Award Number: DAMD 17-01-1-0458

TITLE: Developing a Training Program in Breast Cancer Research to Decrease the Disparity of Morbidity and Mortality in Underserved/Minority Women

PRINCIPAL INVESTIGATOR: Sylvia Flack

CONTRACTING ORGANIZATION: Winston-Salem State University
   Winston-Salem, NC 27110

REPORT DATE: October 2005

TYPE OF REPORT: Annual Summary

PREPARED FOR: U.S. Army Medical Research and Materiel Command
   Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;
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<td>Winston-Salem State University (WSSU) a designated Historically Black College and University (HBCU) is committed to resolving some of the economic, social and health problems in the community in which the university is located. Breast cancer deaths and complication occur disproportionately in minority women than majority women within this community. This proposal is designed to develop a sustainable breast cancer training program at WSSU. Four faculty post docs from the School of Health Sciences are developing research skills by engaging in breast cancer research with professors at Johns Hopkins University who are experts in this area. In order to accomplish this project an interdisciplinary committee of doctors, nurses, educators, researchers and professors who have engaged in breast cancer research led by the researchers from JHU, are guiding the faculty through this development. The objectives of this training program are to allow the trainees the opportunity to develop fundable research proposals, to conduct successful clinical research projects, and to publish and to train other WSSU researchers. The faculty post docs will be able to apply their knowledge to assist minority elderly women to learn how to discover signs of cancer before the cancer became hard to treat. The knowledge gained will allow these researchers to participate in the training of other researchers in the area of breast cancer. Consistent with year 3 objectives, the faculty post docs have attended several training activities, submitted research abstracts and grant applications, presented in scientific conferences, and are continuously designing the program for future WSSU researchers.</td>
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Standard Form 298 (Rev. 8-98)
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INTRODUCTION
This 4-year training program is designed to prepare four faculty members in the School of Health Sciences (SOHS) to conduct research in the area of breast cancer. The program is intended to lay the groundwork for additional faculty to engage in breast cancer research by enhancing the research infrastructure in the SOHS. The three faculty members currently involved in the program represent nursing, clinical laboratory sciences, and physical therapy. Each of these faculty members is paired with a mentor from Johns Hopkins University School of Nursing (JHUSON) who is conducting breast cancer research. The JHUSON mentors are co-investigators on the breast cancer projects. Four academicians and practitioners from Wake Forest University Baptist Medical Center (WFUBMC) who are involved in providing health care to breast cancer clients or in conducting breast cancer research serve as consultants. These consultants represent the disciplines of gerontology, epidemiology, geriatrics and oncology. Two faculty members at WSSU serve as advisors and consultants to the four faculty post docs. The project also includes a biostatistician, housed at JHUSON, and a research assistant housed at WSSU. These persons assist the three faculty members/post docs to meet the goals of the program. In addition, the research assistant assists in maintaining the research center at WSSU. The Principal Investigator, Dr. Sylvia Flack, has administrative oversight of the project.

BODY
The three post docs submitted several research abstracts and presented research at various cancer conferences. Two submitted proposals for grants and one was awarded a grant. Several formal and informal interactions between the mentors, the consultants, the advisors, the faculty post docs, and the trainees took place this year. They have taken place via e-mail, telephone conferences, and face-to-face meetings. Many changes have occurred including the departure from the institution of both participants from the occupational therapy department. Because of staffing problems the goals of the mentees to further develop research has not been met completely. Dr. Sylvia Flack, the PI of this project, has also had consistent interactions with those involved in the project. She and Dr. Fannie Gaston-Johannson, the co-investigator of the project from JHU, communicate at least monthly. There have been continuous interactions between all participants on the grant. Dr. Flack serves as a PACRE board member. The WSSU School of Health Sciences held a national conference, "Faces of a Healthy Future: A Conference to End Health Care Disparities." Dr. Flack served as the lead developer of this national conference. Several of the disparity presentation sessions were cancer related. The post docs submitted poster presentations depicting their work in Breast Cancer Research.
Develop and submit Grant Applications
The post docs have attended grant writing workshops and one received grant funding during this report year. One of the post docs was awarded a grant from the Piedmont Alliance for Cancer Research and Education (PACRE) "Breast Cancer Screening Adherence in older African American Women". This grant received funding in the amount of $25,000.

Design and Implement Breast Cancer Pilot Studies
In Phase 1 of the project, the four faculty post docs received approval on their pilot studies from the Interdisciplinary Team. Phase 2 called for the development of the project. Pilot studies have been designed and are in the implementation phase in correspondence with Phase 3. The following are the approved research questions along with the research design:
Pilot Study 1
Knowledge of Breast Cancer Tumor Marker Results as a Predictor of Emotional Distress

Research Question
Does Knowledge of Cancer Tumor Markers Predict Emotional Distress?

Research Model

Predictors
Knowledge of Breast Cancer Tumor Marker Results

Moderators/Mediators
Tumor Size
Tumor Stage
Metastasis
Treatment History and Type
General Health Status
Fatigue
Demographics

Outcomes
Stress
Depression
Anxiety
Coping
Pilot Study 2:
Research Question: What are the predictors of functional status in older minority women who have been treated for breast cancer?

Dependent Variable: Level Functional Status (physical, emotional, and social)
Independent Variables: Symptoms and Disease and Treatment (level of pain, fatigue, depression, anxiety, sleep, presence of lymphadema, stage of disease, type of treatment).

