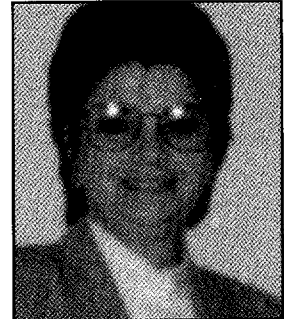


The Relationship of Social Support to Women's Obtaining Mammography Screening

Susan Fite MSN, ARNP
Senior Vice President of
Geriatric Services
Tallahassee Memorial
Regional Medical Center
Tallahassee, Florida

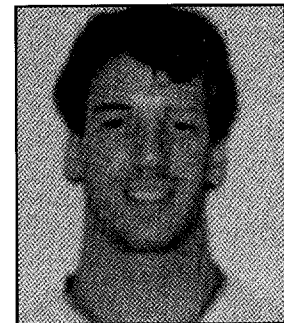


Deborah I. Frank ARNP, PhD
Professor and Graduate
Program Coordinator
Florida State University
School of Nursing
Tallahassee, Florida



This study examined the relationship between social support and obtaining mammography screening. Fifty women, half of whom had undergone mammography, were matched for age and ethnicity and interviewed related to perception of their social support networks. Results revealed a significant difference in the levels of social support and mammography screening. Women who had undergone mammography perceived a higher level of social support than those who had not. Parse's Theory of Human Becoming was used as a framework to discuss nursing implications of the findings.

John Curtin MS
Department of Psychology
Florida State University
Tallahassee, Florida



The incidence of breast cancer in the United States has increased approximately 2% each year since 1980 (*Cancer Facts & Figures*, 1994). The major increase has been in the detection of tumors in early stage or of small size (Miller, Feuer, & Hankey, 1993). Mammography has been demonstrated to be an effective diagnostic tool for early detection of tumors, with improved survival rates (Hamwi, 1990; Remington & Lantz, 1992; Strax, 1989).

In order for tumors to be identified at an early stage, it is critical that screening procedures be employed. The 1994 recommendations from the American Cancer Society (ACS) state that women over the age of 20 should perform routine self breast examinations and that women age 20 to 40 should have clinical breast examinations at least every 3 years. After age 40, clinical breast examinations are recommended yearly (*Cancer Facts & Figures*, 1994). The ACS further recommends that all women have a baseline mammogram by age 40, then an additional mammogram every 2 years between the ages of 40 and 49 and yearly over the age of 49.

While the number of women reporting that they had undergone at least one mammogram in their life-

Address correspondence to Susan Fite, MSN, ARNP, Tallahassee Memorial Regional Medical Center, 1617 Physicians Drive, Tallahassee, FL 32308.

time increased from 62% in 1990 to 74% in 1992 (*Cancer Risk Report*, 1992), it is still important to identify factors that support or discourage women from obtaining mammograms based on ACS guidelines. This area of research is ongoing and includes investigation of a wide range of variables, including biologic and environmental factors, ethnicity, and the role of the social support network of the woman. Utilizing the theories of Parse (1981) and Bandura (1986), the current study examined the role that perceived social support plays in mammogram decisions made by women.

Social support was defined in this study as a woman's interaction with the environment and/or people who influence the attainment of an outcome (Friedman, 1992). The concept of social support is not solely confined to interactions with family. Influences from friends, role models, health care providers, such as physicians and nurse practitioners, educational institutions, and peer groups may be considered to be examples of social support.

The theories of Parse (1981) and Bandura (1986) ascribe to the beliefs that people are in continuous interaction with their environments, that is, the person and the environment each influence/shape the reaction of the other. According to Bandura (1986), all inputs from the environment are filtered through each person's internal belief system. Parse (1981) feels that these entities are inseparable and that there is a unity between man/woman and the environment. In this context, knowledge of person/environmental interactions can assist the nurse practitioner to assess the impact on particular behaviors of a patient. Thus, by understanding the role social support plays in a woman's decision to undergo mammography, nurse practitioners can design interventions that will foster and enhance this influence as a positive motivation for women to obtain mammography screening.

