Moving Forward: A Weight Loss Intervention of African-American Breast Cancer Survivors

Melinda R. Stolley, Ph.D.
University of Illinois at Chicago
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Breast Cancer and AA Women

- African-American women exhibit higher breast cancer mortality rates than white women.

- African-American breast cancer survivors are more likely than white women to die from comorbid conditions.

- Poor diet, lack of regular physical activity and obesity contribute to breast cancer progression, as well as the development and exacerbation of comorbid conditions.
Obesity and Breast Cancer

- Obesity is associated with increased risk for BC progression and death, as well as all-cause and CVD mortality.

- Three possible mechanisms:
  - Produces higher concentrations of estrogen and testosterone
  - Contributes to Insulin resistance leading to increased levels of insulin-like growth factors (IGF-1) and insulin-like growth factor-binding protein (IGFBP-3)
  - Contributes to chronic inflammation
Diet, Physical Activity and Breast Cancer

- Diet and physical activity contribute to weight status.
- Inconsistent results from studies on diet and breast cancer.
- Consistent data from studies on PA and BC – decreased risk of mortality.
  - PA lowers body fat, thus impacting sex hormones, insulin resistance and inflammation
Weight Loss, Breast Cancer and AA Women

- 78.2% of AA women are overweight or obese.
- Most women gain weight as a result of their treatment for breast cancer.
- Randomized weight loss interventions have reported a number of positive outcomes (improved body composition and lipids, decreases in sex hormones, positive behavioral changes).
- All studies included samples that were predominantly white.
Moving Forward
Focus Group Study

- Based on a series of focus groups and feedback from AA BC survivors

- Motivation to Make Lifestyle Changes
  - Improve overall health (87.5%)
  - To feel better (87.5%)
  - To keep cancer from coming back (75%)
  - Other health problems like hypertension or diabetes (62.5%)
  - To lose weight (37.5%)
What Do African-American Women Want in Weight Loss Programs?

- Offer holistic and practical information.
- Address barriers:
  - family and social obligations,
  - lack of social support,
  - financial limitations,
  - pain,
  - failure to maintain weight loss, and
  - access to physical activity and healthy eating resources.
- Honor the importance of taste and role of food within the African-American culture.
- Incorporate spirituality and other sources of inspiration and motivation.
- Invite family and friends to participate as guests.
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Pilot Intervention Study

- Pre-post study design
- 24 African-American breast cancer survivors
- 6-month intervention (with 12 months maintenance)
  - 2x weekly classes with exercise
  - Cognitive behavioral strategies (self-monitoring, stimulus control) and hands on learning activities (grocery shopping; weighing out portions)
Moving Forward Pilot Intervention Study

Pilot study results
- 87% retention at 6 months
- 5.57 lbs weight loss
- significant reductions in dietary fat
- significant increases in vegetable intake
- significant increase in vigorous activity
- a trend observed for moderate activity
- significant increase in social support
Moving Forward Study Design

Recruitment (N=240)

Eligibility: AA, Stage I, II or III BC, Tx completed ≥6 mos, Age 18+, BMI ≥25kg/m², physically able to participate in moderate PA per PCP, Agreeable to randomization and program participation, not currently in a structured weight loss program

Baseline Interview, BP, Ht/Wt, Blood draw

Randomization

Weight Loss

General Health

Post-Intervention Interview, BP, Ht/Wt, Blood draw

6-Month Follow-Up Interview, BP, Ht/Wt, Blood draw
Theoretical Framework

- Intervention based on Social Cognitive Theory and Health Belief model
- Grounded within a socio-ecological framework
- Outcomes are mediated by individual, interpersonal and community-level factors: self-efficacy, social support, perceived access to health food and exercise resources
Community-Based Intervention

- Partnership with Chicago Park District
- Recruitment and program to be conducted in 5-6 neighborhoods
  - Austin, Englewood, Roseland, Grand Crossing, South Chicago, N. Lawndale
  - 40-60 women from each community area
- Recruitment strategies:
  - Postings at community venues (grocery stores, libraries, churches, clinics), door hangers
  - Presentations at BC support groups, churches, etc.
  - Consult with advisory committee on strategies and materials
Measures

- Demographics
- Medical Data
  - Breast cancer data (self-report and from oncologist)
  - Co-morbid conditions (modified cumulative illness rating scale)
- Outcomes:
  - Height/Weight, BMI, waist/hip circumference
  - Diet (Block brief FFQ, subset 24 hr recalls?)
  - Physical activity (Modified activity questionnaire?, subset accelerometer? Pedometers?)
Measures, contd.

- Outcomes, contd.
  - Biological markers:
    - Co-Morbid Conditions
      - Blood pressure (automatic cuffs?)
      - Lipids
      - Hemoglobin A1C
    - Breast Cancer
      - Sex hormones – estradiol, estrone, sex hormone binding globulin, testosterone
      - Insulin resistance – IGF-1, IGBP-3, leptin, C-peptide, + adiponectin?
      - Inflammation – C-Reactive protein
  - Psychosocial
    - Quality of Life – SF36, Fact-ES
    - Fatigue – FACT-F
    - Depression? PHQ-9
    - Body Image? See body image and relationships scale
Measures, contd.

- Mediators
  - Self-efficacy – TBD
  - Social Support – TBD
  - Perceived access to healthy eating and exercise resources (from Active Where study by Sallis and colleagues)
Treatment Intervention

- **6 months twice weekly**
  - Meeting 1 - 120 minutes information + exercise (w/ HR monitor)
  - Meeting 2 – 60 minutes exercise only (w/HR monitor)
  - Text messaging (details to be worked out) – 3 messages per week (2 personal, 1 resource oriented) to be contd until 6 month follow-up

- **20-30 women per group** (all receive a free 12-month membership)

- **Goals**
  - Lose 7% body weight, decrease daily caloric intake (-500 kcals), decrease dietary fat (20% of daily calories), increase F & V (7 per week) increase weekly PA (180 mins per week)
Control Intervention

- Held at CPD on different night
- 6 months, weekly (60 minutes)
- General health topics (lymphedema, BC risk, BC screening, meditation, stress management, stretching, etc. – ideas welcome!)
- All receive a 12-month free membership and program binder at the conclusion of the study
- ? 1-3 Weight loss sessions
Issues to Resolve

- Community areas
  - CPD sites

- Interview location and process
  - At individual homes, group health fairs at CPD or other community site, UIC
  - Blood, blood, blood!

- Intervention
  - Personnel (Angela and Melinda for cohort 1) and responsibilities; training CPD staff
  - Text messaging – exactly what are we going to do
Grocery Store Outing
Survivor Walk Before Baseball Game
Holiday Dinner
THANK YOU!