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GRANT NO: DAMD17-94-J-4178

TITLE: Predoctoral Research Training Program in Biopsychosocial Aspects of Breast Cancer

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CONTRACTING ORGANIZATION: University of Kentucky Research Foundation
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REPORT DATE: August 15, 1995

19951018 157

TYPE OF REPORT: Annual Report

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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REPORT DOCUMENTATION PAGE

Form Approved
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Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 8-15-95	3. REPORT TYPE AND DATES COVERED Annual 15 Aug 94 - 14 Aug 95
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4. TITLE AND SUBTITLE Predoctoral Research Training Program in Biopsychosocial Aspects of Breast Cancer	5. FUNDING NUMBERS DAMD17-94-J-4178
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6. AUTHOR(S) Michael A. Andrykowski, Ph.D.	
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) University of Kentucky Research Foundation Lexington, Kentucky 40506-0057	8. PERFORMING ORGANIZATION REPORT NUMBER
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9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012	10. SPONSORING/MONITORING AGENCY REPORT NUMBER
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11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited	12b. DISTRIBUTION CODE
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13. ABSTRACT (Maximum 200 words)
This report summarizes activities and accomplishments during the first year of a four year predoctoral research training program in biopsychosocial aspects of breast cancer. Two predoctoral trainees were appointed during the initial year of the training program. Research training was provided by a multidisciplinary faculty of six. A monthly meeting of program trainees and faculty was established to facilitate oversight of trainee research activities and discussion of breast-cancer related research. Trainees participated in a variety of group and individual research projects related to breast cancer under the supervision of program faculty. Trainees participated in all phases of the research enterprise including protocol development, obtaining approval for use of human subjects, data collection, data preparation, entry, and analysis, and manuscript preparation. While all research activities during the initial year of the training program involved patients seen at a Multidisciplinary Breast Care Center, efforts are ongoing to expand research opportunities to include projects involving women undergoing autologous bone marrow transplant for breast cancer as well as healthy women receiving counseling for breast cancer risk.

14. SUBJECT TERMS Oncology, Breast Cancer, Research Training, Psychosocial, Behavioral	15. NUMBER OF PAGES 7
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited
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Michael Andrew Paul 8-8-95
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5. INTRODUCTION

High quality research investigating various psychosocial and behavioral aspects of breast cancer has the potential to reduce breast cancer-related mortality as well as improve quality of life following breast cancer. Critical to the performance of high quality research in this area is the recruitment and training of new researchers. This report summarizes activities and accomplishments during the first year of a four year predoctoral research training program in biopsychosocial aspects of breast cancer. The training program is centered in the Department of Behavioral Science, a basic science department in the University of Kentucky College of Medicine. A training faculty of six is drawn from three academic units within the College of Medicine (Behavioral Science, Medicine-Hematology/Oncology, and Nursing).

6. BODY

The research training program was initiated on August 15, 1994 and two predoctoral trainees were appointed to one year terms as of that date. Both of the predoctoral trainees appointed during the first year already possessed Masters degrees in their respective fields and were pursuing doctoral studies in the Graduate School at the University of Kentucky. Both of the trainees during the first project year, Shelly Curran, a doctoral candidate in clinical psychology, and Janet Carpenter, a doctoral candidate in Nursing, already possessed some prior research and clinical experience in oncology settings. Funding from the training program grant provided for both a monthly stipend as well as annual tuition for both trainees.

The training program consists of six basic components: (1) training in research design, methods, and analysis; (2) supervised experience in breast cancer-related research; (3) training in the responsible (i.e., ethical) conduct of research; (4) enculturation to the breast cancer care environment; (5) tutorial in biopsychosocial research in breast cancer; and (6) graduate level coursework. Each of these components was effectively implemented during the initial year of the training program.

A monthly meeting of the training program faculty and predoctoral trainees was established. Other faculty and graduate students interested in biopsychosocial breast cancer research were also invited to attend on an ad hoc basis. This meeting lasted for roughly 75-90 minutes each month. This meeting provided: (a) an opportunity for all members of the training program to keep abreast of the research activities of the two trainees; (b) a forum for training faculty and trainees to discuss recent and ongoing research in biopsychosocial aspects of breast cancer; and (c) an opportunity for faculty and trainees to discuss ideas leading to the development of new breast-cancer related research projects at the University of Kentucky.