Research Model

- **Symptoms**
  - Pain
  - Fatigue
  - Depression
  - Anxiety
  - Sleep Disorder
  - Lymphadema

- **Disease and Treatment**
  - Stage of disease
  - Type Surgery
  - Chemotherapy
  - Radiation Therapy
  - Reconstructive Surgery

- **Moderators**
  - Social Support
  - Spiritual Well-Being
  - Coping Strategies
  - Rehab. Services

- **Functional Status**
  - Physical functioning
  - Psychosocial Functioning

- **Confounders**
  - Age
  - SES
  - Role Demands
  - Comorbidity
Pilot Study 3
Factors That Predict Elderly Women's Ability to Detect Breast Tumor Size

Research Question
What is the relationship between hand and upper extremity function, and tactile sensitivity of the fingers and the ability of elderly minority women to detect breast tumor size?

Research Model
Pilot Study 4

Breast Cancer Screening Adherence in Elderly Minority Women

Research Question
What are the relationships among stress, knowledge of BSE, coping, tumor size (cancer stage) and adherence to breast screening activities?

Research Model
Training Program for Future WSSU Researchers
As stated in last year's report, the training process has been initiated for future WSSU researchers. In year 2 of phase 2 of the project, the post docs had identified future researcher (trainees) in their respective areas. The two trainees who began worked with the post docs left the university during this year. The occupational therapy post doc and trainee both left the university. However, they were working on the design for a breast cancer project. The training process continues to experience delays. The delays are due to changes in staffing at the university. A shortage in faculty members continues to interfere with post docs' ability to identify and train future breast cancer researcher. Some faculty have been employed that will be suited for being trained in breast cancer research. This will help the post docs achieve this goal.

Interdisciplinary Team Meeting
On a yearly basis, the Interdisciplinary Team meets for updates, revisions, and to keep an overall consensus for the project. The faculty post docs also travel to Johns Hopkins to meet with their mentors yearly. These meetings allow the post docs to have one-on-one discussions with their mentors, to meet directly with the biostatistician and to collaborate with established cancer researchers from well-known organizations i.e. NIH and NINR. These meetings have allowed the post docs to prepare for publications and presentations at conferences.

Staffing Changes
Winston-Salem State University continues to incorporate research as an area of major focus. In doing this, several opportunities to advance in the research area are available. Several faculty with doctorates degrees have joined the School of Health Sciences faculty in the years 2004/05 and 2005/06.

The PI, Dr. Sylvia Flack, has been promoted to Special Assistant to the Chancellor. The new position requires commitments that will not allow time for her to continue work on the grant as PI. Dr. Bobbie Riddick has been a constant member of the post docs and has developed a very strong research agenda. She will be recommended to replace Dr. Flack.

Research Center
The research center continues to be housed in the SOHS' building. Resources for the research center are collected on a continuous basis. Books identifying potential funding sources and additional cancer related articles are continuously added to the center. The center is fully equipped with technology.

KEY RESEARCH ACCOMPLISHMENTS

Dr. Sylvia Flack, PI, lead developer of a national health disparities conference entitled "Faces of a Healthy Future:" A Conference to end Health Care Disparities. (600 + attendees) conference held September 27-26 2004.

Sits on the board of the Piedmont Alliance for Cancer Research and Education (PACRE).
Dr. Denny Ryman

Publications:


Presentations:
Dr. Denny Ryman presented a poster on breast cancer tumor markers at "Faces of a Healthy Future" National conference to end health disparities, Sept. 27-29 WS, NC

Conferences:


Mentoring:
Mentored Dr. Donna Bedard until her resignation August 2004.

Dr. Bobbie Reddick

Grants Funded:

Presentations:
Dr. Bobbie Reddick presented at "Faces of a Healthy Future" National conference to end health disparities, Sept. 27-29 WS, NC

Conferences Attended:
Dr. Bobbie Reddick presented at "Faces of a Healthy Future" National conference to end health disparities, Sept. 27-29 WS, NC


Article in Press:

Submission:

Dr. Radwan

Presentations:
Presented "e-care: Breast Cancer Education" in the Annual conference to Advance Health Education. Cairo, Egypt, June 20-28, 2005

Presented in the second annual conference of Graduate Health Education: "How to utilize Physical Therapy Graduate Students as Health Educators to prevent Breast Cancer"

Conferences:
Attended The 7th Milan Breast Cancer Conference, Milan, Italy June 15-17th, 2005.

Submissions:
Submitted a Grant to the United Negro College Fund Special Program, UNCFSNP/NLM-HBCU ACESS Project Grants Program. The title was "e-Health Care Project" with the amount of $23,693.00. Status (Pending).

REPORTABLE OUTCOMES
Two post docs have completed goals with the exception of developing mentees.
One post doc completed all goals except pilot study and developing mentees.
One post doc completed background for pilot study (occupational therapy)
Publications:
   Dr. Ryman Two publications and two in review
   Dr. Bobbie Reddick one publication and one in review

Presentations:
   Dr. Ryman one presentation:
   Dr. Bobbie Reddick two presentations
   Dr. Rodwan two presentations

Grants Submission:
   Dr. Reddick awarded one grant
   Dr. Rodwan submitted one grant

Conferences:
   Dr. Rodwan one conference
   Dr. Ryman three conferences
   Dr. Reddick four conferences

Research Lab:
   Equipped with technology
   Material used for breast cancer research.