

## ABSTRACT

BARLOW, JAMETA NICOLE. Voices from the South: A Mixed Methods Evaluation of the STEPS to a Healthier Heart Intervention Program. (Under the direction of Craig Brookins).

African American women are at the highest risk for death from coronary heart disease (CHD) among all racial, ethnic, and gender groups. Despite a greater CHD event risk, Black women are less likely to receive appropriate preventive therapy and adequate risk factor control for CHD. While some risk factors are uncontrollable, several can be controlled by modifying lifestyle behaviors. Influenced by Dr. Anna Julia Cooper's memoir, *Voice from the South*, and intersectional standpoint framework, this dissertation study employed a mixed methods research approach to evaluate STEPS (Sisters Together Empowered for Prevention and Success) to a Healthier Heart, a culturally and gender appropriate twelve-week heart disease education program (N=394) designed to facilitate changes in knowledge, behavior, and heart disease risk factors among African American women. The overall STEPS program includes two program types. The Program Group (PG) received healthy heart education materials that focused on reducing heart disease risk factors and participated in healthy-heart seminars and physical exercise activities. The Information Only Comparison Group (IOG) only received the healthy heart informational. Participants self-selected into each group.

This two-phased quasi-experimental study consisted of five cohorts of non-randomized participants for both the PG and IOG. The quantitative phase of the study compared the STEPS participants' pre and post-program data across the following selected domains of the Health Promotion Lifestyle Profile II (HPLPII): interpersonal relations; physical activity; health responsibility; stress management; and spiritual growth. There were

no pre-test differences on any of the HPLPII domains. Participant data from both groups were also examined using descriptive and repeated measures mixed analysis of variance (ANOVA) to take a cross-sectional look at individual factors that contribute to health-promoting lifestyle attitudes and behaviors. IOG participants had significantly more children between the ages of 5-12 years old than the PG  $t(351) = 2.48, p = .014$ . Across both groups, however, STEPS participants demonstrated significantly greater improvements in the HPLPII domains of interpersonal relationships, physical activity, health responsibility and stress management at the end of the 12 week program. The only significant difference between the PG and IOG groups was found on the spiritual measure.

The qualitative phase of the current study assessed implementation fidelity as measured by session participation rates (sign-in sheets) and participation acceptability via six semi-structured, post program focus groups, (six to eight participants per group, N=45).. The focus group data were analyzed using a constant comparative analytic technique to explore the attitudes, perceptions and experiences of the STEPS Program Group (PG). . Participant attendance rates were moderately high across all five cohorts. The participants did, however, report a high degree of general support, acceptability and advocacy for the STEPS program. The salient themes that emerged were related to: the within-group oppositional gaze and self-perceptions of Black women; the role that the participant-initiated My Sisters' Keeper component played in providing social support, group cohesion and creating community; and a belief that STEPS had an overall positive impact on health behaviors. Several participants also reported having experienced life-changing and transforming health behaviors during the

course of the STEPS program. These qualitative results provide context for understanding the improved scores on the HPLPII for both groups.

Although limited by several internal and external threats to validity, the results of this study nevertheless further our understanding of community-based heart disease interventions targeting and engaging African American women. Recommendations are made for future implementation and evaluation of such programs.

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Voices from the South: A Mixed Methods Evaluation of the STEPS to a Healthier Heart  
Intervention Program

by  
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## **BIOGRAPHY**

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Gye Name (“except for God”).

With all my gratitude and respect, I offer my sincerest appreciation and dedication to my parents, James. H. Barlow, Jr. and Lavetta R.E. Barlow and brother, James (Trey) H. Barlow, III. Your unwavering support and encouragement during this process cannot be quantified. To all my other family members, friends and mentors, I am humbled by the village that has nurtured me. To the gracious women in Winston-Salem who participated in the STEPS program, I am thankful for your time, commitment and perseverance. This dissertation is as much yours as mine.

I am the hope of so many...and am hopeful for so many.

Ubuntu (“I am because we are”).

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## INTRODUCTION

Widely acknowledged as a foremother to both the feminist and Black feminist canon, Raleigh, North Carolina native, Dr. Anna Julia Haywood Cooper's (b. Raleigh, NC August 10, 1858 – February 27, 1964) lifetime efforts were rooted in transformational community-based action-oriented work, engaging upon principles of consciousness-raising, self-determination, agency, activism and social change. Considered an original author of the Black feminist intellectual tradition, Dr. Cooper boldly pronounced in 1938:

“The Colored woman today occupies, one may say, a unique position in this country...She is confronted by both a woman question and a race problem, and is as yet an unknown or an unacknowledged factor in both”

(Voice, pp. 134).

Today, this issue of intersectionality remains and is even more pronounced in applied research such as the social sciences and public health. Truthfully, her only publication, *A Voice from the South: By A Woman from the South*, was the inspiration for this dissertation study. Transformational, community-based participatory action efforts require long-term community-research relationship building and mutual trust. Congruent with the ideals of equity in feminism, these efforts have the potential to reverse the marginalization of the Black women's health. Feminism's representations of intersecting identities are reflected in its herstories of consciousness-raising, organizing, agency/change, activism and equality.

These constructs, approaches and methodologies should be considered in a discussion of women's health, particularly Black women's health.

A more holistic view of women's health acknowledges the individual within her environment. According to researchers, "Women's health emotional, social, cultural, spiritual and physical well-being, social, political, cultural and economic context of women's lives, as well as by biology" (Phillips, 1995). This definition recognizes the validity of women's life experiences and beliefs about health every woman should achieve, sustain and maintain health, as defined by the woman herself and to her full potential. African American, or Black women, are disproportionately affected by coronary heart disease (CHD) and have the highest risk for death from heart disease among all racial, ethnic, and gender groups. Black women disproportionately suffer from rates of heart disease that are twice as high as those among White women. Some of the factors that contribute to this disparity include higher rates of overweight and obesity, higher rates of elevated cholesterol levels and high blood pressure and limited awareness of our elevated risks (BWHP, 2013). Black women suffer rates of heart disease that are twice as high as those among white women. In addition to having high heart disease rates, Black women die from heart disease more often than all other Americans. Understanding the contextual experiences of Black women from their intersectional standpoint may offer insight towards cultural values, power dynamics and the distinct knowledge cultivated by their intersectional experiences.

### **Heart Disease and African American Women**

Black women are disproportionately affected by coronary heart disease (CHD). A recent American Heart Association study (Field et al, 2010) stated African American women

are at the highest risk for death from heart disease among all racial, ethnic, and gender groups. According to the American Heart Association (2010), African American women are at the highest risk for death from heart disease among all racial, ethnic, and gender groups. This is due in part to African American women's higher rates of obesity, physical inactivity, high blood pressure, and diabetes: 26.7% of African American women are overweight and 51% are obese (Office of Minority Health, 2011). As a result, the prevalence of coronary heart disease in African-American women is significantly higher than the rate for Caucasian women. The mortality rate from heart disease for African-American women is 69% higher than that for White women (Williams, 2011).

According to the Health Status 2010 data, North Carolina ranks poorly on death rates related to cardiovascular disease, particularly stroke and diabetes. Further, women in North Carolina are unaware of the guidelines established in the Healthy People 2020 project to help reduce and prevent the prevalence of cardiovascular diseases. According to the North Carolina Minority Health Facts (2010), the leading cause of death for African Americans in 2008 was heart disease. The rate of death in North Carolina due to heart disease (expressed as deaths per 100,000 population) was 236.0 for African Americans and 192.6 for Caucasians. The health facts also showed that African Americans in North Carolina were less likely to engage in exercise, maintain a balanced diet, and more likely to be obese than Caucasians. In North Carolina, 28% of women and 41% of African American women have high blood pressure; while 26% of women and 41% of African American women are obese (Williams-Brown, 2011).

In general, women have a lack of understanding and awareness of the increased risk for heart disease with age (American Heart Association, 2010). African-American and other minority women tend to have the least awareness of the risk factors for heart diseases (Mosca, Mochari-Greenberger, Dolor, Newby, & Robb, 2010). Thus, the need for education programs that increase women's (Mosca, King, & Ouyang, 2000; Hamner & Wilder, 2008) awareness of heart disease is imperative. Awareness campaigns targeting women have been advocated as an effective way to increase women's awareness of cardiovascular disease (Sanchez & Khalil, 2005). Mosca, et.al (2000) assert that "informed decisions to prevent heart disease and stroke depend on awareness of risk factors and knowledge of behaviors to prevent or detect these diseases" (p. 1) (Williams-Brown, 2011)

**Risk factors for heart disease.** As the leading cause of death in women and twice the rate of all combined cancers, one in four American women will die of CHD. Risk factors such as age, gender, and heredity are all considered uncontrollable (Field et al, 2010). Modifying controllable risk factors such as smoking, high cholesterol, high blood pressure, physical inactivity and obesity/overweight; and other risk factors such as excessive alcohol use, triglycerides, and reaction to stress can reduce the risk of heart disease. Most women fail to make the connection between risk factors such as high blood pressure and high cholesterol and their personal risk of developing heart disease. As women age, the risk of developing CHD increases primarily due to serious risk factors and a decrease in estrogen production. Middle aged women may have several of the risk factors and often underestimate their risk because they lack the knowledge of the risks factors associated with heart disease and the benefits of lifestyle changes (Williams-Brown, 2011; Shifren, 2003; Hamner & Wilder,



2008). But, how cardiovascular disease is framed is critical to understanding its challenges among African American females.

Black women disproportionately suffer from rates of heart disease that are twice as high as those among White women. Some of the factors that contribute to this disparity include higher rates of overweight and obesity, higher rates of elevated cholesterol levels and high blood pressure and limited awareness of our elevated risks (BWHI, 2012). In addition to having high heart disease rates, Black women die from heart disease more often than all other Americans. Socio-historical legacies of African Americans placed African people in environments with foreign foods. Slaves were told what to eat and had no control over their life, not even what they ingested. Food became a way to show love for many Black women who were often forced into kitchens as a source of employment. With respect to food consumption, “the signs of cultural hegemony, food politics and delineations of power are omnipresent” (Williams-Forson, 2006) and can present acts of self-definitions that are both empowering and liberating. Food’s role in constructing this transcendent quality of food as a place of love and calmness has morphed into overconsumption of food and underconsumption of healthy lifestyle practices. Mintz describes this practice of replicating, imitating and emulating the food consumption habits of others in a higher social status, intensification, is representative of acts of liberation for Black women. Being in control of what one eats is an important act of social defiance and action against potential, internalization of acts of oppression (1985). This interaction between geography, nutritional choice and social interaction is a major contributor to the contextual environment of African American females.

## **Epistemologies and Approaches**

Second-order change such as understanding the “causes of the cause” (Nelson & Prilleltensky, 2005) and employing transformative interventions to empower African American communities requires the exploration of psycho-social and behavioral interventions, consideration of socio-historically rooted beliefs and attitudes about medicine, research, health and community; and the environmental correlates. The promotion of health and wellness in African American communities warrants discussion around issues such as the prison-industrial complex and its roots in the co-creation of health inequities; the often absent discussions of the lifestyle-based legacies of slavery (e.g., the idea that Soul Food is indigenous to African people); and the change in the African American community landscape as a result of de-segregation and its effects on community-social structures and relationships.

According to The Fanon Project, “most critiques of power discuss macrosystemic levels, but then focus on microsystems and individual perception“ (pp., 152, 2010). To discuss and address health inequities among African Americans in an effort to build autonomous, sustainable healthy African American communities requires a brief mention of this issue of discussing the health of communities but only focusing on individual’s health. The majority of empirical studies are disease focused (e.g., cancer prevention, obesity prevention) or population focused (e.g., women, men, LGBTQs) and thus, there is a dearth of empirical studies on the general health and well-being of African Americans.

The U.S. Department of Health and Human Services’ Office on Minority Health and the Centers for Disease Control & Prevention’s Healthy Communities Program (2012) monitor the health and welling being of African Americans and communities, respectively.

Nevertheless, the limited examples on community-based efforts, initiated and developed by communities are limited to examples such as the free medical clinics advocated and instituted by The Black Panther Party in the 1960s. The Fanon Project describes power as an inherent collective and never individually based (2010). Consequently, deconstructing the prison-industrial complex with respect to health requires addressing issues of health inequities simultaneously at the macrosystemic and at the microsystemic levels and the interaction of the community members with these environments.

While the present study examined individual level factors between two groups, it also indirectly considers the socio-structural and implementation factors contributing to the implementation of a community-level intervention. This consideration of socio-environmental context in intervention implementation within a new paradigm contributes to transforming individual and collective power among Black women.

**Community psychology principles, practices and healthography.** Nelson & Prilleltensky (2005) advocate for community-based research that incorporates well-being and liberation at multiple levels: personal, relational and collective. Specifically, there should be “studies of the process of personal empowerment, the development of positive identities, alternative personal stories and consciousness-raising that connects the personal and the political” (Nelson & Prilleltensky, 2005, pp. 236). The authors promote community research that examines individuals at multiple levels: groups, organizations and macro-social contexts. At the relational level, well-being and liberation are studied best by exploring “relationships, informal support and power-sharing that disadvantaged people experience in the context of self-help/mutual aid organizations” (Nelson & Prilleltensky, 2005, pp. 237), which is

consistent with FST. At the collective level, well-being and liberation community research should involve social change; “focus on social structures and policies that promote liberation and well-being of disadvantaged groups; challenge the status quo; expose the damaging impacts of oppressive structures and policies (Nelson & Prilleltensky, 2005, pp. 237).

The role of the philosophy of science is critical when considering community health research in African American communities. Community psychology generally recognizes three paradigms of community research: post-positivist; constructivist and critical. Constructivist and critical paradigms often promote methodological approaches such as observational, qualitative research (e.g, interviews, ethnographies, discourse analysis, narratives and case studies) and participatory, action-based research. And, quantitative research is more prevalent in the post-positivist paradigms and generally at the microlevel, examining individuals. Thus, blending these paradigms along with FST perspectives address the needs of the target population, considers traditional approaches and recognizes how the external reality has been shaped by social and institutional structures (Nelson & Prilleltensky, 2005).

The social structures undergirding health inequities in the U.S. and throughout the world are often described as social determinants of health, including social structures related to race, class, gender, geography and intersectionality. Where an individual lives affects that individual’s health and well-being. This concept persists in the community psychology literature and is most often described using the socio-ecological framework. Recently, the American Public Health Association has adopted the term healthography to describe how an individual’s environment and context shapes their health and well-being (APHA, 2013).

Increased presence of fast food restaurants, lack of safe neighborhoods, healthy choices at local grocery stores, lack of access and/or participation in the development of local policies and programs further exacerbates health challenges experienced by African American women (Timmerman, 2007), justifying the need for second order change to the current obesogenic environment; and interventions at each level of the socio-ecological level. Nonetheless, for the majority of the behavioral, policy and environmental-based research, research results are not reported by race/ethnicity (Fitzgibbon et al, 2011); consider a within-groups approach towards Black women; explore the biological mechanisms linking overweight/obesity with co-morbidities (Guh et al, 2009) such as cardiovascular disease; explicate an effect on mental health (Atlantis & Baker, 2008); engage in a transdisciplinary theoretical and methodological approach or employ culturally appropriate frameworks.

### **Feminist Epistemologies and Evaluation**

Researchers have suggested feminist evaluation and inquiry in program evaluations are necessary to improving the implementation of female-focused health interventions. As previously discussed, health inequities are often intersectional, systemic and structural; and feminist evaluation politicizes these contexts by engaging in multiple ways of knowing. Since evaluation is by definition a political activity, where the evaluation researcher as participant-observer brings their perspectives and histories to the program, knowledge can become a powerful resource with intentional or unintentional objectives. This explicit and deliberate participatory process of evaluation supports “consciousness-raising, capacity-building, and evaluator reflexivity, and that make knowledge and knowledge-creation resources available to those who participate in the evaluation, especially disadvantaged

women” (Sielbeck-Bowen, 2002, pp. 3-4). Thus, evaluation research can be a form of social justice for marginalized groups such as African American women participating in the STEPS program.

Feminist epistemology, specifically feminist standpoint theory (FST) posits marginalized social location enables the researcher to problematize the theoretical underpinnings and methodologies most often adopted across research disciplines to frame project (Harding, 2009; Harstock, 1998). Further, Hill-Collins (1986; Crasnow, 2013), informed by Harding (2009) and Harstock’s (1998) work, advocates FST as a framework of analysis for intersectional issues such as race, class and gender. Fortunately, community psychology also embraces a philosophy of science that views the observer as a participant and the participant as an expert. This perspective is in alignment with health promotion science, particularly for communities of color. The following literature review not only addresses these content areas, but highlights the importance of a feminist perspective in the evaluation of health promotion interventions for Black women.

## **LITERATURE REVIEW**

Black women are disproportionately affected by coronary heart disease (CHD) and are at the highest risk for death from heart disease among all racial, ethnic, and gender groups. The social and political economies of Black women and their health (Bondi & Burman, 2001) provide the intersectional standpoint for using community psychological approaches to better understand health promotion science. Delivering effective and efficacious community-based health interventions to this population is critical in advancing health promotion science. The evaluation of community-based health interventions targeting African American women can benefit from the use of feminist epistemologies, which may more appropriately address critical elements of a culturally tailored, gender specific health program than traditional evaluation approaches. Community-based researcher and intervention can promote health in concert with women to challenge health inequities in social systems in order to create sustainable, social change using feminist paradigms and methodologies (Barbee (1992); Bent-Goodley, 2009; Daniels, 2009; Kohn and Hudson, 2002 and Carrington 2006). This involves “conscientization, power-sharing, mutual learning, resistance, participation, supportive and egalitarian relationships, and resource mobilization” (Nelson & Prilleltensky, 2005). Seemingly demanding efforts, these transformational, community-based participatory efforts require long-term community-research relationship building and mutual trust, which are congruent with the ideals of equity in feminism.

### **Health Promotion Framework**

The process of enabling people to increase control over the determinants of health and thereby improve their health is health promotion theory. Since health promotion draws

heavily upon the social sciences and their applications are still being refined and improved, framework or model is a more suitable term. The promotion of health, as opposed to the prevention of disease, has the potential to shift the paradigm of healthy living for those populations at highest risks for chronic conditions and diseases. This is particularly relevant for African American communities, and minimizes the stigma that may be associated with being sick and the label of having chronic diseases and conditions. Furthermore, researchers recently suggested, “the promotion of health and longevity may be more successful at preventing disease and improving both the quality and quantity of our lives than attacking individual diseases (Butler et al, 2008).” This research supports a strengths-based approach to intervention that “contribute[es] to lifelong well-being...[and]..health maintenance.” This paradigm shift helped informed the use of Pender’s (1975) heuristic framework, as it “encourages scholars to look integratively at variables that have been shown to impact health behavior”. Understanding the pathways involved in the health behavior and practices of African Americans is very important when considering prevention mechanisms and communication methods.

The health promotion model focuses on “individual characteristics and experiences; behavior-specific cognitions and affect and behavioral outcomes” (Pender, 2011) and makes the following assumptions:

1. “Individuals seek to actively regulate their own behavior.
2. Individuals in all their biopsychosocial complexity interact with the environment, progressively transforming the environment and being transformed by it over time.



3. Health professionals constitute a part of the interpersonal environment, which exerts influence on persons throughout their lifespan.
4. Self-initiated reconfiguration of person-environment interactive patterns is essential to behavior change.”

Often, health promotion practitioners will use planning models (e.g., PRECEDE/PROCEED, RE-AIM) to guide health promotion activities. Consistent among these models and frameworks to guide individual behavioral change are five distinct phases: 1) problem definition; 2) solution generation; 3) capacity building; 4) health promotion actions; and 5) outcome measurement (Davies & Macdowall, 2006). Problem definition requires knowledge of the targeted community’s needs and priorities. Theoretical frameworks can inform the focus of an intervention and at the individual level, may include “individual characteristics, beliefs and values associated with different health behaviors that may be amenable to change” (Davies & Macdowall, 2006, pp. 26). Solution generation is heavily dependent upon theoretical lenses, as it guides the programmatic objectives, strategies and approaches and can lead to the generation of new ideas. This phase allows for the consideration of multiple theories and approaches in changing the targeted behavior.

The third phase and perhaps the most challenging is capacity building. Garnering the interest of the target population for program implementation requires relationship-building and mutual trust. Program implementation involves multiple strategies, usually activities such as education and advocacy. Theory is essential in the third phase as it serves as a “benchmark against which actual selection of methods and sequencing of an intervention can be considered in relation to the theoretically ideal implementation” of programs (Davies &

Macdowall, 2006, pp. 26). Theoretical frameworks enable researchers to evaluate if the program actually implemented the program as designed and identify the successes and pitfalls. There are multiple levels of the fourth and last phase of health promotion, outcome measurement or evaluation. These include impact measures; intermediate outcome assessment; and health and social outcomes, where knowledge, behavior change and long-term effects are guided by theoretical orientations (Davies & Macdowall, 2006).

### **Community Psychology**

According to Nelson & Prilleltensky (2005), community-based research should incorporate well-being and liberation at the personal, relational and collective levels. This means at the personal level, there should be “studies of the process of personal empowerment, the development of positive identities, alternative personal stories and consciousness raising that connects the personal and the political (pp. 236). The authors advocated for community research that also examines individuals at multiple levels: groups, organizations and macro-social contexts. At the relational level, well-being and liberation are studied best by exploring “relationships, informal support and power-sharing that disadvantaged people experience in the context of self-help/mutual aid organizations” (pp. 237, Nelson & Prilleltensky, 2005). At the collective level, well-being and liberation community research should involve social change; “focus on social structures and policies that promote liberation and well-being of disadvantaged groups; challenge the status quo; expose the damaging impacts of oppressive structures and policies” (pp. 237, Nelson & Prilleltensky, 2005).