LITERATURE REVIEW

A review of the literature reveals only a small number of studies investigating the use of social support to increase willingness to undertake mammography screening. Suarez (1994) reported a positive correlation between support of cancer screening by family and a woman's willingness to obtain mammography. Encouragement of family, friends, and spouse has been reported to positively influence the decision to obtain mammograms (Kruse & Phillips, 1987). Also, being married or cohabiting has been associated with a woman's increased likelihood of obtaining a mammogram (Bastani, Marchus, & Hollatz-Brown, 1991).

When physicians are perceived as part of the social support system, the likelihood for women to obtain mammograms is increased. Studies conducted by Hamwi (1990), Kruse and Phillips (1987), Rimer, Keintz, Kessler, Engstrom, and Rosan (1989), Sienko, Osuch, Garlinghouse, Rakowski, and Given (1992), and Stein, Fox, Murata, and Morisky (1992) found increased rates of mammography screening associated with physician referral. Zapka, Stoddard, Costanza, and Greene (1989) found that when asked, 83% of women stated they would have a mammogram if their physician recommended it. A study by Taplin, Anderman, Grothaus, Curry, and Montano (1994) found that sending a postcard showing physician support of mammography nearly doubled the odds that a woman would obtain a mammogram within 1 year.

The encouragement, by employers, of mammography is another influential social support. A study by Kurtz, Kurtz, Given, and Given (1994) found that when information regarding mammography was distributed at the work site, the number of women who obtained a mammogram increased.

Not all studies agree that social support factors into a woman's decision to obtain a mammogram. Bastani et al. (1991) concluded that "it was not entirely clear that attitudes influence behavior, or whether, in fact, receiving a mammogram influences one's attitudes" (p. 361). These authors suggest that further research is needed to clarify the temporal relationships between attitudes toward mammography and acts of obtaining mammograms. In an attempt to develop a model that would predict a woman's compliance with mammography, Montano and Taplin (1991) found perceived social influence was not significant.

METHODS

In compliance with the rules and approval of the Human Subjects Committee of Florida State University, 50 women age 35 and older were recruited through a newspaper advertisement that asked women to talk with the investigators about their health practices. Subjects were paid \$10 for their participation in the semistructured interview. Demographic information including age, race, education, occupation, income, and marital status was obtained from each subject, along with answers to questions related to social support and feelings about mammography (see Table 1). Twenty-five of the subjects had had at least one mammogram in their lifetime. The mean age for those who had had mammograms was 49.4 and the mean age of those who had not had mammograms was 51.4. There was an even distribution of African American

and Caucasian women in each group (22 were Caucasian and 28 were African American).

RESULTS

Chi-square analyses were used to compare women who had had mammograms with those who had not had mammograms. Controlling for all other measured demographic characteristics, the two groups differed significantly in marital status [$\chi^2(4) = 9.88, p < .043$], with a larger number of married women reporting that they had had a mammogram.

A significantly higher number of women who had had a mammogram reported discussing mammography with a health care provider (HCP). The results of the chi-square analysis [$\chi^2(1) = 15.99, p < .001$] demonstrated a strong relationship between discussing mammography with an HCP and having a mammogram. In addition, significantly more women obtained mammograms if they perceived that their HCPs were supportive of mammography [$\chi^2(4) = 16.95, p < .005$].

Controlling for all other variables, no significant differences were found between groups relating to composition of household or relationship of the person with whom the woman perceived the closest relationship (CR) in the household. The two groups did differ significantly in relation to the attitude of the CR toward mammography. Women who reported that they had had a mammogram reported more often that they had support from their CR than did those who had not had a mammogram [$\chi^2(4) = 9.47, p < .05$]. In addition, a higher percentage of women who had had mammograms reported that they were asked about their mammogram by their CR [$\chi^2(1) = 7.69, p < .05$]. These findings were confirmed through logistic regression analysis at the .05 level of significance.

DISCUSSION AND IMPLICATIONS

The data from this study described a significant relationship between social support and obtaining a mammogram. Results from the sample indicated that women who had undergone mammography were more likely to be married and asked by their CR about mammography, and were more likely to have discussed mammography with an HCP. The latter findings support similar findings in studies conducted by Kruse and Phillips (1987) and Rimer et al. (1989).