During the first year of the training program, both research trainees were actively involved in specific research projects under the supervision of training program faculty. These "communal" research projects included: (a) a comparison of psychological adjustment and quality of life in women with breast cancer and

age-matched women with benign breast problems; (b) an investigation of symptoms of post-traumatic stress disorder (PTSD) in women previously treated for early-stage breast cancer; (c) an investigation of self-reported symptoms of postchemotherapy rheumatism following adjuvant chemotherapy for breast cancer; and (d) investigation of breast cancer risk perceptions, "objective" risk, and breast cancer detection behavior in women with benign breast disease. Trainee involvement in these communal research projects ranged across all phases of the research enterprise including research protocol development, preparation of requests for approval for use of human subjects, data collection, data preparation, entry, and analysis, and finally manuscript preparation.

In addition to the communal research projects cited above, both of the trainees developed and implemented their own research project. In both cases, this research project serves as the research dissertation necessary to meet requirements for their doctoral studies. Again, each of these individual dissertation research projects are being conducted under the supervision of training program faculty with at least two members of the training program faculty serving as dissertation committee chairperson and/or members for each trainee. Shelly Curran's dissertation is a multidimensional investigation of the experience of fatigue following treatment for breast cancer. Identical data is collected from age-matched comparison groups of healthy women and women with benign breast problems. Janet Carpenter's dissertation is a detailed assessment of changes in self-concept and self-esteem following treatment for breast cancer. Identical data is collected from an age-matched comparison group of healthy women. Again, trainees have assumed full responsibility for all aspects of the development and implementation of these research projects, thus providing them with supervised experience in all aspects of the research endeavor.

Each of the communal research projects, as well as the individual dissertation research projects described above, have utilized women treated for breast cancer or benign breast problems at the Multidisciplinary Breast Care Center at the University of Kentucky Chandler Medical Center. In order to identify and enroll study eligible women, trainees have been required to work closely with the breast surgeons and medical oncologists caring for these women at the Breast Care Center. This has resulted in both trainees spending considerable time in the Breast Care Center, thus becoming very familiar with the milieu and culture in which breast cancer treatment is embedded.

During the early spring of 1995, recruitment of additional predoctoral research trainees to be appointed for the second year of the training program commenced. Janet Carpenter was reappointed to a second year of training beginning August 15, 1995. Shelly Curran completed her studies and left on August 14, 1995 to begin a one-year clinical internship at the University of Pittsburgh Western Psychiatric Institute. In addition, a third trainee position is funded for the second year of the training program. Thus, availability of two one-year predoctoral research trainee positions was advertised throughout both the medical center and main campuses at the University of Kentucky. A total of 10 completed applications were received. These 10 applications spanned a variety of disciplines including Nursing, Geography, Anthropology, and various subdisciplines of Psychology including counseling, clinical, and social psychology. Following review of the entire pool of applicants by the training faculty two individuals were offered training positions for the second year of

the training program. Both Lauren Cunningham, a doctoral candidate in Clinical Psychology, and Robin Schlarmann, a doctoral candidate in Social Psychology accepted these offers of appointment. They began their appointments on July 1, 1995 and joined Janet Carpenter to form a very solid group of three trainees for the second year of the training program.

7. CONCLUSIONS

Each of the six components of the research training program were effectively implemented during the first year of the training program. Both trainees received supervised, "hands on" experience in all aspects of conducting biopsychosocial breast cancer-related research. In addition, both trainees had the opportunity to participate in a variety of specific research projects, thus increasing the breadth of their experience. Finally, both trainees had the opportunity for extensive interaction with both patients and health providers in the breast cancer care setting.

During the second year of the project, it is hoped that the breadth of research activities available to trainees will be expanded. Research activities during the first year revolved primarily around patient populations from the Multidisciplinary Breast Care Center at the University of Kentucky Chandler Medical Center. Plans are ongoing to develop research projects utilizing women undergoing autologous bone marrow transplantation. We are also working to develop research projects revolving around counseling for breast cancer risk, including hereditary risk for breast cancer, in healthy women. Finally, we are working to extend research training activities to include additional biological endpoints such as immune functioning or cardiovascular regulation.

8. REFERENCES

None.

9. APPENDIX

No publications have resulted directly from training program research activities at the time of this writing. However, several manuscripts are presently under preparation or review. These will be identified in future annual reports should they be accepted for publication.