A major jewel of community psychology, as a discipline, is its rich history in social activism, community engagement and pursuit of community psychology as a science. Rooted in the idea of multiple levels of analysis: personal, relational and collective levels within the ecological framework, community psychology shares in the belief of a familiar feminist phrase, “[the] ‘personal is political’, which suggests to us that community psychology needs to push its boundaries to the collective level of analysis.” (pp.33, Nelson & Prilleltensky, 2005). Brinton and colleagues detail community’s psychology’s shared traits: “The shift from roots in social activism to a field of research or sub discipline within psychology parallels feminist psychology’s growth from activism to scholarly discipline (pp. 59, Landrine & Russo, 2010).” In fact, according to Nelson & Prilleltensky, community psychology, in its pursuit of legitimization as a science, has failed to attend to issues such as moral, ethical and value dimensions of its work.” (pp. 32, 2005). Moreover, Benton (2003) and Merriman (2010) explicate the “‘foundational threads’” for integrating feminism and community psychology: a call for redistribution of power; participant empowerment; honor and strengthening of “natural helping systems”; and more specific calls-to-action”...integrating contextualized understandings, paying attention to issues of diversity, speaking from the standpoints of oppressed groups, adopting collaborative approaches, utilizing multilevel, multimethod analyses, adopting reflexive practices, and taking activist orientations” (pp. 61, Landrine & Felipe Russo, 2010).

Angelique and Kelley’s (2003) examination of gender consciousness in community psychology, proclaimed the need for a feminist subdiscipline within the field of psychology, because “feminism, as a paradigm [would] allow researchers to acknowledge one’s

worldview and use it as a foundation upon which to conduct scholarly work” (pg. 200). A blend of these constructive and critical paradigms to reflect the needs of multiple stakeholders enables researchers to recognize how research participants’ external realities have been shaped by social and institutional structures (Nelson & Prilleltensky, 2005). These two paradigms often promote methodological approaches such as observational, qualitative research (e.g, interviews, ethnographies, discourse analysis, narratives and case studies) and participatory, action-based research.

### **Feminist Standpoint Theory**

Feminist standpoint theory posits that knowledge originates from the conditions and experiences common to girls and/or women. However, acknowledging and explaining this experience is not the only element of a feminist standpoint. According to Wood (2012), a “feminist standpoint disputes [the] privileging of men and men's interests while devaluing, marginalizing, and otherwise harming girls and women and their interests. In short, a standpoint is an intellectual achievement that reflects—and necessarily entails—political consciousness.” In other words, individuals with shared locations and statuses may often share meaningful experiences, which can generate knowledge, and perhaps action-oriented approaches about the social world. Thus, this translation of a racial and gender consciousness for African American females, their intersectional experiences of being both Black and female, interrogates and disputes the racial and gender privileges of men and White women. Applying Black feminist consciousness, as informed by standpoint theory, is essential to the health of African American women is essential in understanding the nature of chronic disease health risk, assessment and intervention among African American females. Further, feminist

standpoint theory is built on the assumption of power dynamics inherent within social structures and their direct and indirect effects on social locations. Often, these unequal social locations cultivate distinct cultural knowledge that not only offer insight into the lives of Black women, but also has health care practice and implementation implications towards standard delivery of care and prevention approaches.. This insight can result in a balance-consciousness-raising that empowers Black women to engage in agentic behaviors towards their health, or health responsibility and agency.

### **Agency**

Health promotion activities targeting Black women provide mechanisms for Black women to demonstrate autonomy, or agency, in their lives. This self-definition and self-expression resists psycho-social and socio-environmental stressors challenging the health of Black women. Black women have been forced to prioritize either their gender or race in the ongoing quest for social equality in the United States, and historically have had minimal agency over their bodies, and by consequence, their health. Health promotion efforts targeting African American females that fail to explore agentic behavior are overlooking a key dynamic for sustainable behavioral change.

Health disparities between African American females and Whites, specifically White females persist across socio-demographic differences. Researchers have suggested Black females' encounters and interactions with a wide variety of social structures have contributed to these phenomena. Research that employs theoretical and empirical work from the humanities, social sciences and public health to explain mechanisms of psychosocial and environmental stressors contributing to health inequality among African American females is

integral to advancing the science of community psychology and health promotion. This study serves as an extension of this engaged, subjective perspective and supports the use of Black feminist standpoint or consciousness in the development, implementation and evaluation of community-focused, action-oriented approaches, particularly those that consider the individual's interactions with her environment

### **Previous Community-Based Cardiovascular Disease Studies**

Racial and ethnic minority groups are disproportionately affected by cardiovascular disease (CVD); and for women, CVD persists as the leading cause of death. Researchers suggests health disparities such as these can improve the cardiovascular health of African American women via targeted community-based interventions focusing on social support, specifically personal and group wellness (Giardina et al, 2012; Keeley & Driscoll, 2010; Petersen & Cheng, 2011; Rodriguez et al, 2012). Actually, comprehensive individual and population-based interventions are encouraged (Bambs et al, 2011) to reach the American Heart Association's 2020 Impact Goal for cardiovascular health. Recent research using data from the National Sister to Sister campaign, a community-based sample of free heart screening data from 17 U.S. cities, points to the need to understand the reasons for geographic variations in CVD risk factors among women nationally and advocates for tailored preventive interventions (Jarvie et al, 2011).

Love Your Heart, a Boston-based pilot, is an example of an intensive, culturally tailored 12-week nutrition and physical activity program targeting CVD risk factors and was conducted in partnership with an academic institution, community-based organizations and community members. At the completion of their study, there were substantial reductions in

hypertension and elevated waist circumference, contributing to weight management and heart health promotion (Rodriguez et al, 2012). Another study, Heart and Soul Physical Activity Program (HSPAP), focused on physical activity among African American female congregants. Increasing social support for physical activity was the major objective of this six-week health promotion intervention and after completion, participants reported increases in social support (Peterson & Cheng, 2011). The Department of Health and Human Services' Office on Women's Health Initiative to Improve Women's Heart Health encourages women to focus on knowledge and awareness among women with cardiometabolic risk factors. Moving beyond health promotion through the education of traditional CVD risk factors (e.g., hypertension, smoking, elevated low-density lipoprotein cholesterol or LDL-C) and focusing on risk reduction among women with cardiometabolic risk is based upon the observation that "women with [metabolic syndrome] have lower knowledge about CVD as the leading cause of death, the symptoms of a heart attack and the ideal option for managing a CVD emergency" (Giardina et al, 2011, pp. 893). Effective implementation of targeted, culturally and gender appropriate heart health interventions that focus on both health promotion and risk reduction around CVD risk factors and cardiometabolic risk are beneficial towards advancing the field and addressing health disparities.

Still, there is overwhelming evidence that contributing risk factors to cardiovascular disease include smoking, alcohol and physical activity (Kromhout, Menotti, Kesteloot & Sans, 2002). In spite of that, knowledge of these risk factors (American Heart Association, 2012; Centers for Disease Control and Prevention, 2009), as well as awareness among women with cardiometabolic risk factors is lacking (Giardina et al, 2011). Low risk of

coronary heart disease is largely associated with a healthy diet choices (Mintz, 1985; BWHP, 2013) and lifestyle (AHA, 2012; CDC, 2009; NHLBI, 2009), as well as low levels of serum cholesterol, blood pressure and not smoking. Specifically, CVD kills nearly 50,000 African-American women annually and forty-nine percent of African American women ages 20 and older have a form of heart disease (AHA, 2012). While only one in five Black women believe she is personally at risk, only 52 percent of African American women are aware of the signs and symptoms of a heart attack. Further, only 36 percent of African American women know that heart disease is their greatest health risk. (AHA, 2012). Despite these glaring statistics, environmental strategies are known to be effective and cost-effective, while educational/motivational strategies have demonstrated limited success (Glanz, 2010; Glanz, 2010; Renz et al., 2007; Freeman & Ismail, 2009). There remains a need to understand the reasons for geographic variations in CVD risk factors among women nationally, but especially for African American women (Jarvie et al, 2011). Lastly, the United States Department of Health and Human Services (DHHS) suggests research should focus on knowledge and awareness among women with cardiometabolic risk factors (Giardina et al, 2011).

### **Theoretical Frameworks**

This literature review interrogates several theoretical frameworks' applicability to the present study's objectives and how it may uncover spaces of potential individual and community changes in STEPS participants; specifically social cognitive theory and social support framework.



**Social cognitive theory.** The individual-behavior context of the STEPS program was assessed by applying social cognitive theory. Developed by Bandura in the 1960s, initially a Social Learning Theory (SLT), Social Cognitive Theory (SCT) acknowledged the dynamic and reciprocal interaction of the individual, environment and behavior. SCT focused on how individuals regulate goal-directed behaviors over time. Self-efficacy was eventually added to the theory (Glanz, K., et al, 2008). SCT, includes reciprocal determinism; behavioral capability; observational learning; reinforcements; expectations; and self-efficacy. Assumptions of this theory include: environmental changes would have an impact; the unknown dynamic relationship between the individual, behavior and environment; cognitive learning approaches are paramount in how behaviors are influenced. These assumptions can result in the inability to operationalize the theory.

Inherent within the STEPS's program's seminars, my sisters' keepers and training sessions focused on physical activity are tenets of social cognitive theory, such as observational learning (e.g., grocery store visits); reinforcement (my sisters' keepers) and self-efficacy (e.g., workbook). Although theoretical assumptions can result in challenges in operationalization, a feminist evaluative approach towards the STEPS program examines the program's components, while also investigating the contextual factors contributing to risk factors of heart disease among African American females, serves as a means of uncovering spaces of potential individual and community change.

**Social support and network framework.** The STEPS intervention was developed based on the social support and network framework. There are varying definitions of social support in the literature. Central to all is the belief that individuals have relationships and

mechanisms of encouragement that enable them to perform specific behaviors. From Albrecht and Adelman's perspective, social support is "any type of communication that helps individuals feel more certain about a situation and therefore feel as if they have control over the situation." (Mattson & Gibb Hall, 2011, pp. 182); whereas, the National Cancer Institute's definition is more expansive beyond communication aimed at uncertainty: "a network of family, friends, neighbors, and community members that is available in times of need to give psychological, physical and financial help (Mattson & Gibb Hall, 2011, pp. 183). Gottlieb's definition of social support focuses on the interactive process of communication: "the process of interaction in relationships which improves coping, esteem, belonging and competence through actual or perceived exchanges of physical or psychosocial resources" (Mattson & Gibb Hall, 2011, pp. 183).

Further, perceived support frames an individual's feeling that the support received was adequate for the specific situation. Indeed, social support, especially matching models such as the Theory of Optimal Matching have been labeled as over simplistic for complex behaviors and needs. Thus, despite the general acceptance of the five types of social support: emotional support; esteem support; network support; information support; and tangible support, matching models aid in delineating how support is provide and received. The social support type may address multiple needs and researchers advocate for social support components of heart health intervention for purposes of uptake and maintenance (Jarvie et al, 2011; Keeley & Driscoll, 2010; Peterson & Cheng, 2011). Targeted community-based interventions focusing on social support, specifically personal and group wellness, can improve the cardiovascular health of Black women (Giardina et al, 2011; Jarvie et al, 2011;

Keeley & Driscoll, 2010; Peterson & Cheng, 2011; Rodriguez et al, 2012). Inherent within the design and implementation of the STEPS program was the intentional approach of engaging participants around emotional, informational and companionship support.

The dearth of culturally appropriate theoretical frameworks and methodological rigor has often resulted in unclear interpretations of useful socio-ecologically based intervention, treatment and prevention strategies for chronic diseases disproportionately affecting African American women. This section highlights key points in health promotion science literature and how feminist epistemologies and evaluation approaches shape the assessment, implementation and outcomes of a community-based heart health program targeting African American women and focused on physical activity, diet and social support.

### **Previous Studies on Health Promotion Lifestyle**

The Health Promotion Lifestyle Profile (HPLP) II has been used in studies with diverse racial and ethnic populations such as Iranians, Chinese, Japanese, as well as Americans. A 2005 study (Johnson) examining potential gender differences among African Americans for HPLPII scores found evidence for specific health-promoting lifestyle behaviors, with women scoring higher than men. However, these differences become less dominant when education and marital status were used as covariates. Another study (Hulme et al, 2003) used the HPLPII to assess health-promoting lifestyle behaviors in a Spanish-speaking population, found lower scores for physical activity and highest for spiritual growth and differed by age, gender, employment status, marital status and acculturation. The HPLPII was used in Hispanic male truck drivers in the Southwest (Mullins et al, 2013) and suggests the Spanish and English versions may not adequately assess health-promoting behaviors and

cultural influences. Another study, focused on hospital nurses, used the HPLPII in concert with an holistic intervention self-care plan called Collaborative Care Model (CCM) and rooted in social support, found significantly increased overall health promoting behaviors and spirituality, interpersonal relations and nutrition scores. An eight-hour program created to promote a culture of caring, focusing on relationships and patient-centered care, the CCM goal was to foster and sustain a healing environment and a culture of safety. Health promotion lifestyle includes psychosocial factors such as perceived stress and social support and interpersonal relationships (Butler, 2008; McElligot, Capitulo, Morris, & Click, 2010; Pender, 2011) and has been utilized as an instrument of social change (Glanz, 2010; Smedley & Syme, 2000) by engaging individuals to change their individual and collective health and tailoring health promotion and risk reduction in ways that transform the health landscape.

A holistic approach towards woman's health acknowledges the dynamic process between the individual and her environment at the spiritual, emotional, physical and mental levels. Health promotion lifestyle, specifically HPLPII, is representative of this holistic approach with its focus on health responsibility, physical activity, spiritual growth, interpersonal relationships and stress management.

**Health responsibility.** Past research suggests minimal differences among health promoting behaviors, such as health responsibility, when considering socioeconomic status across racial backgrounds (Felton, Parsons, Misener & Oldaker, 1997). However, understanding the nature of the health responsibility with respect to both program implementation and environmental context may contribute to the effective health promotion and uptake among Black women.

**Physical activity.** Recently, large-scale studies have countered the traditional gender differential concerning the health benefits of physical activity. Women of color are more likely to be sedentary; despite how it increases heart disease risk, as well as co-morbidities such as cancers, hypertension, stroke, and type 2 diabetes (Carter, Barba, & Kautz, 2013; Gary-Webb, Suglia & Tehranifar, 2013; Gucciardi, Chan, Manuel, Sidani, 2013; Peek, Cargill & Huang, 2007; Pierre-Louis, Akoh, White, Dexheimer Pharris, 2011; Samuel-Hodge, DeVellis, Ammerman, Keyserling, & Elasy, 2002; Wells, 1996). Reducing chronic disease risk is critical among African American women. And, health-based messages stressing the importance of habitual physical activity, physical fitness and maintenance of normal body weight to good health have largely been culturally inappropriate, instead of culturally sensitive and ethnic-specific (Peek et al, 2007; Wells, 1996).

**Spiritual growth.** Previous research has supported the inclusion of spirituality in health promotion-based interventions (Chester, Himburg, Weatherspoon, 2006) and suggests health practitioners should incorporate the spirituality-based health messages by focusing on strategic improvements to health responsibility, interpersonal relations, and self-esteem, along with other health-promoting behaviors.

**Interpersonal relationships.** Researchers suggest health promotion lifestyle behaviors may be positively influenced within a context of reciprocal social interaction (Drayton Brooks & White, 2004). Social support plays a role in promoting a healthy lifestyle and researchers have called for future research to examine the relationship of social support and health promotion lifestyles, particularly around intervention development and implementation (Adams, Bowden, Humphrey, McAdams, 2000).

**Stress management.** Psycho-social stress may contribute to the disproportionately high rates of cardiovascular disease among African American women. Previous research suggests stress related to central elements of identity, namely race and gender, cohere with generic stress to define the stress experience of African American women (Giscombe & Lobel, 2008) and calls for the need for empirical evidence regarding the influence of psychological stress and social context on disparate health outcomes (Woods & Black, 2010). Black women's unique, intersectional standpoint are a result of experiences related to race and gender and understanding the dynamic of these psycho-social and environmental stressors in relationship to health outcomes is critical towards taking a strengths-based approach.

Thus, culturally appropriate studies rooted in health promoting activities, as well as social support, and focus on women may result in significant behavioral changes among African American women. The current study responds to calls in the literature and by funders to develop sustainable programs that engage community members and have a targeted approach. This feminist evaluative approach sheds light on this potential and has implications for community-based health interventions that seek to work with the daily schedules of this target population.

### **Implementation Fidelity: Intervention Acceptability**

The effectiveness of a health intervention program is most dependent upon how effective it was delivered to its intended population and setting. The science is still unclear on the complex role of implementation fidelity in analyzing outcome effectiveness research.

Breitenstein, Gross, Garvey, Hill, Fogg & Resnick (2010) further explain how this complex relationship can strengthen intervention effectiveness:

“Based on showing variable strengths in the relationships among adherence, competence, and intervention outcomes, an important empirical question is identifying acceptable levels of adherence and competence for maintaining intervention effects. Research on the degree of implementation fidelity needed to retain intervention effects might also shed light on the degree to which interventions can be adapted to the needs of different communities or target populations without reducing their beneficial effects. Reliable and valid assessments of implementation fidelity will increase the understanding and methods used to determine how challenging situations, environments, and/or intervention recipients affect implementation fidelity and intervention outcomes” (pg. 9).

There are varying terms for this process of evaluating the development and implementation of interventions. According to Breitenstein et al (2010), these include implementation fidelity, fidelity of implementation , fidelity, treatment fidelity, treatment integrity and intervention fidelity. Implementation fidelity is the term most often used in prevention and community-based intervention research (Breitenstein et al. 2010).Central to this process is the examination of the intention of the program by the interventionists and the adherence of the program by its interventionists and participants.

Implementation fidelity, or the degree to which a program is implemented as intended, is critical, yet evaluations of fidelity are rarely conducted/discussed. There are several reasons for the lack of discussion of implementation science, or implementation fidelity, in the literature. First, the term itself varies across and within disciplines. Also

known as treatment fidelity, fidelity of implementation, intervention fidelity and treatment of integrity, implementation fidelity is the preferred term by community-based interventionists (Breitenstein et al, 2010). Second, the lack of a consistent term across disciplines also results in the lack of a consistent method of inquiry into implementation fidelity. As a result, the literature is filled with descriptive and outcome studies that often don't discuss implementation fidelity; and when they do, the description of this process is disparate at best, often relying more on self-report measures and less on observational measures. Although observational assessments of participants' and researchers' adherence and competence serve as a gold standard for investigating implementation fidelity due to the observer's unbiased observations, a major disadvantage to observational assessment is the cost, both time and financial, required to have someone observe the full process of the intervention.

However, several researchers have employed audio and video-taped methods of assessing implementation fidelity, in vivo, as shown in Table 3: Comparison of Methods of Implementation Fidelity and STEPS Methods, or in-person investigations are still the preferred methods (Breitenstein, 2010). The mid-term report on Healthy People 2010 objectives indicates that there has been little, if any, improvement in overall rates of participation in these health promoting behaviors, and large disparities continue to exist within the population, with women of color among the most vulnerable to poor health behaviors (USDHHS, 2000). Despite these low rates, many studies have attempted to improve health behaviors, but often face the challenge of increasing and sustaining attendance in behavior change programs. As attendance decreases, intervention dose decreases, leading to low or no adherence to behavior change regimens.



Table 3: Comparison of Methods of Implementation Fidelity and STEPS Methods

COMMON METHODS OF FIDELITY IMPLEMENTATION	STEPS IMPLEMENTATION FIDELITY
Self report methods from participant	√
Self report methods from researcher	--
In vivo session observations to rate participants	--
In vivo recording session observations to rate researchers	--
Audio session observations to rate participants	--
Audio session observations to rate researchers	--
Video session observations to rate participants	--
Video session observations to rate researchers	--

Lastly, implementation science is often not adequately reported due to the validity and accuracy issues of self-reported data on adherence and competence. This may result in inflated or deflated responses, based on the participants' relationship with the intervention/program staff; thereby rendering some potential inaccuracies in intervention implementation assessment.

Assessing implementation fidelity, as designed, can determine if significant findings are due to the intervention and not to elements affecting the intervention delivery and study design (Hardeman, Michie, Fanshawe, Prevost, McLoughlin, Kinmonth, 2008; Horner, Rew, Torres, 2006). Qualitative methods such as focus groups and interviews can offer insight or acceptability of an intervention by a target population. Despite its potential as a source of

participant bias and reporting errors, participant acceptability research that assesses measurement appropriateness, methodological approaches and employs action-based research can be essential in establishing intervention uptake or implementation fidelity. Since this study was conducted after the STEPS intervention completed, the recommended methods of investigation to assess implementation fidelity, as previously described in Table 3, are limited. Instead, the present study uses descriptive data from STEPS session sign-in sheets to primarily assess STEPS intervention group participants' acceptability of the intervention and focus group data to assess STEPS intervention group participants' acceptability or responsiveness to the program. Therefore, for the present study, implementation fidelity is measured by participants' acceptability and responsiveness to the program.

### **Research Questions and Hypotheses**

The purpose of this two-phased study was to evaluate STEPS (Sisters Together Empowered for Prevention and Success) to a Healthier Heart, a quasi-experimental community intervention, guided by the social support framework and consisting of five cohorts of non-randomized intervention (PG) and information-only comparison (IOG) groups.

The following describes the research questions, hypotheses and data sources for the present study:

**Research Question 1.** Quantitative. What are the characteristics of participants who self-selected into the PG and IOG?

Hypothesis 1.1. STEPS participants will be similar across all demographic characteristics, among both PG and IOG.

Data source(s). Demographic assessments, including age, marital status, education, family income, employment, age of children in household, insurance status and medication.

**Research Question 2.** Quantitative. Do STEPS participants show greater improvements after 12-weeks than the information-only participants on the following domains of the Health Promotion Lifestyle Profile II (HPLPII): a) health responsibility; b) physical activity; c) spiritual growth; d) interpersonal relationships; and e) stress management?

Hypothesis 2.1. STEPS participants will show significantly greater improvements in health promotion lifestyle profile domains of interpersonal relations, physical activity, health responsibility and stress management.

Hypothesis 2.2. STEPS program participants will not differ significantly in spiritual growth at the end of 12 weeks, compared to the IOG.

Data source(s). HPLPII pre and post intervention surveys

**Research Question 3.** Qualitative. What were the attendance rates for STEPS PG participants attending the intervention sessions?

Data source. Artifacts, specifically STEPS physical activity and heart disease seminar sign-in sheets for each of the 12 sessions of all five cohorts.

