call or email
- Telephone review of project, implied consent form, interest, questionnaire, interview (date, time, location)

Research Design

Data Collection Tools

Conceptual Model

- *Capacity and readiness (individual, organizational, community/collaborative)* ^{7, 8, 9}
 - Developing, implementing, evaluating, and sustaining efforts to effectively address health needs and achieve health outcomes can greatly rely on individual, group/organizational, community, or collaborative capacity and readiness
 - Identified the most common factors across each capacity and readiness level (individual, organizational, community/collaborative)
- *Partnership synergy* ¹⁰
 - More specifically, community and collaborative efforts to address complex individual and community health needs greatly relies on the reciprocal relationship between individual, group/organizational, community, and collaborative capacity and readiness to execute effective partnerships and achieve desired health outcomes
 - Identified the key factors that influence partnership effectiveness and synergy-working together to achieve more by combining complementary strengths, perspectives, values, and resources of all partners to achieve more solutions
- *Key characteristics and elements of successful faith-based health programs* ¹¹
 - Organizations such as FBO, and collaborative partnerships that are inclusive of community organizations such as FBO, can be complex in nature, which can present challenges unique to projected efforts
 - Identified key factors that have been critical in the development and implementation of faith-based health programs that yield desired partnership, programmatic, and/or health outcomes

Research Design

Data Collection Tools

- Questionnaire
 - Customized for each participant level
 - Sections
 - Personal and organizational experience with program
 - Balanced Living with Diabetes program experience
 - Partnership synergy
 - Collaborative readiness
 - Interpretation of Experience: Changes in your experience with health/wellness planning and partnership over time
 - Instructions
 - List and description of capacity or readiness factors shown to be important within each experience
 - Participants rate the factors that have been most important within that experience
 - 1 signifies “least importance” and 10 signifies “greatest importance”
- Semi-Structured Script
 - Customized script for each participant level
 - Sections
 - Personal and organizational experience with program
 - Balanced Living with Diabetes program experience
 - Partnership synergy
 - Collaborative readiness
 - Interpretation of Experience: Changes in your experience with health/wellness planning and partnership over time
 - How became involved; benefits, opportunities, challenges, barriers; importance of factor within experience with health/wellness program planning and partnership before your current involvement with BLD; most important lessons in role and in partnership
 - Instructions
 - Interviewer asked about factors rated 10 and 9
 - Participant provided descriptions of factors for reference during interview
 - Could provide additional information that was important to experience not discussed
 - Participant asked for feedback at end

Research Design

Data Analysis

- Questionnaire
 - Quantitative statistical analysis using Excel/SPSS
 - Basic descriptive statistics (frequency, mode)
 - Identify most important capacity and readiness factors across partners and within each partner level
- Semi-structured script
 - Audio transcribed into word document
 - Theme Based Content Analysis Strategy
 - Observe patterns in participant responses and organize these patterns into themes under each section and question within script
 - Two data analysis teams
 - Each team consist of an interviewer, BLD researcher, team lead, and team supervisor
 - Researchers that participated in interview do not review “researcher scripts” or act as lead
 - Lead from each team individually identify patterns and themes for each major section
 - Share, reach consensus, synthesize patterns and themes, formalize codes into coding matrix
 - Overarching coding scheme across all partners
 - Subcodes created for each partner level
 - Team members use line-by-line coding method to identify quotes or “meaning units” to support identified themes
 - Researchers meet in teams to share meaning units and achieve consensus

Results

Capacity and Readiness Factors

- Across all partners
 - Refer to handout
- Within partner levels

Personal Experience

Administrator	Area Coordinator	Church Coordinator	Extension Agent	Clergy	Researcher
self-determination	self-determination	self-determination	self-determination	self-determination	self-determination
competence	competence	competence	competence	competence	competence
participation	participation	participation	participation	participation	participation
agency	agency	agency	agency*	agency	agency
confidence	confidence	confidence	confidence	confidence	confidence
mastery	mastery*	mastery	mastery	mastery	mastery
information	information	information	information	information	information
impact	impact	impact	impact*	impact	impact

How has your “ability to make conscious and confident decisions to accomplish personal goals” been important to your experience as **[insert role]** with the BLD program?

Theme	Personal and professional experience w/ diabetes impacted self-determination	“Diabetes is one that we’ve always had to deal with congregationally, and I think every congregation is impacted by it. My own family is very much impacted by it generationally. So at every opportunity that I could, I’ve always tried to include diabetes education as a part of what we always talk about “
Theme	Goal to improve control and prevent diabetes influence self-determination	“...it’s always been my goal to improve people’s ability to control diabetes and prevent it, so this just worked for me in terms of the concept”
Theme	Self-determination helps navigate private issue with public support	“We’ve learned in the program that there are some areas when we never got it off the ground because people saw it as such a private thing not to talk about”

Results

Organizational Experience

Administrator	Area Coordinator	Church Coordinator	Extension Agent	Clergy	Researcher
aspirations	aspirations	aspirations	aspirations	aspirations*	aspirations
strategy	strategy	strategy	strategy	strategy	strategy
organizational skills	organizational skills	organizational skills	organizational skills	organizational skills	organizational skills
human resources	human resources	human resources	human resources	human resources*	human resources
organizational structure	organizational structure	organizational structure	organizational structure	organizational structure	organizational structure
culture	culture	culture	culture	culture	culture

How has [insert organization] vision, mission, and goal(s) been important to involvement with the BLD program?

Theme	BLD and aspirations to promote and sustain healthy behavior change similar	"We always strive to improve the health of the congregation, especially with the black race- we're more prone to high blood pressure and diabetes and things of that nature"
Theme (Challenge)	Maintaining consistent health programming was struggle	"We've had other initiatives that came and went...we struggle with that"
Theme (Importance to Previous Experience)	Programs in the past too difficult to understand to promote health ministry aspirations	"We've had one way in the past...with diabetes that was so research-centered that people couldn't buy in to it because the brochures and everything else were, like, science"

Future Work: Overarching Dissertation Research Aims and Objectives

Overarching aim

- Capacity and readiness factors unique to FBO
- Characteristics of FBO and FBO health ministries that influence readiness and capacity to plan, implement, evaluate, and disseminate health programs that address lifestyle-related chronic disease, **particularly in partnership with community, health, and academic organizations**

3 Phase Study

Preliminary Research

Develop and implement a process evaluation that will further reveal the processes and factors that influence program and partnership outcomes within a lifestyle-related chronic disease program (Balanced Living with Diabetes) that utilizes collaborative partnerships to implement and evaluate the program

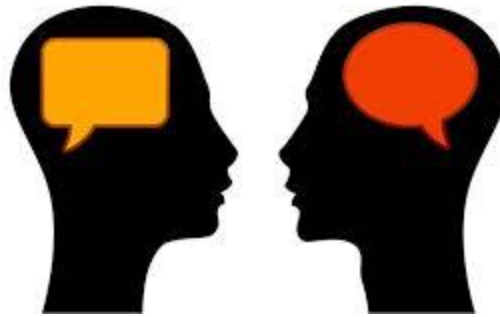
Formative Research

Conduct formative research that will further identify, explore, and expand understanding of unique FBO attributes and infrastructure that influence capacity and readiness to implement health and wellness programs that address life-style related chronic disease- particularly in partnership with community, health, and academic organizations

Culminating Research

Identify, explore, and expand understanding of unique FBO characteristics that influence capacity and readiness to implement health and wellness programs that address life-style related chronic disease-particularly in partnership with community, health, and academic partnerships

Let's Discuss!!



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