The significantly greater support from CRs among those women who had undergone mammography compared to those who had not can be appreciated by applying the concepts of Bandura's Social Cognitive Theory

TABLE 1.
DEMOGRAPHICS

	Mammogram	No Mammogram
Average age	49.4 years	51.4 years
Education	83.4% completed high school or higher	50.0% completed high school or higher
Occupation	100% managerial or technical positions	57.7% managerial or technical positions
Marital status	0% never married	15.4% never married
Income	70.8% = >\$30,000	26.9% = >\$30,000
Caucasian	n = 13	n = 15
African American	n = 11	n = 11

(SCT). The SCT change process "...occurs within a network of social influences" (Bandura, 1986, p. 179). Thus, when a woman is in an environment that supports mammography, it is more likely that she will have a mammogram. According to SCT, when people are presented with information, they freely choose whether or not to act on that information. The likelihood that the information will be acted on is in part determined by the feedback from the social support network (Bandura, 1986). Therefore, if a woman's social support network favors mammography, the woman will receive these messages, filter them through her own personally held beliefs, and then decide whether to act on them.

The influence of social support is also recognized in Parse's Theory of Human Becoming. Parse states that man/woman and the environment exist simultaneously, each cocreating the other. Therefore, if a woman enters into an environment providing support for mammography, it is more likely the woman will act positively in this regard.

While the limited sample of this study may not render these findings widely universal, the significance levels attained in this sample provide information to be considered by nurse practitioners. In light of the significant risk of breast cancer in a woman's life, it is important that information regarding the benefits of mammography be provided to all persons. Nurse practitioners need to be cognizant of the important impact they can have in providing social support to women who come to them as patients.

Parse (1981) stated that a nurse must establish a true presence with the person when providing nursing care. Through this process, emphasis is placed on the human interactions, with the nurse valuing what the woman believes and assisting her in freely choosing her health. To use Parse's theory in practice, what is valued by the woman must be recognized, then the nurse can help to explore new ways of being, allowing the woman to obtain her goal of health. The nurse practitioner could help a woman to know the positive effect of mammography and how that helps the woman obtain what is valued by her.

TABLE 2.
GROUP DIFFERENCES ON SOCIAL SUPPORT VARIABLES

Variable	Had Mammogram	Did Not Have Mammogram	Statistic (d.f.)	p Value
With whom do you live?			$\chi^2(3) = 6.32$	0.097
Alone	25.0%	23.1%		
Husband only	33.3%	19.2%		
Husband and children	37.5%	26.9%		
Other relatives	4.2%	30.8%		
With whom are you closest?			$\chi^2(5) = 6.32$	0.125
Husband	66.7%	38.5%		
Mother	12.5%	7.7%		
Daughter	8.3%	23.1%		
Son	8.3%	11.5%		
Other family member	0.0%	15.4%		
Other	0.0%	3.8%		
How does this person (closest relationship) feel about mammography?			$\chi^2(4) = 9.47$	0.050
Strongly supportive	34.8%	24.0%		
Supportive	56.5%	52.0%		
Neutral	0.0%	8.0%		
Negative	0.0%	4.0%		
Haven't discussed	8.7%	36.0%		
Has this person (closest relationship) asked you about mammography?	62.5%	23.1%	$\chi^2(1) = 7.69$	0.005
If they (closest relationship) asked, what did they ask?			$\chi^2(1) = 5.93$	0.015
Asked if you went	20.0%	80.0%		
Asked about outcome	80.0%	20.0%		
Has health care provider (HCP) discussed mammography?	83.3%	26.9%	$\chi^2(1) = 15.99$	0.001
How does HCP feel about mammography?			$\chi^2(4) = 16.95$	0.002
Strongly supportive	62.5%	15.4%		
Supportive	33.3%	34.6%		
Neutral	4.2%	23.1%		
Negative	0.0%	0.0%		
Don't know	0.0%	19.2%		
Don't have HCP	0.0%	7.7%		
Has anyone else asked you about mammography?	54.2%	34.6%	$\chi^2(1) = 1.94$	0.164
Has anyone else encouraged you to obtain a mammogram?	25.0%	19.2%	$\chi^2(1) = 0.24$	0.623

For instance, if a woman dreams of being a mother to her children and a grandmother to her grandchildren, the nurse practitioner can help her understand how mammography would support that goal.