**Research Question 4.** Qualitative. What was participants' acceptability of the STEPS program?

Data source. Six semi-structured focus groups

## METHODOLOGY

This chapter describes the STEPS program, the conceptual framework on which the program is based, the research evaluation design, the measurement tools used, and the quantitative and qualitative analyses performed. As previously described, health promotion and social support frameworks guided the development and implementation of the STEPS intervention.

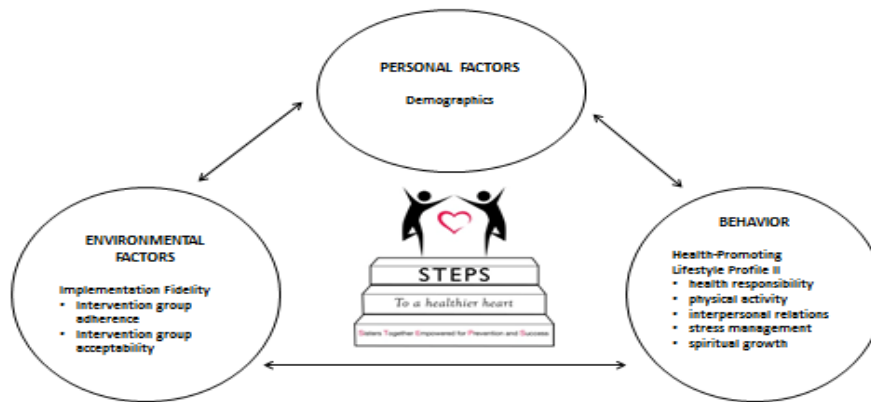


Figure 1. Application of a Broad View of Social Cognitive Theory to STEPS

Specifically, a broad view of the social cognitive model, focusing on personal and behavioral factors and illustrated in Figure 1: Application of a Broad View of Social Cognitive Theory to STEPS, was operationalized in the implementation of STEPS and is used in this research study.

## **STEPS to a Healthier Heart Intervention**

The STEPS (Sisters Together Empowered for Prevention and Success) to a Healthier Heart Program is an educational and social support intervention designed to support African-American women at-risk for heart disease. The program had two goals; 1) to provide information that raises awareness about heart disease and women's health, and 2) to evaluate the effectiveness of the program to improve knowledge, reduce risk factors, and to improve nutritional, physical activity, and wellness behaviors. After completion of a 12 week culturally and gender appropriate intervention targeting women, STEPS assessed participants in the following domains:

- 1) did participants report significant improvements in *knowledge of heart disease risk factors*?
- 2) did participants report significant improvements in risk factors for heart disease after completion of the intervention?
- 3) did participants report significant improvements in *physical activity level*?
- 4) did participants report significant improvements in *nutritional choices* (intake of fruits and vegetables)?

The present study focused on the Health Promotion Lifestyle Profile II (HPLP II) domain subscales and assessed implementation fidelity of STEPS. STEPS participants were assigned to one of two groups: Program Group (PG) and Information-Only Group (IOG). For the present study, PG will be called the intervention group and IOG will be named the information-only group. Prospective participants self-selected into one of the two groups

depending on their availability to participate in the weekly exercise activities and bi-weekly seminars that were a required component of the Intervention Group.

The STEPS intervention, as illustrated in Figures 2 and 3. STEPS Intervention consisted of three interdependent components, an educational component, a weekly structured physical activity component, and a walking component. A convenience sampling

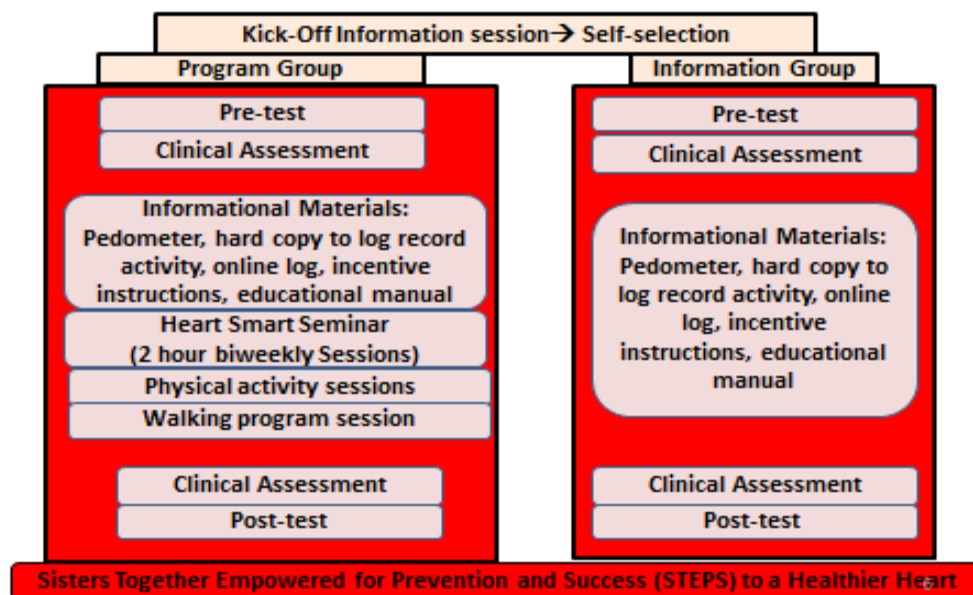


Figure 2: STEPS Intervention Description

method was used to ensure the maximum variation in participant perspectives and views.

The intervention used education and social support to empower participants to improve their heart health. Each week, STEPS staff set a SMART (specific, measurable, achievable, relevant and time-based) goal for the intervention group participants and the each participant would set a personal goal. Over the course of the 12-weeks, intervention group

participants agreed to log their progress in their daily food and exercise logs, attend the twice-weekly physical activity sessions, attend one walking session per week, and attend the biweekly “Heart Smart” seminars. Participants signed in for each of the twice-weekly physical activity sessions and biweekly “Heart Smart” seminars. Each PG participant was provided a pedometer, a hard copy log to record activity, access to the online log, written instructions on how to accumulate incentive points, and an educational manual with information about women and heart disease. The STEPS training schedule is displayed in Figure 3.

WEEK 1	Heart of the Matter Seminar	Importance of PA- FitnessTest + 1 mile walk
WEEK 2	Move More Live Longer Metabolic Conditioning	General Aerobics
WEEK 3	Know Your Numbers U-Fit-2	Circuits
WEEK 4	Zumba	Kickboxing
WEEK 5	Cooking for a Healthier Heart Strength Training	Zumba
WEEK 6	Water Aerobics or Zumba	Kickboxing
WEEK 7	You Are What You Eat U-Fit-2	Water Tai Chi or General Aerobics
WEEK 8	Zumba	African dance
WEEK 9	Stress Management Tai Chi	Yoga
WEEK 10	Water Aerobics or Kickboxing	Metabolic Conditioning w/Circuits
WEEK 11	Breaking Down Barriers to Change U-Fit-2	Line Dancing
WEEK 12	Circuits	1 mile walk + post assessments

Figure 3. STEPS Training Schedule

Healthy incentives were used to encourage participants to increase their walking and other physical activity. Based on a point system, intervention group participants had a chance to win prizes such as a water bottle (150 pts.), t-shirt (200 pts.), workout towel (250 pts.), workout dvds (300 pts.), workout duffle bag (350 pts.). Intervention group participants earned points by attending weekly STEPS exercise classes (2 pts. per session); attending the heart smart seminars (1 pt. each); everyday of vigorous exercise totaling 30 minutes of more (1 pts. per day); for each 10,000 steps per day (1 pt. per day); each day they ate the required 5 fruits and vegetables (1pt per day); each day they drank eight glasses of water or 4 bottled waters (1 pt. per day); and completion of the log for the entire week (1 pt. per week). Bonus points were offered, as determined by STEPS staff. Intervention participations who earned an outstanding achievement were able to receive 5 extra points. An example of an outstanding achievement was an intervention group participant who finished first for the circuits in the previous week's class. All pts. were tallied on STEPS to a Healthier Heart Point Card.

Intervention participants were required to log their weekly exercise, including duration and intensity; how many steps they took from morning until evening, with the goal of 10,000 steps; and the amount of water they drank daily. Intervention participants also had to log their food on a weekly basis, which included food intake by using serving sizes (i.e., 2 servings of grapes, 1 serving of strawberries and 2 servings of carrots); the date and time of each meal and their emotions and feelings after eating. The goal was to eat 5 servings total of fruits and vegetables per day and to determine if they were emotional eater and how food affected their bodies.



The biweekly seminars were held for 2 hours. The first 30 minutes were devoted to informal interaction among the participants and opportunities for them to compile and submit their documentation of activity for the previous two weeks. Guest speakers then presented gender and culturally specific information on how to improve heart health for the next hour. The final 30 minutes were devoted to informal “housekeeping activities,” group support building activities, and a “Take Ten” info session. Each “Take Ten” session consisted of a ten minute presentation designed to provide participants with strategies to incorporate ten minutes of walking and/or other activity into their daily routines. Participants were provided with written information about walking (i.e., benefits of walking, walking mechanics). (Williams-Brown, 2011).

As previously illustrated in Figure 2: STEPS Intervention Description, STEPS participants in the information-only Group (IOG) were provided with the same program materials (pedometers, logs, etc.) and the manual with the information about heart disease risk factors for women. The PG participants were also encouraged to participate in physical activity three times a week and had the option of participating in any of the physical activity sessions. A program website was developed to provide all participants with electronic resources related to culturally specific information regarding women’s heart health. Links were provided to information related to dietary and nutrient intake, rest, stress management, physical activity, and other health promotion topics.

An emergent component to the STEPS program was My Sisters’ Keeper. During the earlier cohorts, participants naturally began to support and encourage one another on reaching personal and program goals of increasing physical activity and cardiovascular

knowledge. What emerged was a program component, where intervention group participants from the previous cohort, served as a “My Sisters’ Keeper” (MSK) in future cohorts. They would participate in all sessions and motivate other participants to complete the session; however, no data was collected on them during the intervention. The present study recognizes the MSK’s participation in cohorts 3, 4 and 5 and investigates this aspect of the STEPS program through the semi-structured focus groups.

### **Phase One**

The quantitative phase of this study assessed program participants’ characteristics and the effect of the program, comparing the intervention group (PG) to the information-only comparison group (IOG) on specific domains of the Health Promotion Lifestyle Profile II (HPLPII): interpersonal relations; physical activity; health responsibility; stress management; and spiritual growth. Participants’ data were examined to take a cross-sectional look at individual factors that contribute to health-promoting lifestyle attitudes and behaviors. Research questions 1 and 2 were addressed in Phase One.

**Participants.** Participants were African-American women between 35-65 years of age who were able to attend each session. Potential participants were excluded from the program if they had medical conditions which would prevent them from participating in moderate physical activities.

**Procedures.** This dissertation study employed a mixed methods research approach to evaluate a culturally and gender appropriate twelve-week heart disease education program (N=394) designed to facilitate changes in knowledge, behavior, and heart disease risk factors among African American women. The purpose of this two-phased study was to evaluate the

STEPS to a Healthier Heart Intervention Program, a quasi-experimental community intervention designed using a social support framework and consisting of five cohorts of non-randomized intervention and information-only comparison groups. This dissertation study employed a broad view of the social cognitive theory and social support framework to analyzes the direct and indirect impacts of the STEPS program by estimating the between PG and IOG group effects of the program on intervention group participants' health promotion lifestyle profiles, as well as their acceptability of the program. Table 1: STEPS Study Objectives and Study Evaluation Questions, in the Appendix, displays the relevant evaluation questions for the STEPS study and Table 2: STEPS Evaluation Plan, describes the STEPS Evaluation Plan. Below Figure 4 displays the present study's evaluation plan.

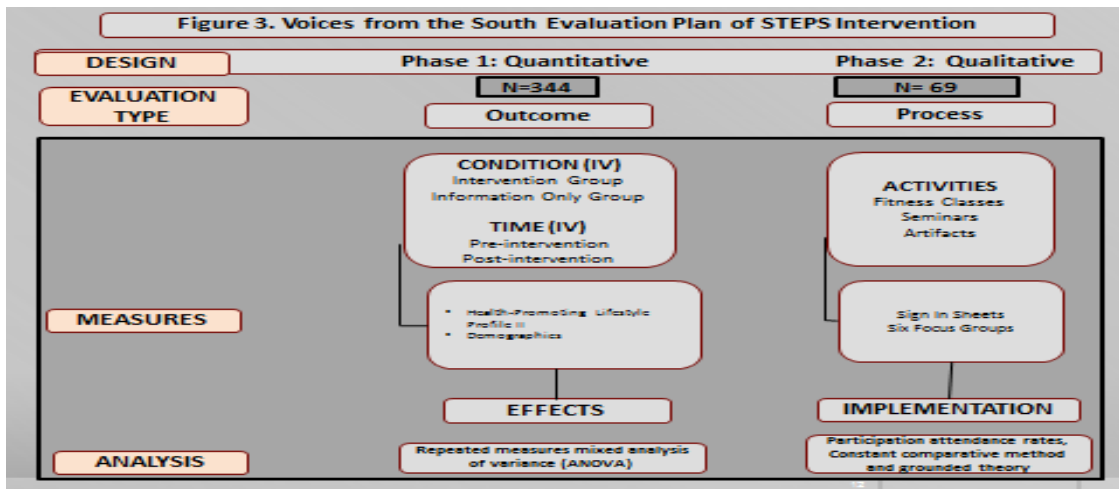


Figure 4: Voices from the South Evaluation Plan of STEPS Intervention

There were a total of five cohorts of intervention and information-only comparison groups. The first cohort was recruited from residents in the Winston-Salem Housing

Authority and the intervention was implemented November 30, 2011- February 14, 2012. The second cohort, a group of non-traditional students and staff at Winston-Salem State University participated in the intervention February 7, 2012-April 26, 2012. The last three cohorts were recruited from the larger Winston-Salem community and the intervention was implemented in April 17, 2012-July 27, 2012 (Cohort 3); August 8, 2012-November 16, 2012 (Cohort 4); and February 19, 2013-May 9, 2013 (Cohort 5). Recruitment occurred via email, flyers, brochures, church bulletins and word of mouth. Presentations were made in forums that targeted women residing in the Housing Authority areas. STEPS participants were recruited for participation in either PG or IOG up to 60 participants. Interventions occurred in the fall, spring and summer.

**Measures.** The independent variables of Phase I include time (pre-intervention and post-intervention) and condition (intervention and information-only comparison groups). The following dependent variables were examined in Phase I: Health Promoting Lifestyle domains: health responsibility, physical activity, spiritual growth, interpersonal relations and stress management. This study used the Health Promoting Lifestyle Profile II (Walker, 1995), as assessed pre and post intervention in the STEPS. Descriptions of each instrument are described by dependent variable as follows:

**Health Promoting Lifestyle Profile II.** Health-Promoting Lifestyle Profile II (HPLPII) measures health promoting behaviors. It is a 52-item summated behavior rating scale employs a 4-point response format to measure the frequency of self-reported health-promoting behaviors in six domains. The domains are health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations and stress management. “Content validity

was established by literature review and content experts' evaluation. Construct validity was supported by factor analysis that confirmed a six-dimensional structure of health-promoting lifestyle, by convergence with the Personal Lifestyle Questionnaire ( $r = .678$ ), and by a non-significant correlation with social desirability. Criterion-related validity was indicated by significant correlations with concurrent measures of perceived health status and quality of life ( $r$ 's = .269 to .491). The alpha coefficient of internal consistency for the total scale was .943; alpha coefficients for the subscales ranged from .793 to .872. The 3-week test-retest stability coefficient for the total scale was .892.'(Walker, 1996)

The overall health-promoting lifestyle score is obtained by calculating a mean of the individual's responses to all 52 items; six subscale scores are obtained similarly by calculating a mean of the responses to subscale items. The use of means rather than sums of scale items is recommended to retain the 1 to 4 metric of item responses and to allow meaningful comparisons of scores across subscales. The items, scored as Never (N)=1; Sometimes (S)=2; Often (O)=3; Routinely (R)=4, included on each scale are as follows: Health-Promoting Lifestyle 1 to 52; Health Responsibility 3, 9, 15, 21, 27, 33, 39, 45, 51; Physical Activity 4, 10, 16, 22, 28, 34, 40, 46; Nutrition 2, 8, 14, 20, 26, 32, 38, 44, 50; Spiritual Growth 6, 12, 18, 24, 30, 36, 42, 48, 52; Interpersonal Relations 1, 7, 13, 19, 25, 31, 37, 43, 49; and Stress Management 5, 11, 17, 23, 29, 35, 41, 47. A high score indicates good health-promotion behaviors and a low score indicate poor behaviors.

**Demographics.** Demographic data included age, family income, education, medical history (self-reported history of heart disease, family history of heart disease, current

medication use and current smoking status). Family income was recoded into above \$50,000 and under \$50, 000, based on the spread of the data.

**Analysis.** Descriptive and repeated measures mixed analysis of variance (ANOVA) analyses were conducted to answer Research Questions 1 and 2, to understand within and between group effects. Self-reported questionnaire data was collected pre-intervention and post-intervention (12-weeks) for each of the five cohorts of the STEPS intervention program.. Means and standard deviations were used to report demographic and assessment results. Quantitative data was analyzed using the Statistical Package for the Social Sciences (SPSS), version 18.0. The quantitative phase compared the mean differences between groups that have been split on two independent variables, time (pre and post intervention) and condition (PG vs IOG). Thus the primary purpose was to understand if there was an interaction between these two factors on each dependent variable: Health Promoting Lifestyle. Profile. This warrants the use of mixed ANOVA as an analytic technique and requires eight assumptions to be passed to give a valid result. These assumptions include:

1. The dependent variable is measured at the interval or ratio level.
2. The within-subjects independent variable (time) should consist of at least two categorical, related groups or matched pairs.
3. The between-subjects independent variable (condition) should each consists of at least two categorical, "independent groups".
4. There should be no significant outliers in any group of the within-subjects factor or between-subjects factor.

5. The dependent variable should be approximately normally distributed for each combination of the groups of the independent variables (i.e., your within-subjects factor and between-subjects factor).
6. Homogeneity of variances for each combination of the groups of the two factors must occur. This can be tested using the Levene's test for homogeneity of variances in SPSS.
7. Homogeneity of variance-covariance matrices using Box's test for equality of covariances matrices in SPSS must occur.
8. Sphericity, the variances of the differences between the related groups of the within-subject factor for all groups of the between-subjects factor must be equal. This was assessed using Mauchly's Test of Sphericity in SPSS.

This can be tested using SPSS and the Shapiro-Wilk test of normality. There is a method in case the data fails this assumption. The STEPS data passed the eight assumptions that are required for a mixed ANOVA to give a valid result. Thus, mixed analysis of variance (ANOVA) was used to analyze pre-and post-intervention differences within and between groups. A mix of qualitative and quantitative data gathering enriches evaluation. Therefore, data collection and analysis include both quantitative and qualitative data Phase two describes the qualitative assessments of this study.

## **Phase Two**

The qualitative evaluation phase of this study assessed implementation fidelity, specifically participants' intervention acceptability. Six semi-structured focus groups and sign-in sheets were analyzed utilizing a grounded theory approach and the constant

comparative method to explore the relational health behaviors, attitudes, and experiences of STEPS participants. Focus group data was analyzed using Dedoose 2.0. Overall, the results of the study are expected to inform community interventions targeting African American women and appropriate cardiovascular and health promotion and lifestyle intervention. Research Questions 3 and 4 were addressed in Phase Two.

**Participants.** A convenience sample was obtained from STEPS participants (N=45), whose recruitment was described in Phase One. Five focus groups, consisting of all five cohorts of the intervention group and were conducted and focus group participants were recruited by STEPS staff and participated based on their schedule availability.

**Procedure.** Research questions 3 and 4 were assessed employing qualitative methods. STEPS physical activity and heart disease seminar sign-in sheets for sessions for all five cohorts. Sign-in sheets were examined to determine the overall average level and percentages of participation, which serve as a proxy measure of exposure to the STEPS program. Assessing these levels and percentages within and across cohorts can highlight patterns of participation, specifically those sessions with the lowest rate of participation, which consequently offers insight into intervention content. Narratives from six focus groups (all five cohorts and IOG) were investigated to explore STEPS participants responses about their direct and relational experiences with the STEPS program, as described in the discussion guide in Appendix D.

**Measures.** Focus group participants were asked questions about their direct and relational experiences as STEPS participants. For the present study, the following questions were the focus of inquiry:



1. What part of the STEPS program was the best? (e.g., staff, instructors, peers, “my sisters’ keepers”)

Probe: What did you like the most about the program?

2. What part of the STEPS program did not work for you?

Probe: What did you like least about the program?

3. If you were to make any changes to the STEPS program, what would they be?

Probe: Describe how the program could have been improved?

4. What were your reasons or motivations for participating in the STEPS program?

Probe: What was that one thing that kept you coming back to STEPS?

5. Describe how STEPS is helpful in preventing heart disease.

The full discussion guide can be found in Appendix D. These questions explicitly asked participants to describe and explain their experiences with the STEPS program and ways in which this program could have been improved.

**Analysis.** In order to obtain a more in-depth and deeper understanding of the contextual and environmental factors affecting women’s behaviors and attitudes; Phase II narrative analyses of focus group data was conducted. This inductive approach towards data analysis involves an identification of a sequence of interrelated steps: reading, coding, displaying, reducing, and interpreting. As a result of data immersion—reading and rereading texts and reviewing notes, emergent themes developed and chunks of text were coded around each thematic area. This iterative process involves finding the core meaning of the thoughts, feelings and behaviors described in the texts. An overall interpretation explaining the thematic areas and network of concepts, particularly how they correspond to research

evaluation questions guided not only this study's findings but also beyond the context of the study (Ulin et al, 2005). Dedoose 2.0, a Web-rich internet software package for the management and analysis of mixed-methods research data, to organize, excerpt and code the qualitative data in this study. Dedoose also allowed for the integration of the qualitative data and coding activity with the quantitative data component of the focus group responses. There may be potential for selection bias on both pre- and post-variables given the self-selection.

## RESULTS

### Research Question 1

Quantitative. What are the characteristics of participants who self-selected into the intervention and information-only comparison groups?

STEPS participants included a convenience sample of African-American women residing in the larger Winston-Salem, North Carolina area. Descriptive statistics were reported. STEPS participants' ages ranged from 25-65 years, with a mean age of 50.98 for the IOG and 52.64 for the PG. Educational preparation ranged from attending (7.4%) and completing (12.5%) high school to a graduate degree (2.3%), with the majority of the sample attending college or trade school (23.5%) and graduating college with a baccalaureate degree (28.8%). For the IOG, the predominant educational preparation was completion of a community college degree (28.6 1%), whereas it was completion of a baccalaureate degree (29.0%) for the PG.

The majority of the participants were married (39.3%), with similar results for the intervention group (41.2 %). Although, single participants were almost equally represented in this sample (34.9%) and in the IOG (37.4%) and PG (33.5%). Approximately seventy-eight percent reported having no children less than 5 years old (78.6%), 5-12 years old (78.3%) and 13-17 years (71.2%); and this was consistent among the IOG (80.3%; 72.8%; 70.7%) and PG (77.6%; 81.6%; 71.4%). The majority of the STEPS participants were employed (67.3%), making \$50,000 or below and had either an HMO (15.8%) or PPO (19.9%) as health insurance; and employment was consistent in the IOG (66.7%) and PG

(67.8%). Contrary to the overall sample, the predominant sources of health insurances for the IOG were Other (19.0%), PPO (13.6%) and HMO (9.5%). For the PG, the predominant sources of health insurance were consistent with the overall prevalence, PPO (20.4%), HMO (17.1 %) and Other (10.2%). Interestingly, the majority of the STEPS participants' family income was less than \$50,000, as displayed in Table 4: STEPS Participants' Demographics.

Upon further assessment of group differences at the pre-test assessment, having children 5-12 years of age was the only variable demonstrating a significant difference between the information-only and intervention groups significance. This investigation found that IOG participants had significantly more children between the ages of 5-12 years old than the PG  $t(351) = 2.48, p = .014$ . This was the only significant difference between the two groups, demographically.

Further inquiry into potential group differences at the pre-test assessment of the psycho-social variables in this study examined the total, not including nutrition, and subscale domains of the health promotion lifestyle profile II (HPLP): health responsibility, physical activity, spiritual growth, interpersonal relationships and stress management. There were no significant differences between the PG and IOG on the HPLPII subscale domains examined, as well as overall, not including the nutrition domain. Table 8: Repeated Measures ANOVA Between and Within STEPS Groups on Select Health Promotion Lifestyle Profile II Subscales, illustrates these results. However, there were non-significant differences in pre-test scores between the groups on health responsibility, physical activity, spiritual growth and stress management.

It was hypothesized that STEPS program participants would be similar across all demographic characteristics, among both PG and IOG. This hypothesis was partially supported. Both the STEPS information-only comparison and intervention groups are comparable on the HPLPII variables used in this study, as well as the majority of the demographic variables, except for having children 5-12 years of age.

Table 4. STEPS Participants' Demographics (N= 344)

	TOTAL 100% (392)	INFORMATION- ONLY GROUP 37.5% (147)	PROGRAM GROUP 62.5% (242)	GROUP DIFFERENCE AT PRE-TEST
	Mean Age=52	Mean Age=50.98	Mean Age=52.64	
<b>Age</b>				
25-34	.8 (3)	1.4 (2)	.4 (1)	$t = -1.9$
35-44	9.2 (75)	21.8 (30)	19.3 (45)	$df=370$
45-54	35.7 (140)	38.4 (53)	37.1 (87)	
55-64	36.6 (143)	37.7 (52)	38.9 (91)	
65+	2.8 (11)	3.9 (8)	.4 (1)	
<b>Marital Status</b>				
Single	34.9 (137)	37.4 (55)	33.5 (82)	$t = -.07$
Married	39.3 (154)	36.1 (53)	41.2 (101)	$df=387$
Separated	3.8 (15)	4.8 (7)	3.3 (8)	
Divorced	15.6 (61)	14.3 (21)	16.3 (40)	
Widowed	5.6 (22)	6.8 (10)	4.9 (12)	
<b>Number of children in household</b>				
<i>Less than 5 years old</i>				
0	78.6 ( 308)	80.3 (118)	77.6 (190)	$t = .79$
1	10.5 (41)	9.5 (14)	11.0 (27)	$df=351$
2	.8 (3)	.7 (1)	.8 (2)	
3	.3 (1)	---	.4 (1)	
<i>5-12 years old</i>				
0	78.3 (307)	72.8 (107)	81.6 (200)	$t = 2.48^*$
1	8.9 (35)	14.3 (21)	5.7 (14)	$df=351$
2	1.8 (7)	1.4 (2)	2.0 (5)	
3	0.8 (3)	1.4 (2)	.4 (1)	
4	0.3 (1)	0.7 (1)	---	
<i>13-17 years old</i>				
0	71.2 (279)	70.7 (104)	71.4 (175)	$t = .1$
1	15.3 (60)	17.0 (25)	14.3 (35)	$df= 351$
2	3.3 (13)	2.0 (3)	4.1 (10)	
3	.3 (1)	.7 (1)	---	

Table 4 cont'd

**Level of Education**

None	.3 (1)	8.2 (12)	.4 (1)	$t = 1.68$
Attended high school	7.4 (29)	13.6 (20)	6.9 (17)	$df = 382$
High school graduate	12.5 (49)	17.0 (25)	11.8 (29)	
Attended college, trade school	23.5 (92)	9.5(14)	27.3 (67)	
Community College Degree	9.7 (38)	28.6 (42)	9.8 (24)	
Baccalaureate Degree	28.8 (113)	19.0 (28)	29.0 (71)	
Graduate Degree	2.3 (9)	3.4 (5)	10.2 (25)	

**Employment Status**

Employed	67.3 (264)	66.7 (98)	67.8 (166)	$t = -.88$
Unemployed	16.3 (64)	20.4 (30)	13.9 (34)	$df = 368$
Homemaker	2.3 (9)	3.4 (5)	1.6 (4)	
Retired	13.5 (53)	9.5 (14)	15.9 (39)	

**Average Yearly Family Income**

Under \$50,000	63.0 (247)	55.8 (82)	67.3 (165)	$t = 1.93$
Above \$50, 000	33.7 (132)	38.8 (57)	30.6 (75)	$df = 377$

**Insurance**

Medicare	7.9 (31)	1.4 (2)	8.2 (20)	$t = -.98$
Medicaid	6.9 (27)	7.5 (11)	5.3 (13)	$df = 361$
HMO	15.8 (62)	9.5 (14)	17.1 (42)	
PPO	19.9 (78)	13.6 (20)	20.4 (50)	
Other	9.4 (37)	19.0 (28)	10.2 (25)	
None	32.1 (126)	8.2 (12)	33.5 (82)	

Notes: \*.The mean difference is significant at the .05 level

Table 8. Repeated Measures ANOVA Between and Within STEPS Groups on Select Health Promotion Lifestyle Profile II Subscales (N=346)

Items	Least Square Mean-Adjusted for Baseline		Analysis			
	Information-Only (N= 129)	Program (N=217)	Difference over time	Difference between groups/ time	Tests of between-subject effects	Pre-Test Group
	Mean (SD)	Mean (SD)				
Pre-Health-Promoting Lifestyle Profile II	13.49 (2.5)	13.17 (2.24)	F= 80.41**	F= 14.6*	F= .08	t= 1.23
Post-Health Promoting Lifestyle Profile II	14 (2.6)	14.5 (2.11)	df=344	df=344	df = 1	df=390
Pre-Health responsibility	2.68 (0.64)	2.59 (0.57)	F = 38.11**	F = 5.48 *	F = 0.48	t=1.43
Post-Health responsibility	2.78 (0.61)	2.80 (0.52)	df = 1	df = 1	df = 1	df= 390
Pre-Physical activity	2.15 (0.72)	2.10 (0.64)	F = 115.17**	F = 20.24**	F = 2.10	t=.51
Post-Physical activity	2.35 (0.69)	2.59 (0.62)	df = 1	df = 1	df = 1	df= 390
Pre-Spiritual growth	3.12 (0.59)	3.02 (0.56)	F = 29.29**	F = 7.59**	F = .16	t=1.77
Post-Spiritual growth	3.19 (0.55)	3.24 (0.53)	df = 1	df = 1	df = 1	df= 390
Pre-Interpersonal relationships	3.04 (0.53)	2.97 (0.50)	F = 7.19**	F = 2.78	F = 0.25	t=1.15
Post-Interpersonal relationships	3.06 (0.55)	3.08 (0.46)	df = 1	df = 1	df = 1	
Pre-Stress management	2.50 (0.58)	2.50 (0.54)	F = 52.85**	F = 6.34*	F =1.08	t=.17
Post-Stress management	2.62 (0.55)	2.74 (0.53)	df = 1	df = 1	df = 1	df= 390

Notes: \*.The mean difference is significant at the .05 level  
 \*\*. The mean difference is significant at the .001 level



## Research Question 2

Quantitative. Do STEPS participants show greater improvements after 12-weeks than the information-only participants on the following domains of the Health Promotion Lifestyle Profile II (HPLPII): a) health responsibility; b) physical activity; c) spiritual growth; d) interpersonal relationships; and e) stress management?

Previous literature identified confounding demographic variables for health promotion (Davies & MacDowall, 2006). Correlational analyses were conducted to assess the relationship between demographic variables and the HPLP subscales used in this study, which include pre and post-assessments of health responsibility; physical activity; spiritual growth; interpersonal relationship; and stress management.

Using the Pearson's Correlation Coefficient, results suggested there were significant correlations with select demographic variables and HPLP subscales. Nevertheless, these correlations, displayed in Appendices F-H, were generally consistent in the overall, information-only and intervention groups. The Mauchly's test of sphericity was not conducted since there were only two levels of repeated measures in the present study.

There were three tests conducted in the repeated measures analysis to address research question 2: difference over time; difference between group over time and tests of between subjects effects. The difference over time tests between pre and posttest for the information-only comparison (IOG) and program groups (PG) respectively revealed: health responsibility ( $F=38.11$ ,  $p=.001$ , 2.68, 2.59; 2.78, 2.8); physical activity ( $F = 115.17$ ,  $p = 0.001$ , 2.15, 2.35; 2.10, 2.59); spiritual growth ( $F = 29.29$ ,  $p = .001$ , 3.12, 3.19; 3.02, 3.24);

interpersonal relationships ( $F = 7.19$   $p = .008$ , 3.04, 3.06; 2.97, 3.08); and stress management ( $F = 518.67$ ,  $p = .001$ , 2.50, 2.62; 2.50, 2.74). In other words, for the IOG, there was an increase in all subscale domains, except for health responsibility. The largest increase was in stress management and the lowest increase was in interpersonal relationships. For the intervention group, there was an increase in all subscale domains, with the largest increase in physical activity and the lowest increase in health responsibility. Overall, the differences between the pre and post test scores for the intervention group was higher than the differences between the pre and post test scores for the IOG.

The 12 week intervention had a statistically significant effect at the  $p < .05$  level between all of the HPLP subscale pretest and posttest means scores assessed in this study: health responsibility ( $F=5.48$ ,  $p=.02$ ); physical activity ( $F =20.24$ ,  $p = 0 .001$ ); spiritual growth ( $F =7.59$ ,  $p = .01$ ); interpersonal relationship ( $F =2.78$   $p = .01$ ); and stress management ( $F =6.34$ ,  $p = .01$ ). In other words, this test of the difference between the PG and IOG over time tests suggests the STEPS program had a significant effect across all domain subscales. The between subjects effects test revealed no significant differences. All data is displayed above in Table 8: Repeated Measures ANOVA Between and Within STEPS Groups on Select Health Promotion Lifestyle Profile II Subscales.

It was hypothesized that STEPS intervention participants would show significantly greater improvements in health promotion lifestyle profile domains interpersonal relations; physical activity; health responsibility and stress management than the IOG participants. This hypothesis was confirmed and there was significant greater improvement in spiritual growth as well. It was also hypothesized that STEPS intervention participants would

demonstrate non-significant change in spiritual growth at the end of 12 weeks, compared to the IOG. This hypothesis was not confirmed, as there were increases in reported spiritual growth scores, albeit minimal.

Thus, the outcome variables of the HPLPII are described by a score for each of the five subscales: health responsibility, physical activity, spiritual growth, interpersonal relationships and stress management. Both the PG and IOG increased their overall scores. As noted below, the mean subscale scores increased for all program participants. The scores for the IOG increased in all areas. In comparing the subscale differences between groups over time, mean subscale scores from pretest to posttest, a significant increase in the intervention group scores was noted in stress management for both groups: 2.50 to 3.19 for IOG and 2.5 to 3.24 for PG.

### **Research Question 3**

Qualitative. Did STEPS intervention group participants adhere to the intervention as intended?

Implementation fidelity, operationalized in the present study as participants' intervention acceptability, using participation attendance percentage rates across and within cohorts was observed.

**Acceptability.** Data was examined by comparing participants' sign-in signatures across each of the 12 weekly sessions for all five cohorts. Participation attendance rates were generally high with a 55% overall participation rates among all five cohorts. The overall average participation attendance rate was 40.97% for cohort 1: 68.4% for cohort 2; 34.82%

for cohort 3; 55.97% for cohort 4 and 84.6% for cohort 5. The average participation rates, across cohorts, for Week 1 was 70.08%; Week 2 was 72.25%; Week 3 was 66.52%; Week 4 was 67.85%; Week 5 was 73.87%; Week 6 was 56.97%; Week 7 was 67.77%; Week 8 was 63.09%; Week 9 was 58.7%; Week 10 was 47.54%; Week 11 was 22.53%; and Week 12 was 16.2%. The sessions with the highest participation attendance rate was Week 1 of Cohort 5, with nearly 98%; whereas the session with the lowest participation rate was Week 1 of Cohort 3, with 22%, excluding those sessions where data was not reported. STEPS participation rates and trends are depicted graphically and displayed, respectively, in Figure 11 and Table 9: Results of the Implementation Fidelity: Intervention Group Participation Rates.

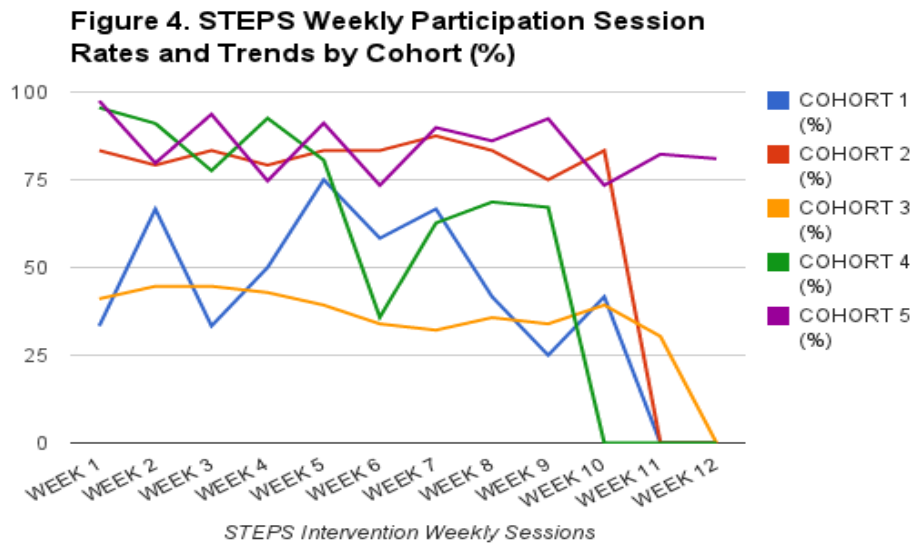


Figure 11. STEPS Weekly Participation Session Rates and Trends by Cohort (%)

Despite clear instructions and eligibility rules for not missing more than four exercise sessions and two heart smart seminars to maintain participation in the intervention, attrition rates, according to the sign-in sheets, appear to persist across all groups, indicating that for some lessons, there were very few participants. Cohorts 2 and 4 averaged overall higher attendance rates, with Cohort 3 averaging the lowest attendance rates in the STEPS program. And, for the last two weeks of Cohorts 1-4, records were unclear, inconsistent and/or missing. Thus, a true assessment of implementation fidelity, operationalized as intervention group participants' acceptability of the intervention using participation attendance percentage rates cannot be adequately and appropriately assessed.

Table 9. Results of the Implementation Fidelity: Intervention Group Participation Rates

Week	Cohort 1 (12/5/11-3/1/12) N=12 Attendance N (%)	Cohort 2 (2/7-4/26/12) N=24 Attendance N (%)	Cohort 3 (4/17-7/5/12) N=56 Attendance N (%)	Cohort 4 (8/21-11/8/12) N=67 Attendance N (%)	Cohort 5 (2/19-5/9/13) N=79 Attendance N (%)
1	4 (33.33)	20 (83.00)	23 (41.07)	64 (95.52)	77 (97.47)
2	8 (66.66)	19 (79.16)	25 (44.64)	61 (91.04)	63 (79.74)
3	4 (33.33)	20 (83.00)	25 (44.64)	52 (77.61)	74 (93.67)
4	6 (50.00)	19 (79.16)	24 (42.86)	62 (92.54)	59 (74.68)
5	9 (75.00)	20 (83.00)	22 (39.29)	54 (80.60)	72 (91.13)
6	7 (58.33)	20 (83.00)	19 (33.92)	24 (35.82)	58 (73.41)
7	8 (66.66)	21 (87.50)	18 (32.14)	42 (62.69)	71 (89.87)
8	5 (41.66)	20 (83.00)	20 (35.71)	46 (68.66)	68 (86.08)
9	3 (25.00)	18 (75.00)	19 (33.93)	45 (67.16)	73 (92.40)
10	5 (41.66)	20 (83.00)	22 (39.29)	0 (0)*	58 (73.42)
11	0 (0)*	0 (0)*	17 (30.36)	0 (0)*	65 (82.28)
12	0 (0)*	0 (0)*	0 (0)*	0 (0)*	64 (81.01)

\*denotes records are unclear, inconsistent or missing

There were several emergent themes from Phase II of this study. In response to the question, “What is the one thing you want us and others to know about how STEPS has impacted your life?” several STEPS participants described how the acknowledgement of unhealthy behaviors made a difference in their overall daily lifestyle and eating habits.

“Had it not been for STEPS, I wouldn’t have been looking at that stuff. I was in the grocery last night, wanting some butter for some garlic bread. So I was reading I Can’t Believe It’s Not Butter and I was looking at it, well it still got ‘5 grams of saturated fat in here, that aint no balance.’ And so I put it back. I spent 20 minutes in the dairy section looking for a butter that had less calories, that I thought would taste like butter. But I was very invested in not buying the one that had the 11 grams of saturated fat in it. Before STEPS, Land of Lakes, here we go, you know? That’s why I have 40% blockage now, which I found out, you know after we started the program.”

Indeed, for one participant, she recognized the need for a behavioral change, the second emergent theme, and how her previous behavior was rooted in comfort-seeking actions that weren’t healthy, another emergent theme.

“Yea, food was my friend. You know, I need to get me some better friends.”

Several participants experienced life-changing and transformational news and action during the course of the STEPS program. These types of responses are described in the next section, but represent the widespread acceptability and satisfaction of the STEPS program.

#### **Research Question 4**

Qualitative. What was participants’ acceptability of the STEPS program?

Phase II of the present study consisted of qualitative inquiry towards intervention group participants’ acceptability of the STEPS program. This component of the present study seeks to determine if intervention group participants’ adhered to and accepted intervention

implementation. Two main sets of themes are presented in this study to help assess participant acceptability: 1). the original themes, guided by the focus group questions in the Moderator's Guide, represent the descriptive level of analysis, and 2). the emergent themes represent the interpretive level of analysis. The original themes are: STEPS' impact on participants' life; best part of the STEPS program; negative aspects of the STEPS program; suggestions for changes and improvements to the STEPS program; how STEPS can prevent heart disease; reasons and motivations for STEPS program participation. The salient emergent themes are: within-group oppositional gaze and self- perceptions of Black women; my Sisters' keeper and the creation of community to transform health behaviors.

**Best part of the STEPS program.** Participants enthusiastically and emphatically rave about the community that emerged from the STEPS program. One participant explains:

“Um I think that every individual, you can go exercise, you can go to Zumba class, you can go to Girls Run or whatever. But in particular this study had the organization and the professionalism. That made a specific impact on how well the material presented, how well you cope with people on different levels, there were modifications for certain people. That, that individuals, you know I been in other studies but the individuals in this particular study apparently knew the brand or knew the client, knew what they were are um, the target margin, if you will. So that there were issues, there were follow ups, there was written material, there was a plan. There was, you knew what was coming each class, you got the organizational, each class a summary of what we were going to do, we did it. We had a evaluation after the fact. If you had issues or problem they were facilitators to sit down and talk with you



about, you know coming back or not doing anything. So for any obstacle that arose in a person ability to participate, there was some accommodation like ■■■ said. There was a accommodation so that it was hard for to fail. It was really hard to fail, so that was not a coincidence. I think that going in a study they, or whoever put it together, uh knew that this was something that you needed all that. So I think the success of the participants was uh contingent upon that kind of organization and Maryann was the most professional person; her energy. She would fire us up. If we didn't holler back loud enough, we had to holler back like 4 or 5 times.”

**Negative aspects of the STEPS program.** The majority of participants agree that a major negative of the STEPS program was that it was not continued. One participant claimed:

“The only thing that I didn't like about the STEPS program is that, it wasn't long enough. I really wish. Because we need this every, I mean a lot of people need it everyday. I mean, I know they couldn't do it, that's the only thing I had. Even the timing; the timing of the classes and everything. It was still, that was a good time and everything but I wish it was longer.”

Another woman explains, within the context of describing what was wrong with the STEPS program:

“I really, there is nothing I found out that's wrong about STEPS. To me, because like she said, you know we got some people and its a time thing and class has started but maybe they get off late. but majority of them, they were on time. And when she said 'ladies, let's do this, let's do that.' And I have never been, unless I'm to church or

somewhere, with a bunch of Black women all trying to do, and the floor looks good with everybody out there trying to do what they can do. And they'll tell you don't over do it. I might can jump a little high, if the other person can't go but so high, they tell you 'don't over do it.' And it's to me, I love the program. I didn't see no different thing in the program, in my case. I love it.”