It is important for the nurse practitioner to understand and communicate the benefits of mammography. Nurse practitioners are in the unique position of practicing from a holistic model, especially in the primary care setting where they can explore with a woman

the perceived barriers to compliance and assist in making more informed health choices. In utilizing a holistic approach to health care, the nurse practitioner is aware of the influences that a woman's social support has on health care decisions. In that light, educating friends and family members on the importance of support to women considering mammography may increase motivation, decrease anxiety, and influence decisions to obtain mammograms.

SUMMARY

Breast cancer continues to be one of the leading causes of cancer among women. While there has been no effective cure for the disease, early detection of tumors when they are small and locally contained has promoted longer survival rates. Mammography has been shown to be an effective tool to detect tumors at an early stage. It is therefore imperative that nurse practitioners understand what factors assist in motivating women to obtain mammograms.

This study examined the relationship between social support and women's obtaining mammograms. Higher levels of social support appeared to have a positive influence on obtaining mammograms among women in this study. These findings are consistent with the results of earlier studies. However, understanding the influence of social support on obtaining mammograms is only the first step. Nurse practitioners need to design intervention programs to enhance social support that test these assumptions. Through the application and understanding of social support factors, nurse practitioners can promote obtaining mammograms to ensure tumor detection at an earlier stage. This detection may provide the only viable defense in combating breast cancer until a cure can be developed.

References

- American Cancer Society. *Cancer facts & figures—1994*. (1994). Atlanta, GA: American Cancer Society.
- American Cancer Society. *Cancer risk report: Prevention and control—1992*. (1992). Atlanta, GA: American Cancer Society.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bastani, R., Marchus, A. C., & Hollatz-Brown, A. (1991). Screening mammography rates and barriers to use: A Los Angeles County survey. *Preventive Medicine, 20*, 350–363.
- Friedman, M. (1992). *Family nursing theory and practice* (3rd ed.). Norwalk, CT: Appleton & Lange.
- Hamwi, D. A. (1990). Screening mammography: Increasing the effort toward breast cancer detection. *Nurse Practitioner, 15*, 27–32.
- Kruse, J., & Phillips, D. M. (1987). Factors influencing women's decision to undergo mammography. *Obstetrics & Gynecology, 70*, 744–748.
- Kurtz, M. E., Kurtz, J. C., Given, B., & Given, C. C. (1994). Promotion of breast cancer screening in a work force population. *Health Care Women International, 15*, 31–42.
- Miller, B. A., Feuer, E. J., & Hankey, B. F. (1993). Recent incidence trends for breast cancer in women and the relevance of early detection: An update. *CA—A Cancer Journal for Clinicians, 43*, 26–40.
- Montano, D. E., & Taplin, S. H. (1991). A test of an expanded theory of reasoned action to predict mammography participation. *Social Science Medicine, 32*(6), 733–741.
- Parse, R. R. (1981). *Man—living—health: A theory of nursing*. New York: John Wiley.
- Remington, P. L., & Lantz, P. M. (1992). Using a population-based reporting system to evaluate a breast cancer detection and awareness program. *CA—A Cancer Journal for Clinicians, 42*, 367–371.
- Rimer, B. K., Keintz, M. K., Kessler, H. B., Engstrom, P. F., & Rosan, J. R. (1989). Why women resist screening mammography: Patient-related barriers. *Radiology, 172*, 243–246.
- Sienko, D. G., Osuch, J. R., Garlinghouse, C., Rakowski, V., & Given, B. (1992). The design and implementation of a community breast cancer screening project. *CA—A Cancer Journal for Clinicians, 42*, 163–177.
- Stein, J. A., Fox, S. A., Murata, P. J., & Morisky, D. E. (1992). Mammography usage and the health belief mode. *Health Education Quarterly, 19*(4), 447–462.
- Strax, P. (1989). The Health Insurance Plan of New York Study: Clinical aspects. *Cancer, 64*(Suppl.), 2641–2645.
- Suarez, L. (1994). Pap smear and mammogram screening in Mexican-American women: The effects of acculturation. *American Journal of Public Health, 84*(5), 742–746.
- Taplin, S. H., Anderman, C., Grothaus, L., Curry, S., & Montano, D. (1994). Using physician correspondence and postcard reminders to promote mammography use. *American Journal of Public Health, 84*(5), 571–574.
- Zapka, J. G., Stoddard, A. M., Constanza, M. E., & Greene, H. L. (1989). Breast cancer screening by mammography: Utilization and associated factors. *American Journal of Public Health, 79*, 1499–1502.