Despite this pervasive appreciation for the program, participants still offered suggestions, albeit minimal, to improve the STEPS program.

**STEPS' impact on participants' life.** Participants emphasized the integral role of STEPS staff in creating the supportive network for the program.

“There was an accommodation so that it was hard to fail. It was really hard to fail, so that was not a coincidence. I think that going in a study they, or whoever put it together, uh knew that this was something that you needed all that. So I think the success of the participants was uh contingent upon that kind of organization and Marian was the most professional person; her energy. She would fire us up. If we didn't holler back loud enough, we had to holler back like 4 or 5 times”

It is this supportive environment that nurtured a safe place and prompted another participant to describe the major impact the STEPS program had on her life:

“I need to do this and I need to get this out. I need to say this before I, I'm trying not to cry...[crying], I told you when you came to my job [pause], that if it wasn't for the STEPS program, I would have never known I had cancer. Because I lived with this, under my arm for a long time and we went to Forsyth hospital when they had a doctor and a nurse. So I would like to thank you [REDACTED] because I would

have never done it on me own. I know I wouldn't have. And I just wanted to say thank you and when they had a nurse she was from Winston-Salem State too. And she um, I enjoyed that part that we were able to ask that nurse any question we had about health or just um, found out too that I had high blood pressure, so it really helped me. I'm sorry. You know people look at me and I try to be happy and smiling.”

**Suggestions for changes and improvements to the STEPS program.** Participants' suggestions for improving the program centered on lengthening its implementation, considering sustainability assessments and offering a membership to all participants upon completion. Several participants had preferences for specific fitness instructors over others and felt their roles should be increased in the program.

**How STEPS can prevent heart disease.** Discussion around how STEPS can prevent heart disease was often clouded by the ongoing accolades given to the STEPS program by STEPS participants. One attribution:

“Whoa because, it was a, it was a great experience. And then it would take effect in actually helping us and reminding us what we learned before. And keep us you know, learning a little bit more but it would just refresh what we already learned.”

**Reasons and motivations for STEPS program participation.** A recurring theme when considering how to maintain an active, healthy lifestyle. Once participant contextualizes this issue in her description for her motivation, and perhaps others', to participate in the STEPS program:

“I think it provided an opportunity to be a commodity for Black women. Um, we as Black women, were busy. You know, we carry a lot of crosses. And uh, we're the

minister of finance and information and organization and our children. And the where we make a break point, its always in within our own health and our own well-being. Um I had a cousin who encouraged me to come and so she has a weight a problem. So I came to keep her encouraged, and you know I have a weight problem too. But I didn't seem to be concerned about mine as she was about hers. But by coming with her, it it you know? We gloried in each others success and she would say 'I lost 3 lbs. this week.' And I would say, 'Oh my gosh, I'm going to let you out do me.' So it was a way for us to build on each other successes and it gave us motivation to emulate. You know, if your in an environment with a bunch of people who never do anything. And they don't move anything then there no emphasis for you to do anything. But like when I was in college and everybody was you know, fitting in, trying to fix their hair, I took a little more time with those things so I could keep up. And so, you get away from that, after you grow up, have a family. Have a husband, have jobs, and all that kind of stuff. When you get, really time to take a break. You do not go to gym and so but STEPS was like the social interaction, the encouragement, the motivation and the opportunity.”

**Within-group oppositional gaze and self- perceptions of Black women.** While describing their experiences and perceptions of the STEPS program, one participant exclaimed,

“I don't know anybody knows her but she was an assistant professor who would come in, 3 or 400 lbs. and her health about took her out. And I just, you could even look at congress and look at the African American women sitting in congress, they

over weight, you know, they're big? Look at [REDACTED], she uh, and so I'm thinking how could we be so educated, so informed so survival mode and we're not taking care of ourselves. And so, I, this is a answer to that. There is, I don't see anything else in the universe that address that for Black women. And I know intuitively sitting here like, can you really, because I try to talk to my diabetic sister to walk 4 days a week and I can't get her out. But had she lived here, I would've drugged her to STEPS. So STEPS gave my Sister's Keeper mode on. And Maryann also. You know you feel that because you know, I don't think I took a personal interest in other people until the idea was suggested, well you can be your Sister's Keeper, 'well, how you doing today, you looking good, everything alright with you?' And even when I said my car broke down. Then people say 'aw, sorry to hear that.' That's commodity."

Participants repeatedly shared their observations of how daily life stressors and the effects of role strain can appear on the faces of Black women and as a result, they appear mean and depressed.

"You know it was a good social interaction for African American woman. The one, I'm just going to say one more thing. Um, ever just a person on Earth, I often would walk and observe the expression on African American women faces. And we always look kind of tired, kind of mean, kind of down. And it concerns me when people don't take time to look how they look. I was in Walmart, you see it in Walmart."

Participants discovered community while engaging in health-promoting behaviors.

"We are the number one group um actually at the problem [laughing]. So we needed more than anybody and then Black woman, we also need to stick together. This group

bring us together. And like you said, we are either neighbors or we know each other. So if a neighbor have a problem, I can help, I will. So we, we learned quite a bit. We got quite a bit out of it. We learned to exercise healthy and not over stress yourself, we learned to eat heathy. And we bonded.”

**My Sisters’ Keeper.** Participants repeatedly mentioned they enjoyed the fellowship in the group:

“Yea, like caring. And so, I think this, facilitate that. Facilitate the opportunity and I thought to myself, if we can just replicate this program and come up with an initiative and call it my Sister’s Keeper that not a study but a movement. You know, look at the difference we can make in the life long journey of the Black woman;”

and this motivated them to participate:

“The title of My Sister’s Keeper, you have somebody that’s on your side, somebody that has your back.”

One participant summarized this concept:

“The My Sister’s Keeper was like a bonus. They could get the day and we could choose to participate but the the impact that was not directly a exercise bonus, but a relationship, I don’t think would have been, we could have had, uh in terms of even thinking about that concept. You know like, now I can go to a aerobic class at the ‘Y’ and I still don’t know nobody’s name and don’t care, I’m not interested. That concept is not in there but in my movement in the movement in the temple class at church, there’s that My Sister’s Keeper, we have prayer part. So I can see the difference. If I’m in Zumba no big deal, I not going to miss my movement in temple

class. Because I know Ms. So-and so who has a stroke and Ms. So-and so who ask me about my son and you know somebody else who keeps up with the things that I'm doing. So [Indecipherable] for the studies objective, they get their data but the participants can get, I think My Sister's Keeper is significant. It's significant motivator that keeps coming because it bonds us."

**Creating community to transform health behaviors.** For one participant, the staff was a major source of this effort to transform health behaviors by intentionally creating community.

"And Maryann was so encouraging. She would look at your journal or she would help you with your activity level and encourage you, 'thats good, that's good. Do the best you can.' Then you find yourself doing a little more and little bit more. But I was, I was enthusiastic about coming. Every time I would come for a session. I was enthusiastic about the next session because I always felt uh, and there were times I would driven myself over here because I had a bad hip but after the class, I felt so much better. And I'm proud of myself for coming because I could've just sat at home on the couch and dies of depression. But it helped me, coming to class helped me."

The STEPS program created an environment that allowed participants to feel comfortable in that created space:

"What had impact me was I know, you know the times that they had to get to be over there. And I'm a times personal like to be on time and we would go and everybody, the staff, the girls, I mean everybody was so nice. It really motivated me to not stay out one day. I really, really, really, got a lot out of the whole session. But they would

talk to you and you know, you would go in at 11 and then during the time you would have different people come in and showing you stuff. And it made me move more because like I said, me being retired, I really wasn't doing anything until I had found out about STEPS. And anything I heard like Black Women Run or whatever I tried to get in on it.”

Individuals not only changed their behaviors; for many, there were sustainable post-intervention habits created:

“Just that particular one. Because every, every session that we had and I would've loved to erase all the sessions and just, exercise through that. But at the same time, I wouldn't take it back now because the information that I learned at that session helped me. And I put it towards something. You know. I was a soda drinker. I did not do water. I brought bottle water by the cases.”

Several women mentioned the amount of social support received from spouses, family and friends:

“It had gotten to the point where I knew what time we would be picked up, so I would rush my son off that bus. We would go do his homework, real fast. He would go ‘mommy you going to workout, aint ya?’ I'm like, he was like ‘game time.’”

Even if these individuals were unable to participate, through their STEPS connections, they were still able to engage in health promoting activities:

“The third group. And even when the people were coming in, that I would see help signing up, their attitudes were real positive. I even got a couple of my friends from out the neighborhood to come. You know, like the lady that owns the store off of



Liberty st., Anna tried the STEPS program. She ended up give it up because of her work schedule but she ended up picking a ‘Y’ membership.”

One participant summarized her confidence in changing their behaviors:

“I would like to challenge myself and see if I cannot do better. Improve myself. Because now I know something’s and I can just go and be challenge to do much better than before. A lot of my fears, with this group that I was in, has gone. I want to see if a brand new program and bring me a brand new me.”

In summary, using multiple methods in a mixed fashion to address the research questions offers a type of triangulated approach towards better understanding the implementation of the STEPS program. There was only one difference between the PG and IOG, the IOG had more children 5-12. And, both groups increased their scores on all subscale domains measured from the HPLPII. Lastly, there is evidence of high implementation fidelity, as measured by the high participation rates to the program and the participants’ acceptance of the program. Still, there may have been a number of documentation issues that may have confounded the data. The next section interprets the data, while weaving a story of how to implement, complex health promotion lifestyle interventions both effectively and efficaciously.

## CONCLUSIONS

This study examined STEPS participants' characteristics and the effect of the program, as well as implementation fidelity, specifically participants' intervention acceptability.

In summary, IOG participants had significantly more children between the ages of 5-12 years old than the PG  $t(351)=2.48, p=.014$ . STEPS participants demonstrated significantly greater improvements in health promotion lifestyle profile domains of interpersonal relationships, physical activity, health responsibility and stress management. However, there were not significant differences between PG and IOG. STEPS program participants demonstrated significant change in spiritual growth at the end of 12 weeks, compared to the IOG. Additionally, participation attendance rates were 55% overall participation rates among all five cohorts. There was overwhelmingly general support, acceptability and advocacy for the STEPS program.

Social cognitive theory framed data analysis and outcome studies focused on health promotion offer knowledge for dissemination to communities. Like Dr. Cooper, who insisted upon what May (2008) calls a "more nuanced and complex political and theoretical standpoint that is fundamentally matrix or intersectional," I posit, STEPS participants, African American women residing in the U.S. South and shaped by that context, have also created a nuanced, political and theoretical standpoint or approach towards their individual, relational and collective health, simply stated as My Sisters' Keeper.

## DISCUSSION

The current study examined a community-level, multi-component, heart health promotion intervention previously implemented and targeting African American women in North Carolina. The two phases of this dissertation study assessed select components of the intervention and select participants' perspectives of the intervention itself. Dr. Anna Julia Cooper's assertion of her simultaneous and interlocking identities as a Southern, Black female laid the groundwork for an intersectional standpoint framework. This framework can be operationalized through the lenses of STEPS participants. Southern Black women, knowingly or unknowingly, negotiate these intersecting identities around daily living and socio-environmental stressors that directly or indirectly impact their health. This sense of reciprocal determinism influences Black women's perspectives on the relationship between themselves and their environments, as well as their self-efficacy in changing health behavior(s). Because everything an individual experiences can have multiple influences (Bandura, 2002), an agentic perspective is essential to Black women changing their personal, relational and collective behaviors.

Applying this intersectional standpoint framework to health promotion science offers a more holistic approach to changing health behavior, which is consistent with Phillip's (1995) comprehensive definition of women's health. This framework and epistemological approach engages an individual's physical, spiritual and collective perspectives of the influences of not only their intersectional identities but also their social environment in which a community-based program is implemented. The following discussion interprets the results

of the present study, attending to elements of social cognitive theory, social support and health promotion science.

### **Personal Factors**

Typically, several factors, including demographic, contribute to participation in health promotion lifestyle interventions such as STEPS. Previous research has examined the social context of low-income women, who manage multiple challenges and stressors, which may contribute to poor health. These contributing factors include “competing health issues, economic hardship, demanding caretaking responsibilities and relationships, insurance-related challenges, distrust of health care providers, and inflexible work policies.”(Shelton, Goldman, Emmons, Sorensen, Allen, 2011, pp. 474). Low socioeconomic status (SES) is often associated with morbidity in several populations, including Black women (Sabanayagam & Shankar, 2012). This does not include the psycho-social and environmental stressors, as a result of structural challenges related to their intersectional identities. The uncontrollable CHD risk factors include age, gender and heredity and the controllable risk factors, assessed in this study include the HPLPII and its subscale domains.

The hypothesis that STEPS participants would be similar across all demographic characteristics, among both the PG and IOG, was not fully supported. There were minimal differences between the groups, where the only difference was the information-only group who had more children ages 5-12 than the intervention only group. In fact, this may have been a major reason for a potential participant to self-select into an IOG—the responsibilities of having to take care of a 5-12 year old as part of the many roles women have as mothers.

IOG may have been less likely to participate due to caregiving roles and the perception of not having this support of aid.

Researchers suggest SES measures such as education and income may operate in multiple pathways towards poor health. In this study, for example, the majority of IOG participants had completed a community college degree and were almost two years younger than the intervention group, who the majority (of the intervention group) had completed a baccalaureate. Although there weren't any significant differences between the groups at pretest, the majority of the STEPS participants in both groups, were employed; however, the majority were making \$50,000 or below. Nonetheless, PG consisted of more families making under \$50, 000 than the IOG.

An intersectional standpoint theoretical approach towards the data enabled researchers to consider the personal, relational and collective challenges among African American females. Still, the finding that the majority of the participants making \$50, 000 or below is consistent with researchers who suggest income may be a stronger predictor of morbidity and mortality than education. Thus narrowing income differentials in at-risk populations serves as a mechanism for reducing health disparities (Sabanayagam & Shankar, 2012). For the present study, the majority of those participants with family incomes less than \$50, 000 were in the intervention group. Focus group participants repeatedly described that the \$75 incentive aided in their interest, but they were more motivated by the community that was fostered through the other participants and access to the program's resources.

## **Behavioral Factors**

**Health promotion science.** Research suggests a systematic approach pairing planning and incorporating health-promoting activities are protective in delaying the onset of chronic diseases such as diabetes or heart disease (Jefferson, Melkus, Spollett, 2000; Davies & Macdowall, 2006). The current study's mixed methods assessment offers a lens in understanding the nature of the health responsibility with respect to both program implementation and environmental context may contribute to the effective health promotion and uptake among Black women. In fact, connection to the STEPS program and its targeting of Black women and CVD, may have contributed to HPLP change more than the intervention itself.

The current study's hypothesis of STEPS program participants showing significantly greater improvements in health promotion lifestyle profile domains interpersonal relations; physical activity; health responsibility and stress management but non-significant change in spiritual growth at the end of 12 weeks, as compared to the IOG, was nearly fully supported. All HPLP scores for both PG and IOG increased as a result of the STEPS program, with the largest increase occurring in stress management. Specifically, as a result of the STEPS program, participants in both groups demonstrated a significant increase their scores in health responsibility, stress management, physical activity, spiritual growth and interpersonal relationships. As reported by participants in the focus groups, STEPS participants were exposed to supportive environments and engaged in sessions rooted in observational learning and reinforcements. These sessions contributed to participants' training and practice in self-efficacy.

A 2014 study acknowledges that mental health inequalities typically focus on “individuals’ stress exposure and coping strategies (i.e., perceptions of support adequacy) (Norris & Mitchell, pp. 3). Researchers advocate for more studies that investigate the mechanisms involved in this stress-support-distress and social group differences approach. What’s more, formal support systems, such as health promotion programs like STEPS, are recommended, especially when internal resources, such as health education, can contribute to improving mental health in Black women. Another recent study (2014), focused on John Henryism, depression and Black women found evidence for a negative relationship between perceived social support and presence of depressive symptoms (Bronder, Speight, Witherspoon, Thomas). They suggest that for optimal well-being, it is important for Black women to be connected to a social support network of friends and family in their network. Additionally, Bronder et al (2014) found a positive relationship to John Henryism, a construct widely touted as the prolonged, high-effort psychological response to psychosocial stressors, and social support. This is congruent with the HPLP study results from the present study. In spite of the many stressors experienced by STEPS participants, in managing their multiple roles as caregivers, employees, family members, etc...the evidence supports the protective factors of social support networks. Thus, although both group increased their HPLPII scores from pre to post intervention, the intervention group’s scores were slightly higher, which may be due to social support networks such as the one developed in STEPS and My Sisters Keeper.

The next section discusses the HPLPII subscale domains, health responsibility, physical activity, spiritual growth, interpersonal relationships and stress management, in further detail and how each relates to the literature.

**Health responsibility.** Similar to past research, the current study results also suggests minimal differences among health promoting behaviors such as health responsibility, when considering demographic factors or SES (Felton, Parsons, Misener & Oldaker, 1997). By asking women to be consciously aware of their individual health and the nature of how they engage with the socio-ecological levels of their environments, participants' health with health care professionals and the media. Moreover, health responsibility is tangential to agency as participants' were questioned about their skills and willingness, or intention, to take good care of oneself and question the advice of health care professionals. Women acknowledged how their comfort-seeking actions weren't healthy and that STEPS helped them explore the confidence or self-efficacy to change their health behaviors; and for those who did, it was a transformational experience. Parallel to the other HPLPII domains, there was a significant increase in health responsibility scores upon intervention completion. This result is consistent with the literature that describes the integral role of social support networks and/or group and social cohesion in health behavior change among Black women (Lee et al, 2012; Norris & Mitchell, 2014).

**Physical activity.** Since African American women are more likely to be sedentary, a major component of the STEPS program responds to these phenomena by exposing Black women to varying forms of physical activities. This includes yoga, Zumba, kickboxing, walking and jogging. By increasing physical activity, STEPS was targeting the heart disease



risk, as well as co-morbidities such as cancers, hypertension, stroke, and type II diabetes (Wells, 1996). Reducing chronic disease risk is critical among African American women. And, although minimal differences were detected between the increased scores in the PG and IOG, recent research (Lee et al, 2012) supports the argument that a culturally appropriate, gender specific program represents a targeted approach (Wells, 1996) towards creating a supportive environment, complete with expectations and expectancies. Individuals are the experts on their life, habits, desires, goals, values and hopes. Most lifestyle change is more about engaging these motivational elements than about imparting knowledge. Participation in health promoting behaviors is extremely important for populations most vulnerable to health compromising conditions. Specifically, similar to the Health is Power (HIP) study (Lee et al, 2012), the STEPS study employed specific strategies to enhance goal setting, achievement and self-efficacy. Participants received encouragement from MSK, STEPS staff and incentives to complete the goals by using the point system to exercise more, eat more fruits and vegetables and drink more water. The branding of the STEPS program spread throughout the Winston-Salem community and symbolized women lifting each other, connected and achieving their goals towards a STEPS to a healthier heart. Moreover, engaged heart health and physical activity session leaders not only engaged and supported the women but challenged them to move beyond their comfort zones. Although the IOG had access to similar artifacts such as the workbook; they did not have the other components as described.

**Spiritual growth.** The STEPS study did not include specific spirituality-focused components; thus the hypothesis did not state any difference as a result of the STEPS

intervention. Nonetheless, STEPS participants spiritual growth scores still improved, specifically for the intervention group.

Previous research suggests health promotion-based interventions (Chester, Himburg, Weatherspoon, 2006) have benefited from incorporating the spirituality-based health messages with other health promoting behaviors such as health responsibility, interpersonal relations, and self-esteem. Although this component was absent from STEPS, the lack of a major increase does not necessarily mean limited spiritual growth among participants. Rather, the results suggest STEPS did not change spiritual growth in a major, significant way. Emergent themes from the focus group revealed several participants viewed the STEPS program as a transformational experience, mostly due to the resources offered and the connections and support with other women who had similar goals, which is consistent with the literature. Although implicit, this may be a source for the increased scores in the intervention group over the IOG.

**Interpersonal relationships.** Social support was central to the development of the STEPS program. Although a social support measure was not employed for the STEPS program, this interpersonal relationships domain subscale assessed how participants' give and receive support among family, friends, larger networks, including health care professionals. Tangential to interpersonal relationships, was the role of the My Sisters' Keeper (MSK) informal component of STEPS. For the phase 2 participations, MSK was indisputably the highlight of the STEPS intervention. This is important to note because this informal then institutionalized component emerged from the participants and not the STEPS staff. The women recognized a gap in the program and what would help them stay motivated

and accountable for the tasks so as a result of this group and social cohesion, MSK was birthed. Participants discussed how their relationships and confidence were strengthened when they felt supported to attend the STEPS activities. Several, particularly those in Cohort 1, described how the STEPS program became an escape or stress relief, from their lives. STEPS was time for themselves; a haven in their week, where they could focus on themselves and remove the other roles that added to their daily stressors. Moreover, several were inspired at the sight of so many African American who looked like them, as it relates to body size, weight and age, working out and trying to improve their health.

Researchers suggest health promotion lifestyle behaviors may be positively influenced within a context of reciprocal social interaction (Drayton, Brooks & White, 2004). Social support plays a role in promoting a healthy lifestyle and researchers have called for future research to examine the relationship of social support and health promotion lifestyles, particularly around intervention development and implementation (Adams, Bowden, Humphrey, McAdams, 2000). These results are consistent with past research citing its use in diverse racial and ethnic populations (Johnson, 2005; Meihan, 2011; Hulme et al, 2003).

**Stress management.** The stress management domain subscale results respond to the call for the need of empirical evidence regarding the influence of psychological stress and social context on disparate health outcomes (Woods & Black, 2010). Due to the intersectional standpoints of Black women generic stress and the stress experience of Black women (Giscombe & Lobel, 2008) are a result of experiences related to race and gender and understanding the dynamic of these psycho-social and environmental stressors in relationship to health outcomes.

## **Factors Contributing to Implementation Fidelity**

Although a true assessment of implementation fidelity was potentially challenged by program implementation and the lack of information regarding environmental factors. Sign-in sheet documentation does offer some insight into participant attendance rates. Additionally, a potential barrier was that although participants were compensated \$75 for their participation in the program, consistent and free transportation was not always available. Further, over the course of the five cohorts, the STEPS program had spread via word of mouth and among family, friend and co-workers. As a result, there may have been some potential response bias or contamination.

Cohort 1 consisted of low-income women recruited from the housing authority. As described in the previous section, there are many potential barriers to adhering to the STEPS program. Often, these barriers include accessibility, transportation costs and challenges associated with the multiple roles women traditionally take on within families (Shelton, et al, 2011). Perhaps its challenges such as these that contribute to the sharp rise and falls in cohort 1's participation rates.

The make-up of cohort 2 was non-traditional students and staff at Winston-Salem State University. The majority of the sessions, except for those held at the YMCA, were held on Winston-Salem State University's campus; thereby making it easier for attendance and perhaps explaining this cohort's consistent participation or adherent rates above 75. Week 10 shows a dramatic decrease in participation, which may be attributed to documentation error. Yet, proximity of the intervention delivery may be the major contributor to consistently high participation rates for cohort 2.

Cohort 3 represents the first of the three community-wide recruited cohorts. Surprisingly, cohort 3's participation rates were around 50 percent. have known each other but may not have felt as connected to each other. The line gradually decreases and lends itself to this interpretation. However, group cohesion was not measured in this study. Smith-Ray and colleagues (2012) suggest when considering strategies to “increase attendance and access to the intervention [for women of color] concepts, strategies and connections are very important...task and social dimensions are important to include in health promotion interventions focused on women of color” (pp. 34). This suggestion is not only salient with populations with strong cultural dimensions but also congruent with the intention of culturally and gender appropriate and tailored interventions such as STEPS. This lower attendance rate cannot be fully explained by the focus group data either. However, combined with this cohort being the first community-wide recruited cohort, recent research may explain the lower participation and attendance rates of cohort 3.

A 2012 randomized controlled trial designed to investigate the efficacy of a social cohesion intervention to increase physical activity and improve dietary habits in both African American and Hispanic/Latina women was among the “first to suggest that [group cohesion] may be useful for enhancing attendance in interventions focused on women of color.” (Smith-Ray, Mama, Reese-Smith, Estabrooks, Lee, R.E., 2012, pp. 28). Group cohesion, found to be successful in intervention population within White populations, (Smith-Ray et al, 2012), is defined as a “dynamic process reflected by the tendency of a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs (pp. 27).” Specifically, group cohesion includes four

dimensions: individuals' attractions to the group's task, individual attractions to the group's social aspect, group integration around the task and group integration around social aspects. This operational model, stemming from Lewin's 1939 (Smith-Ray et al, 2012), work on a sense of group social cohesion among its members, may explain cohort 3's low participation rate.

Cohorts 4 and 5 and to a small degree, cohort 3 may have benefited from a program component that emerged from the participants and not the STEPS program, but was institutionalized in the latter cohorts: My Sisters' Keeper (MSK). Further described in the next section, MSK may have been a major contributor to the initial high participation rates of cohort 4 and the ongoing participation rates of cohort 5. During week six, there is a major drop in participation for cohort 4, which could be attributed to documentation error of participation fatigue. For most of the cohorts, for which there was available data, week 10 participation constituted a major drop. During week 10, participants had the opportunity to participate in either water aerobics or kickboxing and metabolic conditioning with circuits. There may have been program administration or participation fatigue, which would explain this observance. However, focus group participants' across all cohorts exclaimed they wanted more weeks added onto the STEPS program, as well as support for the program staff. Still, it is unclear if this decrease in participation was mostly due to the program activities or to the social support and group cohesion. Cohort 5's higher participation attendance rates can be best explained by the duration and presence of MSKs, STEPS staff program delivery and presence of task-based social cohesion (Lee et al, 2012; Norris & Mitchell, 2014).

Assessing the STEPS intervention group's acceptability of the intervention was problematic. Broad acceptance of the STEPS program is related to focus group participants viewing STEPS as a space away from their multiple roles and responsibilities. As previously described, although the attendance rates were generally high, there was much unclear, inconsistent or missing data. Administrative errors, situational and environmental challenges could be the cause for these phenomena. This is a major limitation of the study.

Fidelity researchers advocate for increased documentation to account for potential changes over time, particularly if used for monitoring purposes (Molbray, Holter, Teague & Bybee, 2003) such as sign-in sheets. Without complete documentation of intervention group participants' session attendance, not only is it difficult to assess the internal validity of the study, but also its challenging to determine if the program was successful or unsuccessful due to the program or some other extraneous variable. The STEPS program had very clear and well-enforced eligibility and participation rules, nonetheless complete documentation of its implementation is not clear. Therefore, although incomplete sign-in sheet records made this analysis problematic, the science is still unclear on the participation rates required for an effective intervention and the lack of this information may not make a substantial difference. In spite of this, until such claims are established, this information is needed to ascertain intervention effectiveness. However, given the complexity of the intervention, program staff effectively implemented a program where social support was the goal and perhaps, group social cohesion was reinforced upon completion. Future studies should explore potential environmental factors and group cohesion as it pertains to African American women.

There are several ways in which implementation fidelity for the present study could be enhanced. These include strict adherence to the participation eligibility guidelines; only collecting the data of participants; quality improvement system for data coders; additional observation analyses conducted during the intervention; and follow-up with key stakeholders (Breitentstein et al, 2010; Carroll, Patterson, Wood, Booth, Rick, Balain, 2007; Saunders, Evans and Joshi, 2005; Saunders, Evans, Kenison, Workman, L. Dowda, M. & Chu, 2012 ) This triangulated approach presents a comprehensive picture of how to enhance implementation fidelity, while capturing content, coverage, frequency and duration.

### **Original and Emergent Themes**

The original and emergent themes were described in the results section and presented the STEPS participants perspectives of what components of the program were and were not effective. Additionally, the original themes described the participants' perspective of the impact of STEPS on their daily lives. The following section uses the social support framework to describe STEPS participants' perspectives of the intervention.

**Original theme: STEPS' impact on participants' life.** Participants emphasized the integral role of STEPS staff in creating the supportive network for the program. This level of emotional support exhibits expressions of empathy, love, trust and caring.. Moreover, participants describe how the staff motivated and encouraged them to continue on an ongoing basis. It is this supportive environment that nurtured a safe place and prompted another participant to describe the major impact the STEPS program had on her life. Because the STEPS program offered clinical assessments before and after the program, participants such



as this one became aware of life-threatening illnesses and were better prepared to engage in a treatment program.

**Original theme: Best part of the STEPS program.** Participants enthusiastically and emphatically rave about the community that emerged from the STEPS program. More importantly, participants enjoyed the variety of physical activities and the peer-to-peer support, coupled with the program support. This participant's explanation of the STEPS climate is consistent with other participants' responses. Even negative aspects of the STEPS program were alleviated by the more positive attributes of the program, as previously described. Together, these elements serve as advice, suggestions and information.

**Original theme: Negative aspects of the STEPS program.** The majority of participants agree that a major negative of the STEPS program was that it was not continued. The tangible aid and services were highly valued and missed, upon study conclusion. Participants recognized the resource STEPS offered and valued its service for themselves and to the other participants. Participants seemingly found gratitude and appreciation when other women who looked like them were engaged in health behavior changing activities. Despite this pervasive appreciation for the program, participants still offered suggestions, albeit minimal, to improve the STEPS program.

**Original theme: Suggestions for changes and improvements to the STEPS program.** Participants' suggestions for improving the program centered on tangible aid and services that lengthen its implementation, consider sustainability assessments and offer a membership to all participants upon completion. Several participants had preferences for specific fitness instructors over others and felt their roles should be increased in the program.

**Original theme: How STEPS can prevent heart disease.** Discussion around how STEPS can prevent heart disease was often clouded by the ongoing accolades given to the STEPS program, specifically its tangible aid and services.. Participants recognized how their activities and sessions on physical activity, stress management and nutrition related issues are related to heart disease prevention. Still, several participants attribute the programs potential to preventing heart disease to the program's structure. It is this attribution, or knowledge of the possible effects of the STEPS program is what motivated participants to remain connected to and engaged with heart disease preventive behaviors and actions.

**Original theme: Reasons and motivations for STEPS program participation.** Lastly, participants were acutely aware of the psycho-social and environmental stressors that African American women experience and how this might be related to daily living and health habits. As a matter of fact, it was a recurring theme when considering how to maintain an active, healthy lifestyle.

**Emergent theme: Within-group oppositional gaze and self- perceptions of Black women.** While describing their experiences and perceptions of the STEPS program, participants eventually encountered discussions of images and perceptions of Black women by themselves and larger society. These discussions forced participants to be self-evaluative with respect to their individual and public spheres. Much social commentary occurred and specific discussions around the dissonance between Black women's education and health. It's this acknowledged dissonance that resonated with participants and initiated a drive or interests to take ownership over their personal and collective health. This perception extends beyond this dissonance. Repeatedly, participants shared their observations of how daily life

stressors appear on the faces of Black women and as a result, they appear mean and depressed.

Borrowed from bell hooks' (1992) discourse on spaces of agency that exist for Black women to document representations of Black women in public and private spheres, this gaze, usually performed by "others," has often fostered stereotypes and reinforced structural policies, based on stereotypes of Black women. For example, West (2008) describes how stereotypes such as Mammy, Jezebel, and Sapphire are found in the media and have provided the rationale and justification for policies such as Headstart, welfare and abortion. According to hooks, the "gaze" has been and is a site of resistance for colonized black people globally. Subordinates in relations of power learn experientially that there is a critical gaze, one that 'looks' to document. In resistance struggle, the power of the dominated to assert agency by claiming and cultivating "awareness" politicizes 'looking' relations--one learns to look a certain way in order to resist (1992, pp. 116)." When Black women recognize the gaze in one another and the effects of life experience, what can flow from that experience is what hooks terms "the capacity of Black women to construct ourselves as subjects in daily life, the extent to which Black women feel devalued, objectified, [and] dehumanized in this society (1992, pp. 116)". For those Black women, such as the STEPS participants who recognize the effects of daily stressors in other women and for whom identities may be constructed in resistance, opposing the dominant order of the public image of African American women as not wanting to engage in physical activity, may actually serve as a protective factor or indicator for increasing health promotion. The practice of within-group oppositional gaze and self-

evaluative perceptions of Black women may serve as a place of resistance (hooks, 1992) and act of liberation (West, 2008).

In the STEPS program oppositional gaze, when applied to health, allowed participants to engage in acts of liberation (West, 2008), simply by taking ownership of their health and participating in the program. Their awareness of this process may be helpful in developing strategies for maintenance and sustainability. The intersections of oppositional gaze and Black female representation are often studied in media and communication studies. Nonetheless, Black women are rarely offered a space to construct and apply this oppositional gaze to health, including promotion and prevention.. Participants recognize the connection between psycho-social health and physical health and well-being but find it challenging to collectively do something about changing this phenomenon. For them, STEPS offered an opportunity to explore this issue while engaging in health-promoting behaviors. West offers suggestions for solutions to Black women's role strain, in an effort to address the socio-environmental issues influencing their health such as socio-political activity and individual self-care practices as a collective (2008).

**Emergent theme: My Sisters' Keeper.** Not to be confused with the program component that emerged in Cohorts 2-5, this concept of My Sisters' Keeper (MSK) was pervasive throughout the STEPS program, among both the PG and IOG. Participants repeatedly mentioned they enjoyed the fellowship, camaraderie and sisterhood discovered among women, with different personalities and from different backgrounds and neighborhoods. In fact, one participant labeled these phenomena as a movement beyond the intervention program. There was a support that was present that not only engaged the

participant, but motivated them, even if they did not have a familiar relationship with other participants. Having someone's back implied that you were part of a team, and in the STEPS study, this team was working together to improve health behaviors and prevent heart disease. In the end, you developed healthier lifestyle habits, but also gained relationships and an extended social support network, a component widely cited for positively influencing health behavior change among African American women.

The program component, MSK, which emerged from the participants, offered not only a form of social support, but a form of group integration around the task of lifting up and serving other women. This social aspect of group integration for the purpose of serving others while also engaging in the activity oneself, may be an approach for not only engaging women of color to change behaviors, but also inadvertently targeting women who may be Superwomen and experiencing role overload (Giscombe & Lobel, 2008). Accordingly, women who serve as MSKs, not only exhibit leadership qualities and an interest in supporting other women, but demonstrate this concept of agency for Black women. As MSKs, participants didn't have to prioritize one gender over another, experienced health promotion –related activities targeting Black women provide mechanisms for Black women to demonstrate autonomy, or agency, in their lives. This self-definition and self-expression resists psycho-social and socio-environmental stressors challenging the health of Black women. Black women have been forced to prioritize either their gender or race in the ongoing quest for social equality in the United States, and historically have had minimal agency over their bodies, and by consequence, their health. An intersectional evaluative approach towards this work provides a holistic lens in which to interrogate the root of health

disparities and undergirding social structures creating health inequities for this population; thereby exploring agentic behaviors in the lives of Black women.

**Emergent theme: Creating community to transform health behaviors.** While participants acknowledge and described the perceptions of Black women and were aware of how integral the aspect of my sisters' keeper could be, there was even more discussion on how these two emergent themes could be used to create community to transform health behaviors.

It was apparent in all aspects of the STEPS intervention. The staff had an immediate impact on this participants participation, but it also motivated her to return as it offered her an escape or a chosen family with whom to share this experience with over the 12 weeks. Just having caring, open staff and fellow participants created an environment that allowed participants to feel comfortable in that created space. Participants' experiences with the STEPS program influenced their individual behavior in very concrete ways with relevant consequences to health promotion. Individuals not only changed their behaviors that were sustainable post-intervention:

This support in health behavior change extended beyond the STEPS community. Several women mentioned the amount of social support received from spouses, family and friends. Not only were participants engaged in this program, but family members were as well. Creating community among and within their social networks was common for STEPS participants, who often recommended other individuals for subsequent STEPS cohorts. Even if these individuals were unable to participate, through their STEPS connections, they were still able to engage in health promoting activities. STEPS participants felt challenged and

accomplished as a result of completing this program. Several participants discussed ongoing health promotion related efforts in which they were engaged. Not only had their knowledge changed, but also had their self-efficacy and behavioral capability for changing behaviors.

## **STUDY LIMITATIONS**

There were several limitations to the present study, representing potential threats to internal and external validity. These include selection, contamination, data quality control, theoretical framework, construct validity, external validity, population validity and reactive effects of experimental arrangements, also known as Hawthorne effect. Participants were geographically located in the Southeastern U.S. and this culturally tailored program may not be generalizable to other settings and populations. There were a number of logistical issues that surfaced during both implementation and analysis phases.

The STEPS study was conducted in a targeted community setting, limiting the generalizability of findings. Data were self-reported. This may have impacted analyses. The recruitment process was complex and dependent on each cohort, as well as the program's specified attendance rules. Participants could not miss more than three sessions. Participants were not randomized into the information-only comparison or intervention groups, but self-selected into the program based on their commitment and schedule. Short-term sustainability was not assessed at the time of this submission; thus long-term results remain unknown. Together, this may have contributed to the challenges in assessing program effectiveness.

There were a number of coding issues in assigning participants to information-only comparison or intervention group; these were discovered during analysis phase. This study only focused on the HPLPII and did not include other psycho-social measurements or clinical assessments. The triangulation of that data might reveal more understanding of the specific mechanisms involved in health promotion lifestyle intervention programs. Social cognitive theory was employed broadly to assess the STEPS program and did not include specific



evaluations of how reciprocal determinism, behavioral capability, observational learning, reinforcements, expectations and self-efficacy were employed and/or operationalized. Rather, a broader view of the Social Cognitive Theory was employed in this mixed methods evaluation, focusing on the behavioral, environmental and personal factors, as previously illustrated in Figure 1.

## **FUTURE RESEARCH**

Future research should test the role of group and social cohesion, as well as family adaptability, which has been explored, in health promotion and lifestyle programs targeting African American women and other conditions and diseases such as obesity, heart disease and diabetes. Testing the role of group and social cohesion around health promotion and lifestyle programming will offer additional meaning in Black women's experiences with health if there is a formal process of engaging in an active oppositional gaze. STEP participants engaged, exercised, attended classes, spoke and acted from a place of resistance, as an "outsider-within" confronting and addressing the individual and contextual challenges contributing to their metabolic risk for heart disease, while encouraging their sisters, even if they had just met at the program's beginning. These women were also uniquely and astutely aware of the daily struggles and experiences of other Black women through their oppositional gaze analysis. More research on this dynamic will support efforts to target the root causes and innovative approaches to address them. A holistic approach towards women's health, where the physical, spiritual, mental and emotional well-being of an individual is targeted, is often targeted in primary preventative interventions such as the STEPS program. Nevertheless, there remains limited evidence describing how to operationalize health promoting activities in health interventions targeting African American women.

This study responds to the need for future research to examine the relationship of social support and health promotion lifestyles, particularly around intervention development and implementation (Adams, Bowden, Humphrey, McAdams, 2000). The significant results

of increasing health-promoting behaviors support the application of the Health Promotion Model in the design and evaluation of the STEPS program. These results have implications for community-based health intervention programs targeting African American females with metabolic risk. Future studies should match theories to measures and intervention components; measure social support empirically; consider a triangulated approach towards implementation science; and operationalize and further explore intersectional standpoint framework towards the health of Black women. The results of the study provide a better understanding of behaviors, attitudes and experiences of African American females' approaches to cardiovascular disease and the contextual factors, or healthography, that characterized their experiences.

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## APPENDICES

## Appendix A

Table 1: STEPS Study Objectives and Study Evaluation Questions

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After completion of a 12 week culturally and gender appropriate intervention targeting women, participants will

Objective 1: experience significant improvements in *knowledge of heart disease risk factors*?

Objective 2: experience significant improvements in risk factors for heart disease after completion of the intervention?

Objective 3: experience significant improvements in *physical activity level*?

Objective 4; experience significant improvements in *nutritional choices* (intake of fruits and vegetables)?

Summative Evaluation Questions:

- What type of statistical test was used to analyze the STEPS data?
- Were statistically significant results found? If so, explain.

Process Evaluation Questions:

- Is the program staying true to the original design (program fidelity), and is it maintained in the implementation process?
- Are the quality and quantity of the services and products maintained at the capacity level expected?
- Is the level of satisfaction sustained across participating groups?
- Is there any identified reason why one group of participants is no longer participating?

Outcome Evaluation Questions:

- Were the short-term goals achieved by the STEPS program?
- What was the stakeholder's level of satisfaction in the program implementation?
- Did specific health knowledge and motivation increase participation among the STEPS participants?
- Did availability of social support positively affect the participants' health outcome?

Impact Evaluation Questions

- What external influences affected the results?
- What percentages of participants were lost to follow-up over the STEPS study?
- Was the expected behavior changed sustained over the expected period of time?
- How did the expected cost compare to the actual cost of the impact evaluation?



## Appendix B

Table 2. STEPS Evaluation Plan

Goals/Objectives	Means of Assessment	Criteria-Target	Results	Action and Follow Up
<b>Goal 1: to provide a prevention program that will raise awareness about heart disease and women's health.</b>				
1) Develop and implement a 12 week educational culturally and gender appropriate intervention program for women between the age of 35 and 65;	Seminar Evaluation, Formal and Informal Observation, Participant Feedback, Participant Logs, Guest Speaker Evaluation	A program manual with seminar objectives, outlines, educational materials and resources		
2) Recruit and enroll 350 women to participate in the project over the 2 year period;	Registration, Consent Forms, Attendance Logs	At least 350 women will receive program materials and participate in pre- and post-test data collection		
3) Recruit and enroll at least 175 (50%) of women who are either low income, Medicaid beneficiaries, or underinsured.	Demographic Data from Registration Forms	At least half (175) of program participants will be low income women		
<b>Goal 2: to evaluate the effectiveness of the program to improve knowledge, reduce risk factors, and to improve nutritional, physical activity, and wellness behaviors.</b>				
1) To significantly increase participants' knowledge of risk factors for cardiovascular disease	Coronary Heart Disease Knowledge Test Focus Groups	80% of intervention participants will have a significant increase in knowledge		
2) to significantly improve participants' risk factors for heart disease;	Anthropometric Data, Lipid Screening, Blood Pressure, Resting Heart Rate, Focus Groups	80% of intervention participants will experience a significant reduction in two or more risk factors.		
3) Increase participants' physical activity level to a minimum of at least three times per week	BRFSS Health-Promoting Lifestyle Profile II, Behavioral Risk Factor Surveillance System, Focus Groups	80% of intervention participants will increase activity levels to at 30 minutes of moderate exercise, 3 days a week.		
4) Significantly improve nutritional choices of participants.	Health-Promoting Lifestyle Profile II, Behavioral Risk Factor Surveillance System, Focus Groups	80% of intervention will show an increase in positive nutritional behaviors such as fruit and vegetables and a decrease in negative habits such as fat intake.		

## Appendix C

### STEPS Measures: The Health-Promoting Lifestyle Profile II

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#### LIFESTYLE PROFILE II

**DIRECTIONS:** This questionnaire contains statements about your *present* way of life or personal habits. Please respond to each item as accurately as possible, and try not to skip any item. Indicate the frequency with which you engage in each behavior by circling:

**N** for never, **S** for sometimes, **O** for often, or **R** for routinely

1. Discuss my problems and concerns with people close to me. N S O R
2. Choose a diet low in fat, saturated fat, and cholesterol. N S O R
3. Report any unusual signs or symptoms to a physician or other health professional. N S O R
4. Follow a planned exercise program. N S O R
5. Get enough sleep. N S O R
6. Feel I am growing and changing in positive ways. N S O R
7. Praise other people easily for their achievements. N S O R
8. Limit use of sugars and food containing sugar (sweets). N S O R
9. Read or watch TV programs about improving health. N S O R
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber). N S O R
11. Take some time for relaxation each day. N S O R
12. Believe that my life has purpose. N S O R
13. Maintain meaningful and fulfilling relationships with others. N S O R
14. Eat 6-11 servings of bread, cereal, rice and pasta each day. N S O R
15. Question health professionals in order to understand their instructions. N S O R
16. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week). N S O R
17. Accept those things in my life which I can not change. N S O R

- |                                                                                                                                                                 |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 18.Look forward to the future.                                                                                                                                  | N S O R |
| 19.Spend time with close friends.                                                                                                                               | N S O R |
| 20.Eat 2-4 servings of fruit each day.                                                                                                                          | N S O R |
| 21.Get a second opinion when I question my health care provider's advice.                                                                                       | N S O R |
| 22.Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).                                                         | N S O R |
| 23.Concentrate on pleasant thoughts at bedtime.                                                                                                                 | N S O R |
| 24.Feel content and at peace with myself.                                                                                                                       | N S O R |
| 25.Find it easy to show concern, love and warmth to others.                                                                                                     | N S O R |
| 26.Eat 3-5 servings of vegetables each day.                                                                                                                     | N S O R |
| 27.Discuss my health concerns with health professionals.                                                                                                        | N S O R |
| 28.Do stretching exercises at least 3 times per week.                                                                                                           | N S O R |
| 29.Use specific methods to control my stress.                                                                                                                   | N S O R |
| 30.Work toward long-term goals in my life.                                                                                                                      | N S O R |
| 31.Touch and am touched by people I care about.                                                                                                                 | N S O R |
| 32.Eat 2-3 servings of milk, yogurt or cheese each day.                                                                                                         | N S O R |
| 33.Inspect my body at least monthly for physical changes/danger signs.                                                                                          | N S O R |
| 34.Get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parking car away from destination and walking). | N S O R |
| 35.Balance time between work and play.                                                                                                                          | N S O R |
| 36.Find each day interesting and challenging.                                                                                                                   | N S O R |
| 37.Find ways to meet my needs for intimacy.                                                                                                                     | N S O R |
| 38.Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day.                                                              | N S O R |
| 39.Ask for information from health professionals about how to take good care of myself.                                                                         | NS O R  |
| 40.Check my pulse rate when exercising.                                                                                                                         | N S O R |
| 41.Practice relaxation or meditation for 15-20 minutes daily.                                                                                                   | N S O R |

- |                                                                                   |         |
|-----------------------------------------------------------------------------------|---------|
| 42. Am aware of what is important to me in life.                                  | N S O R |
| 43. Get support from a network of caring people.                                  | N S O R |
| 44. Read labels to identify nutrients, fats, and sodium content in packaged food. | N S O R |
| 45. Attend educational programs on personal health care.                          | N S O R |
| 46. Reach my target heart rate when exercising.                                   | N S O R |
| 47. Pace myself to prevent tiredness.                                             | N S O R |
| 48. Feel connected with some force greater than myself.                           | N S O R |
| 49. Settle conflicts with others through discussion and compromise.               | N S O R |
| 50. Eat breakfast.                                                                | N S O R |
| 51. Seek guidance or counseling when necessary.                                   | N S O R |
| 52. Expose myself to new experiences and challenges.                              | N S O R |

## Appendix D

### Discussion Guide for STEPS Focus Groups

Date/Time	Focus Group
Thursday, December 12, 2013, 6-8pm	Cohort II – WSSU Staff & Non Traditional Students) /Program Group
Wednesday, December 18, 2013, 11am-1pm	Cohort I- Underserved Population/Program Group
Wednesday, December 18, 2013, 2pm-4pm	Cohort III – First Community Program Group
Wednesday, December 18, 2013, 6pm-8pm	CONTROL GROUP (comprised of various participants/cohorts)
Thursday, December 19, 2013, 11am-1pm	Cohort IV- Program Group
Thursday, December 19, 2013, 2-4pm	Rollovers/ Dropouts
Thursday, December 19, 2013 – 6pm-8pm	Cohort V- Program Group
Friday, December 20, 2013- 2pm-4pm	Heart Smart Presenters
Friday, December 20, 2013 – 6pm-8pm	Fitness Instructors

Please help yourself to refreshments and then we will get started.

#### I. INTRODUCTION (5 minutes)

##### A. Describe project

Thanks for coming. My name is \_\_\_\_\_ and I'll also be getting help from \_\_\_\_\_ and \_\_\_\_\_. We are having conversations with program participants and staff who were a part of the STEPS (Sisters Together Empowered for Prevention and Success) to a Healthier Heart intervention. We want to hear your thoughts about the program, how it may have helped you and your environment. You are here today as a group of individuals willing to share your thoughts about heart health, specifically heart disease as a primary risk factor, fitness, health behaviors and lifestyle practices in your environments/communities. We really are interested in understanding your perspective of the

program and staff, especially what you think would be a good program to change health behaviors contributing to heart disease, as well as obesity. We really want to know what you think. And to show our appreciation, each person will receive \$25 after the meeting for taking time out of your day to talk with us.

B. Describe focus groups

Has anyone ever been in a focus group before? Let me explain what it is:

A focus group is just a group of people who come together to talk about specific issues, in our case issues related to being at risk for heart disease and physical fitness. Before we get started, I want to cover a few points to help us have a good discussion.

C. Honest opinions

There is no right or wrong answer. Think of this like sitting around talking with friends. Anything you say is the right answer, and everyone's opinion counts. Think of yourself as representing maybe a hundred other people like you who live in North Carolina but who couldn't be here today. Your honest opinions are very important to us.

D. Recording the session

We are taping the session today to record exactly what is said so we can concentrate on our discussion, and not miss what anyone says. We are trying to get a better idea of your ideas and beliefs. When we write the final report, your names will be omitted. We will write about what you said, not who said it. Your friends nor family members will know what you said.

E. Talking rules

Talk one at a time, be respectful of others, especially when you disagree, keep our discussion private. What is said in this room should stay here.

Group Facilitation and calling on people: Just a couple of words about how we can best facilitate the focus group. Since some people talk a lot and others don't, we try to get everyone equally involved in the discussion. I may from time to time call on some people who haven't spoken up. It's not to single anyone out; it's just to make sure that everyone has a chance to give us their opinion. Please speak one at a time so that everyone's opinion can be heard and recorded accurately. Also, please silence all cell phones and other devices during this time period.

Topic Transitioning and jumping from topic to topic. I have an outline that I use to make sure we cover everything that we need to talk about today. We try to have a free flowing

discussion, but to make sure that I cover everything I have to; I may jump around a little bit or cut the conversation short on some points.

F. Housekeeping

Feel free to get up at anytime to use the rest room. I only ask that you do this one at a time so I'm not left here alone and so that we can keep the conversation going.

G. Consent Form Reminder

(PARTICIPANTS) As a reminder, you have completed a consent form for participating in this program. That consent form covers your participation in today's focus group.

(STAFF) As you came in, you were each given a consent form. Let's go over these forms now and make sure there are no questions before we begin.

Important points to note:

Purpose of the study and what participants are being asked to do

Length of participation

Risks, benefits and compensation

Protection of privacy

Note that discussions will be recorded if all participants are willing. Recording can be stopped at any time at any participant's request

Note who to call with questions

Are there any questions? If you are willing to continue, please sign this form and return it to one of the project staff.

START THE RECORDER

I. Introduction of participants

As a reminder, STEPS stands for Sisters Together Empowered for Prevention and Success to a Healthier Heart Program. Let's quickly go around the table and introduce ourselves. Please give your first name OR A FAKE NAME, and tell us

**Adults:** [What is the one thing you want us and others to know about how STEPS has impacted your life?]

II. Introduction of topic (5 minutes)

A.Ok, let's get started:

Today we are going to discuss issues related to STEPS, heart disease prevention, overweight and obesity and the role of African American culture to all of these ideas. First, we will start with the STEPS evaluation.

STEPS Evaluation (50 minutes)

I want you to take a few moments and reflect on your experience with the STEPS Program.

1. What part of the STEPS program was the best? (e.g., staff, instructors, peers, “my sisters’ keepers”)

Probe: What did you like the most about the program?

2. What part of the STEPS program did not work for you?

Probe: What did you like least about the program?

If you were to make any changes to the STEPS program, what would they be?

Probe: Describe how the program could have been improved?

(ALL GROUPS EXCEPT Rollover/Dropout Group) What were your reasons or motivations for participating in the STEPS program?

Probe: What was that one thing that kept you coming back to STEPS?

What role, if any, did “my sisters’ keepers” factor into your participation in the STEPS program?

Probe: Were the “my sisters’ keepers” helpful to you? If so, how?

Probe: How different would the STEPS program have been without the “my sisters’ keepers”

5. (GROUP I/II ONLY) Other cohorts of the STEPS program has a component called MY SISTERS KEEPERS, who served like peer leaders, supporters and mentors for program participants. How do you think a component such as MY SISTERS KEEPERS could be helpful/harmful to the STEPS program?

(Rollover/Dropout Group ONLY) Describe your reasons for not wanting to participate in the combined STEPS program with community members?

(Heart Smart Presenters/Fitness Instructors ONLY) What could you have improved in your delivery of the program?

Probe: Do you think your presentation/instruction was helpful to participants?

Describe how STEPS is helpful in preventing heart disease.



Probe: If you don't think it is helpful, please describe how you would change it so it would be.

Would you be willing to participate in another program like STEPS in the future?

Probe: If so, why? If not, why?

The next set of questions is going to focus on your perspective of your community and environment.

### Contextual Environment (30 minutes)

1. What role, if any, do you think historical and social factors shape your environment?

Probe: What is our history as African Americans?

Probe: How does it affect the way we live now?

Probe: What kinds of social institutions do we have?

Probe: How do our faith communities support us?

Probe: What are our families like?

Probe: What are our community strengths?

Probe: What is our collective strength for taking action?

2. What are the influences of culture and mindset on your environment?

Probe: What are our social values?

Probe: What do we believe in?

Probe: What gives us pleasure?

Probe: What gives comfort?

Probe: How do we cope with stresses?

Probe: What is fair treatment?

Probe: Who earns our trust and our loyalty?

3. What are some of the challenges in navigating your environment?

Probe: Do we have money to buy the things we need?

Probe: What are our neighborhoods like?

Probe: What type of food is available? How much does it cost?

Probe: Where are opportunities for recreation and outdoor activities?

Probe: Who sponsors community events?

Probe: What messages do we get from TV, radio, outdoor ads, the web?

4. Lastly, how does the environment contribute to health conditions such as heart disease, overweight and obesity?

Probe: Based on our discussion, do you see any connections between heart disease, obesity and the environment

Closing

Summarize discussion. What I heard you say was...did I get it right?

**What else** do you feel we did not cover but is important that I know?

**Thank you** for taking this time to talk with us. Please sign for your reimbursement before you leave.

## Appendix E

### STEPS Basic Training Schedule

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#### Week 1

Tuesday, February 19<sup>th</sup>

6:00-7:00pm-Move More Live Longer Seminar

7:00-8:00pm-Importance of Exercise-Physical Fitness Testing

Thursday, February 21<sup>st</sup>

7:00-8:00pm-Importance of Exercise-Physical Fitness Testing

#### Week 2

Tuesday, February 26<sup>th</sup>

6:00-7:00pm- Conditioning

Thursday, February 28<sup>th</sup>

6:00-7:00pm-General Aerobics

#### Week 3

Tuesday, March 5<sup>th</sup>

6:00-7:00pm- The Heart of the Matter/Know Your Numbers Seminar

7:00-8:00pm-Metabolic Conditioning

Thursday, March 7<sup>th</sup>

6:00-7:00pm-Circuits/Field Day

#### Week 4

Tuesday, March 12<sup>th</sup>

6:00-7:00pm- Zumba

Thursday, March 14<sup>th</sup>

6:00-7:00pm- Kickboxing

#### Week 5

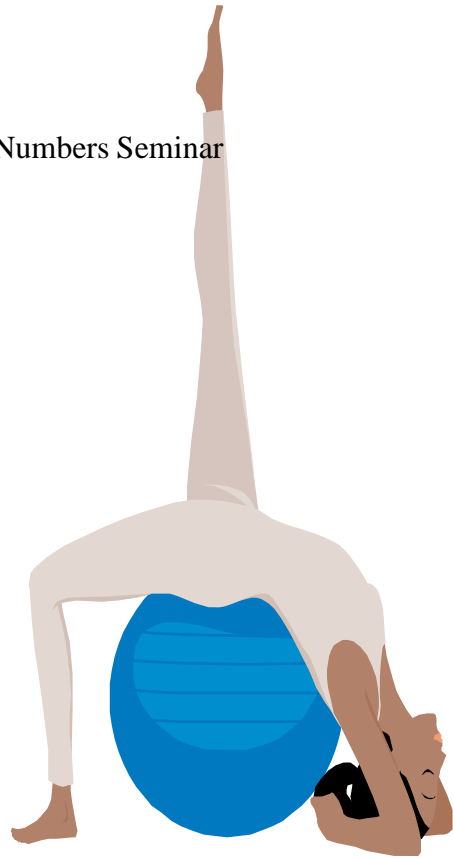
Tuesday, March 19<sup>th</sup>

6:00-7:00pm-You Are What You Eat Seminar

7:00-8:00pm-Mini Boot Camp

Thursday, March 21<sup>st</sup>

6:00-7:00pm-African Dance



Week 6

Tuesday, March 26<sup>th</sup>  
6:00-7:00pm-Zumba/Water Aerobics

Thursday, March 28<sup>th</sup>  
6:00-7:00pm-Masala Bhangra

Week 7

Tuesday, April 2<sup>nd</sup>  
6:00-7:00pm-Cooking For a Healthier Heart Seminar  
7:00-8:00pm-Circuits/Field Day

Thursday, April 4<sup>th</sup>  
6:00-7:00pm- Aerobic Mix/Aqua Zumba

Week 8

Tuesday, April 9<sup>th</sup>  
6:00-7:00pm-Zumba

Thursday, April 11<sup>th</sup>  
6:00-7:00pm- SH'BAM

Week 9

Tuesday, April 16<sup>th</sup>  
6:00-7:00pm-Stress Management Seminar  
7:00-8:00pm-Meditation

Thursday, April 18<sup>th</sup>  
6:00-7:00pm-Yoga Combo

Week 10

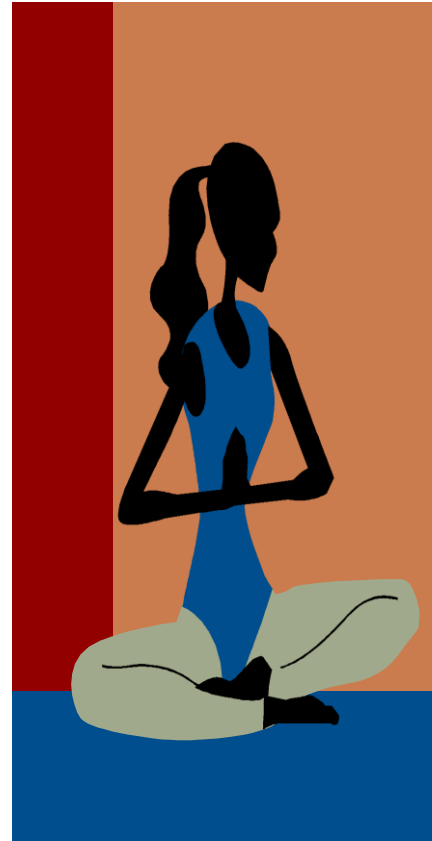
Tuesday, April 23<sup>rd</sup>  
6:00-7:00pm-Kickboxing/Water Aerobics

Thursday, April 25<sup>th</sup>  
6:00-7:00pm-African Dance

Week 11

Tuesday, April 30<sup>th</sup>  
6:00-7:00pm- Breaking Down Barriers to Change Seminar  
7:00-8:00pm- Gospel Mov

Thursday, May 2<sup>nd</sup>  
6:00-7:00pm-Field Day Fun



Week 12

Tuesday, May 7<sup>th</sup>

6:00-7:00pm-Silver Sneakers

Thursday, May 9<sup>th</sup>

6:00-7:00pm-U Keep Moving

## Appendix F

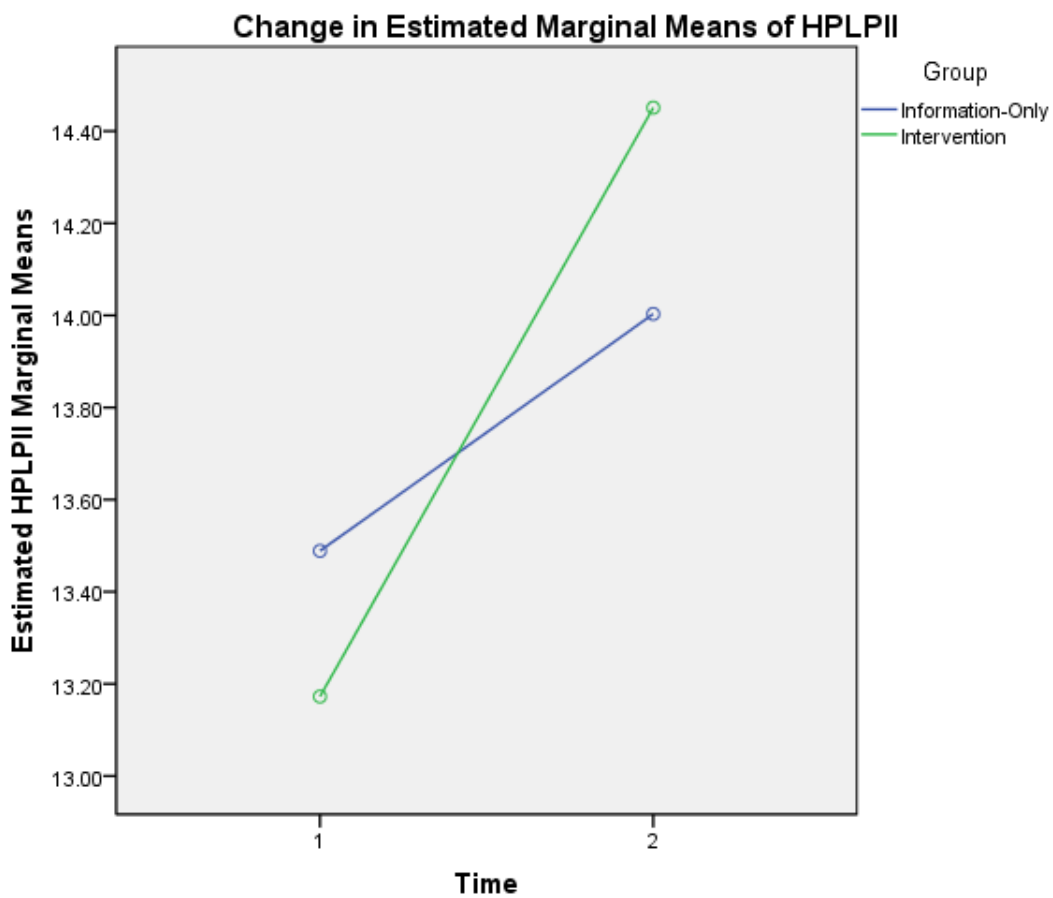


Figure 5. Repeated Measures ANOVA Graph, Change in Pre-Posttest Assessment of Health Promotion Lifestyle Profile II Between STEPS Groups

## Appendix G

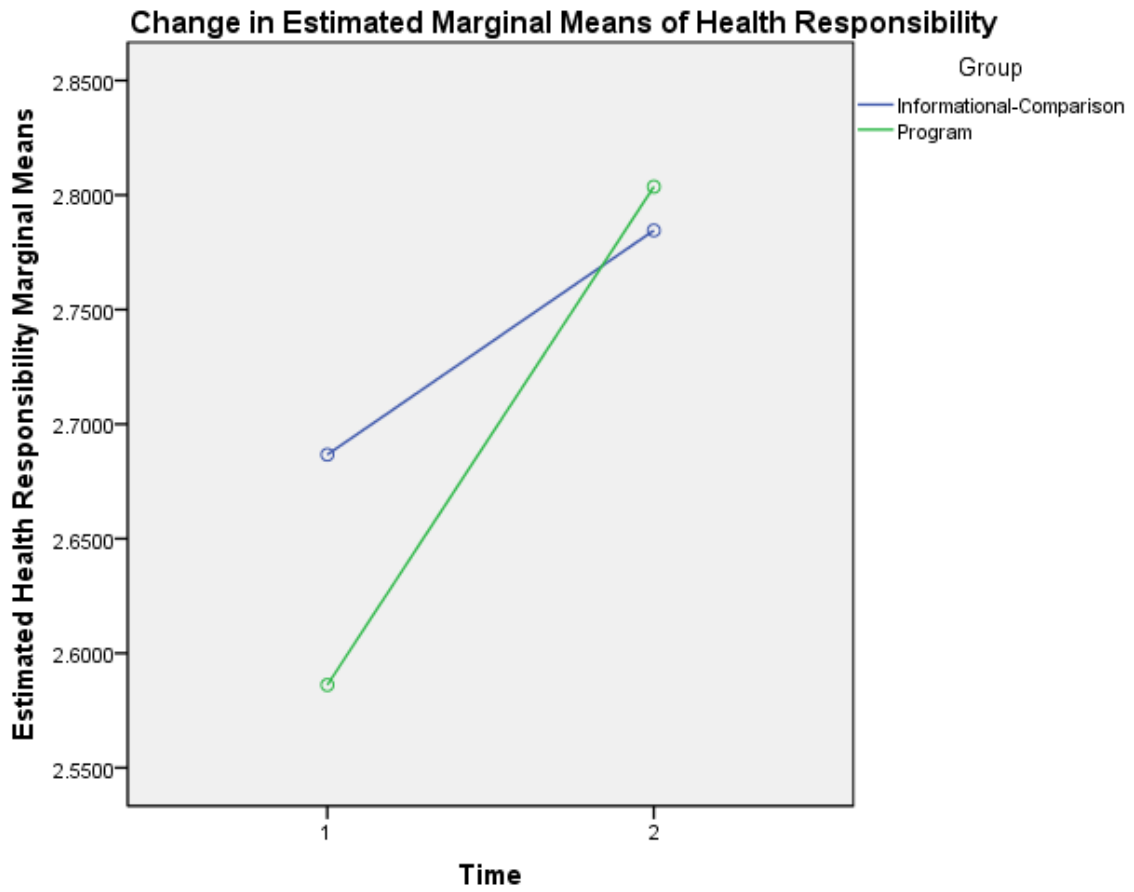


Figure 6. Repeated Measures ANOVA Graph, Change in Pre-Posttest Assessment of Health Responsibility Between STEPS Groups

## Appendix H

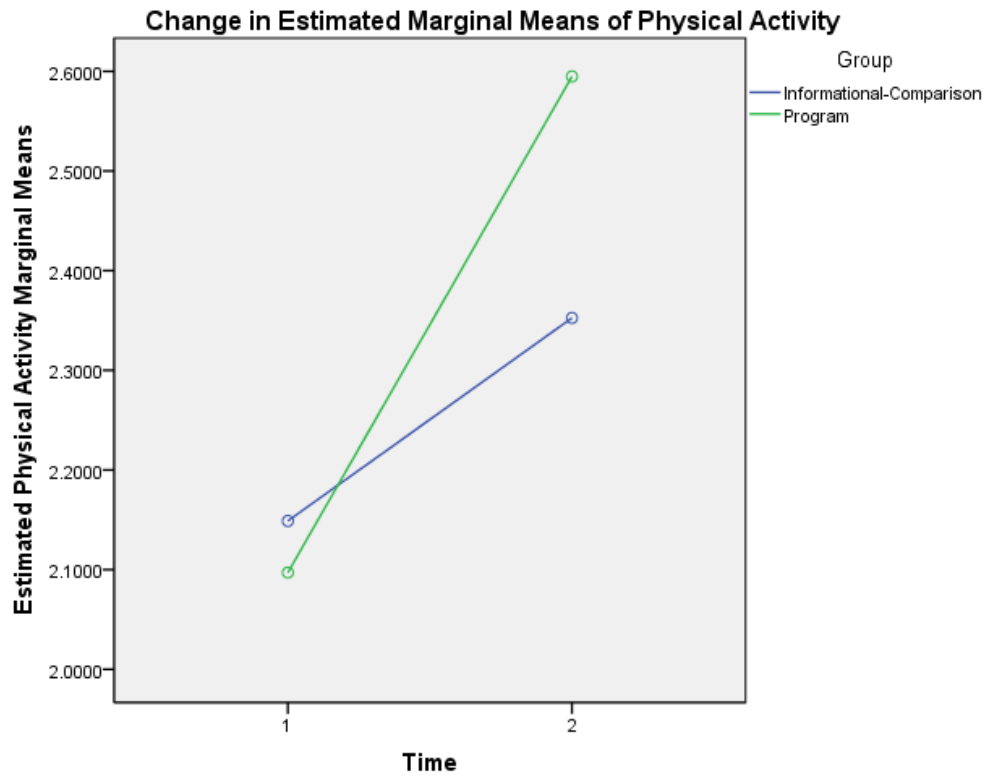


Figure 7. Repeated Measures ANOVA Graph, Change in Pre-Posttest Assessment of Physical Activity Between STEPS Groups



## Appendix I

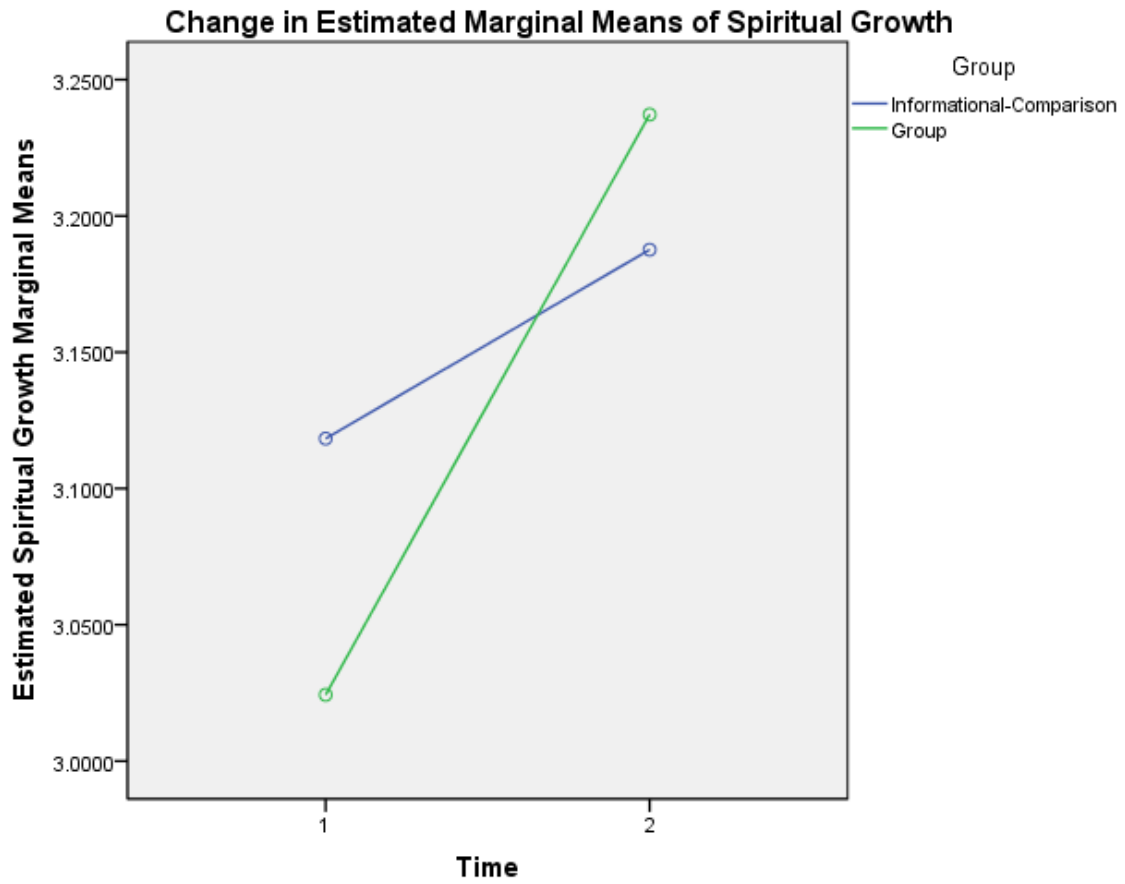


Figure 8. Repeated Measures ANOVA Graph, Change in Pre-Posttest Assessment of Spiritual Growth Between STEPS Groups

## Appendix J

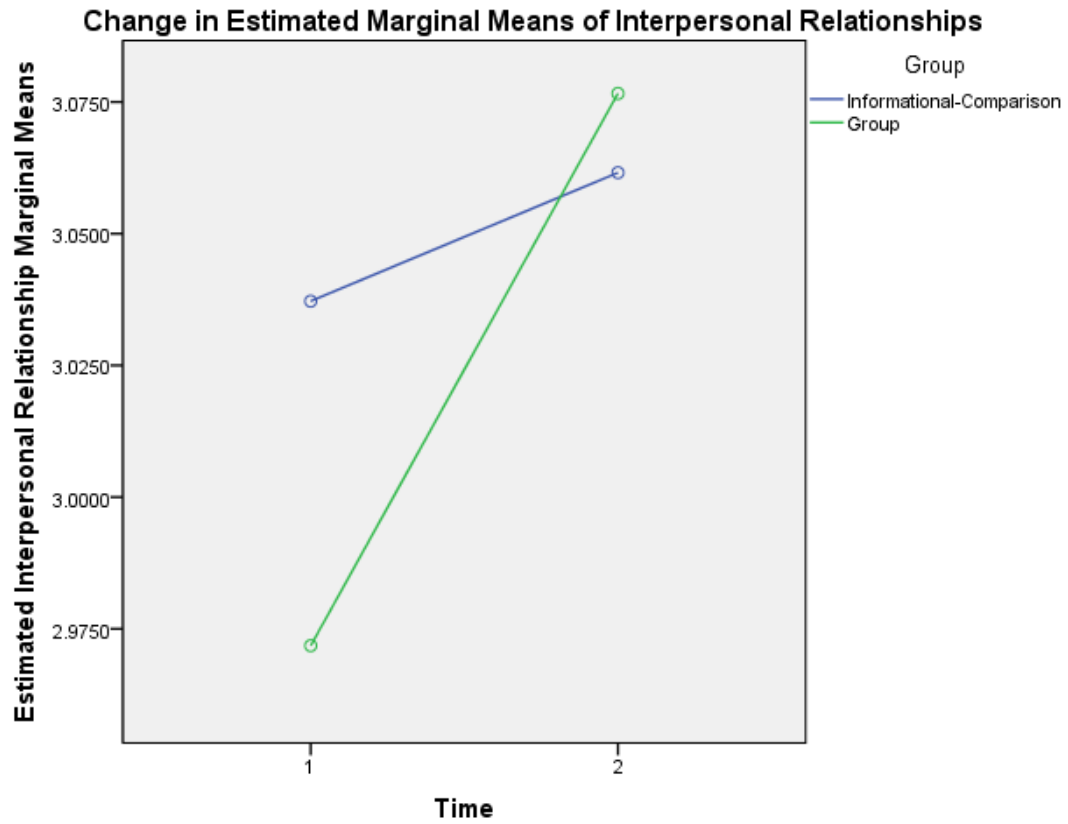


Figure 9. Repeated Measures ANOVA Graph, Change in Pre-Posttest Assessment of Interpersonal Relationships Between STEPS Groups

## Appendix K

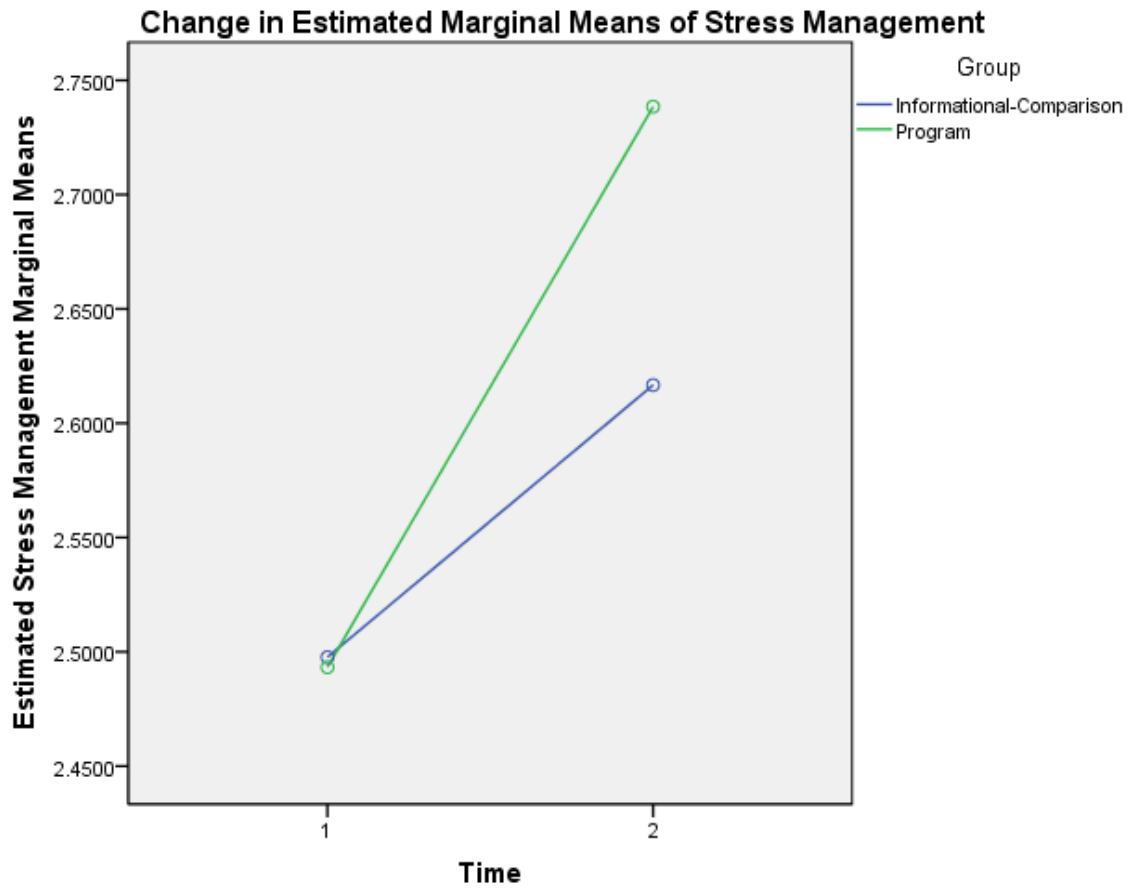


Figure 10. Repeated Measures ANOVA Graph, Change in Pre-Posttest Assessment of Stress Management Between STEPS Groups

## Appendix L

Table 7. Results of the Process Evaluation: Participant Acceptability

Questions	Emergent Themes	Selected Excerpts/Quotes
<p>What is the one thing you want us and others to know about how STEPS has impacted your life?</p>	<p>Acknowledgement of unhealthy behaviors; Need for a behavioral change; Comfort-seeking actions aren't healthy; Self-awareness; Life-changing; Transformational</p>	<p>Had it not been for STEPS, I wouldn't have been looking at that stuff. I was in the grocery last night, wanting some butter for some garlic bread. So I was reading I Can't Believe It's Not Butter and I was looking at it, well it still got '5 grams of saturated fat in here, that ain't no balance.' And so I put it back. I spent 20 minutes in the dairy section looking for a butter that had less calories, that I thought would taste like butter. But I was very invested in not buying the one that had the 11 grams of saturated fat in it. Before STEPS, Land of Lakes, here we go, you know? That's why I have 40% blockage now, which I found out, you know after we started the program.</p>
		<p>Yea, food was my friend. You know, I need to get me some better friends.</p>
		<p>I need to do this and I need to get this out. I need to say this before I, I'm trying not to cry...[crying], I told you when you came to my job [pause], that if it wasn't for the STEPS program, I would have never known I had cancer. Because I lived with this, under my arm for a long time and we went to Forsyth hospital when they had a doctor and a nurse. So I would like to thank you Dr. Brown and Maryann because I would have never done it on me own. I know I wouldn't have. And I just wanted to say thank you and when they had a nurse she was from Winston-Salem State too. And she um, I enjoyed that part that we were able to ask that nurse any question we had about health or just um, found out too that I had high blood pressure, so it really helped me. I'm sorry. You know people look at me and I try to be happy and smiling.</p>
		<p>Moving makes your heart gets your heart pump better. Being able to go back home, my medication but at lower doses. Um and knowing my arthritis knees can move in ways I thought I never could, and moving, it really helped me.</p>

Table 10 cont'd

<p>What part of the STEPS program was the best? (e.g., staff, instructors, peers, “my sisters’ keepers”) Probe: What did you like the most about the program?</p>	<p>Community linkages and connections; Keep moving; Investing in yourself and others rewards all</p>	<p>It was just so many different people saying and the different neighborhoods and everything. And connecting. Yea. And you know, most people you think you wouldn’t get along with because they’re from a certain neighborhood, and they had a certain attitude; we all end up getting along.</p>
		<p>Everybody personalities just link in. Like a chain link, like they were supposed to just fit together.</p>
		<p>I can say that’s one of the things I benefited most from; the commodity, the fellowship, coming over and meeting women, and women my age, the activity level, and Dr. Brown wouldn’t let you sit down, ‘keeping moving.’ You can’t do what were doing, the important thing is keep moving. And she exercise that a lot.</p>
		<p>So the fact the actual researchers were invested in and um and presenting the program or facilitating the study or doing whatever they needed to do to get whatever they needed from us, uh it was just hard not to participate. It was hard work but uh, we enjoyed it. And like I said, the variety of different kinds of exercise so we can see different options for things we do. You know I fell in love with the kickboxing teacher. Whatever he told me to do, I would do it.</p>
		<p>Um I think that every individual, you can go exercise, you can go to Zumba class, you can go to Girls Run or whatever. But in particular this study had the organization and the professionalism. That made a specific impact on how well the material presented, how well you cope with people on different levels, there were modifications for certain people. That, that individuals, you know I been in</p>

Table 10  
cont'd

		<p>other studies but the individuals in this particular study apparently knew the brand or knew the client, knew what they were are um, the target margin, if you will. So that there were issues, there were follow ups, there was written material, there was a plan. There was, you knew what was coming each class, you got the organizational, each class a summary of what we were going to do, we did it. We had a evaluation after the fact. If you had issues or problem they were facilitators to sit down and talk with you about, you know coming back or not doing anything. So for any obstacle that arose in a person ability to participate, there was some accommodation like ■■■ said. There was a accommodation so that it was hard for to fail. It was really hard to fail, so that was not a coincidence. I think that going in a study they, or whoever put it together, uh knew that this was something that you needed all that. So I think the success of the participants was uh contingent upon that kind of organization and Maryann was the most professional person; her energy. She would fire us up. If we didn't holler back loud enough, we had to holler back like 4 or 5 times.</p>
<p>What part of the STEPS program did not work for you? Probe: What did you like least about the program?</p>	<p>Length of program was too short; varied styles of teaching; difficulty fitting the classes into daily schedule;</p>	<p>Oh, I was going to say that I agree with them both. She is a very good instructor and I'm a person that do yoga at home and some of the things she was getting us to do was still challenging even for me. So I think she should've um, been more mindful of that. And modify some of the poses, and modify the program that she had and take it into consideration that you know, yoga is not what everybody does all the time so that a lot of those things would be challenging. She did encourage us to you know, do what we could. But you know we all in there like together (overlap talking), we going to compete a little bit, we going to push a little bit harder so yea, I think she should've taken that into consideration and should've may have been new to some people of not as familiar to most people as it was to her</p>
		<p>The only thing that I didn't like about the STEPS program is that, it wasn't long enough. I really wish. Because we need this every, I mean a lot of people</p>

Table 10 cont'd		need it everyday. I mean, I know they couldn't do it, that's the only thing I had. Even the timing; the timing of the classes and everything. It was still, that was a good time and everything but I wish it was longer.
		I really, there is nothing I found out that's wrong about STEPS. To me, because like she said, you know we got some people and its a time thing and class has started but maybe they get off late. but majority of them, they were on time. And when she said 'ladies, let's do this, let's do that.' And I have never been, unless I'm to church or somewhere, with a bunch of Black women all trying to do, and the floor looks good with everybody out there trying to do what they can do. And they'll tell you don't over do it. I might can jump a little high, if the other person can't go but so high, they tell you 'don't over do it.' And it's to me, I love the program. I didn't see no different thing in the program, in my case. I love it.
If you were to make any changes to the STEPS program, what would they be? Probe: Describe how the program could have been improved?	Staying connected; sustainability of activities and fellowship	No, no that didn't motivate me to get out and move and prove to myself that I can do something, besides sitting around, looking at tv. It really helps you stay focus and be impact on something you know you can do and once you get started, it just become a habit and you enjoy. You enjoy, you look forward to get out and doing this. This is something we look forward to doing every time we went there and it was a good ol' deal and I enjoyed that.
		So maybe as the sections progress, maybe you can do a follow up with the women that age out, after 65. Maybe another focus group or follow up to get input.
		That at the end of the program, give everybody a membership.

Table 10 cont'd

<p>Describe how STEPS is helpful in preventing heart disease. Probe: If you don't think it is helpful, please describe how you would change it so it would be.</p>	<p>Debunking of stereotypes of Black women; Identifying the un/healthy factors and changing behavior; agency to make health behavior changes; supportive networks</p>	<p>Maryann made a statement, so many women in there at one time that we should actually get a whole space instead of that part that we had. I mean, it grew. They just coming out of the woodworks. They was just coming in. People just came in. I mean they enjoyed themselves. And like I said us as Black women, we got the 'x' put on us anyhow, but uh date night, we don't do anything but eat and watch television. We're not doing nothing but they don't get to the good part. There are a bunch of black women out doing something, I see, I don't care for running but I'll walk fast. There are a bunch of Black women but they don't get that side of it. They get the wrong side of it, 'we don't want to lose weight or we don't care about our body, we don't care how we look.' But that's the wrong impression. But like said, get the wrong impression of a certain group and that's what they tag us with. But them women were over there, and I mean, they came. I mean, it was a full house. If somebody was out, I couldn't tell it unless there was a role call. Because like I said, I look around and people ready to go.</p>
		<p>Once you know the healthy factors or the harmful factors, you can correct those factors and so everything is healthy.</p>
		<p>Whoa because, it was a, it was a great experience. And then it would take effect in actually helping us and reminding us what we learned before. And keep us you know, learning a little bit more but it would just refresh what we already learned.</p>
<p>What were your reasons or motivations for participating in the STEPS program? Probe: What was that one thing that</p>	<p>Sisterhood; self-care; uplifting one another; collective celebration in individual successes</p>	<p>I think it provided an opportunity to be a commodity for Black women. Um, we as Black women, were busy. You know, we carry a lot of crosses. And uh, we're the minister of finance and information and organization and our children. And the where we make a break point, its always in within our own health and our own well-being. Um I had a cousin who encouraged me to come and so she has a weight a problem. So I came to keep her encouraged, and you know I have a weight problem too. But I didn't seem to be concerned about mine as she was about hers. But by coming with her, it it you know? We</p>



<p>Table 10 cont'd</p> <p>kept you coming back to STEPS?</p>	<p>gloried in each others success and she would say 'I lost 3 lbs. this week.' And I would say, 'Oh my gosh, I'm going to let you out do me.' So it was a way for us to build on each other successes and it gave us motivation to emulate. You know, if your in an environment with a bunch of people who never do anything. And they don't move anything then there no emphasis for you to do anything. But like when I was in college and everybody was you know, fitting in, trying to fix their hair, I took a little more time with those things so I could keep up. And so, you get away from that, after you grow up, have a family. Have a husband, have jobs, and all that kind of stuff. When you get, really time to take a break. You do not go to gym and so but STEPS was like the social interaction, the encouragement, the motivation and the opportunity.</p>
	<p>And also about me having this knee replacement, it kind of got me down a little bit. But going to STEPS, motivated me to keep me from having another knee replacement. Because I was due for another one but thank God I don't have to have it right yet. But like my husband was telling me, 'dog it seems like you get around better now than you ever got around.' And I mean I do. I can see me, I'll get out and rake my yard. I'll rake up the yard. I'll rake all the leaves around the house. He'll take the lawn mower and mow it up. And you know, I look forward to that. Like this one does everything, the whole works; the raking, the cutting te grass, and everything. Because she does she own yard. The I can't.' I don't use that around my house, I don't know the meaning of 'I can't.'</p>

## STEPS TO A HEALTHIER HEART



(**S**isters **T**ogether **E**mpowered for **P**revention and **S**uccess)

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