

# Perceptions of postmastectomy patients. Part II

## Social support and attitudes towards mastectomy

Betty L. Feather, Ph.D., and Jean M. Wainstock, R.N., M.S.N.

*To measure the relationships among social support, attitudes toward mastectomy, and self-esteem in women postmastectomy, the Mastectomy Attitude Scale (MAS), the Norbeck Social Support Questionnaire (NSSQ), and Rosenberg's Self-Esteem Scale (RSE) were used. A factor analysis of the MAS yielded six factors that were used in regression analyses. Stepwise regression was used to identify variables that significantly contributed to women's self-esteem. Covariates in the analyses were age, years of education, marital status, and adjuvant chemotherapy. The women ( $n = 456$ ) averaged 54 years in age, had slightly more than a high school education (mean = 13.0 years), and were predominately married (80%); almost half had adjuvant chemotherapy (45.6%). The overall regression model was significant ( $df = 16,440$ ;  $F = 15.12$ ,  $p < 0.0001$ ) and accounted for 35.5% of*

*the variance. Seven of the 16 variables were significant accounting for the following percentages of variance: sexuality, 21.1%; outlook, 5.8%, appearance satisfaction, 3.1%; emotions, 1.3%; college education, 1.2%; adjuvant chemotherapy, 0.6%; and age (60-69), 0.6%. Thus, women's attitudes toward mastectomy accounted for a greater proportion of the variance in their self-esteem than did social support and other demographic variables.*

**Key Words:** Attitudes toward mastectomy—Breast cancer and self-esteem—Mastectomy and self-esteem—Social support and mastectomy.

In part I of this study, significant relationships were reported women's age, marital status, and education with perceived social support. Social support increased with advancing age, but social network size (mean = 8.1) decreased (1). Married and widowed women reported greater amounts of aid than women who were divorced or never married. Women who had less than a high school education perceived greater emotional support than women with more than a high school education. There was no indication that greater numbers of network providers were associated with increased social support.

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Betty L. Feather is a Professor of Textile and Apparel Management, University of Missouri-Columbia, Columbia, Missouri.

Jean M. Wainstock is a Surgical Oncology Clinical Nurse Specialist, Ellis Fischel State Cancer Center, Columbia, Missouri.

Address correspondence and reprint requests to Dr. B. L. Feather, 122 Stanley Hall, University of Missouri-Columbia, Columbia, MO 65211.

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The major purposes of this article are to report women's attitudes toward their mastectomy, the specific relationships between attitude factors and social support components, the relationships of social network providers to women's attitudes toward mastectomy, and the significant demographic variables, attitude factors, and social support components that relate to women's self-esteem postmastectomy.

### SELF-ESTEEM

The appreciation of one's physical body has a profound effect on self-concept and self-esteem. Derogatis (1a) indicated that self-concept does not arise purely from self-perceptions but that the "reflected perceptions" of others play a very significant role in shaping a person's self-appraisals. These important others broadly include one's social support system, which has been identified consistently as a factor associated with the quality of psychological adjustment to illness (2-4).

Within the symbolic interaction framework, individuals develop a sense of self through interaction with significant others from childhood throughout life. Through interaction with others, the image and evaluations change (5,6). Self-esteem is the sum total of all that a person feels about herself (7). It is a dynamic concept that changes from positive to negative and back again. Rosenberg (8) suggested that self-esteem is an attitude that can be measured and has two connotations, either "very good" or "good enough." In the latter case, the woman respects herself, considers herself worthy, but does not necessarily consider herself better than others.

Adjustment to major illness can have a significant impact on self-concept from the perspectives of adjusting to the disease and accepting the change of self or loss of a body part (9). Cantor (10) said, "Cancer and cancer treatment almost always assault the private self-image that sustains a person's self-esteem . . ." Losing control of one's life and body is probably the biggest threat to a cancer patient's sense of competence. This experience can lead to diminished personal competence and loss of self-esteem.

Self-concept is usually highly dependent on a woman's satisfaction with her body and her sense of sexual adequacy; the loss or disfigurement of a significant body part almost always involves a major blow to self-esteem (11,12). Visual or perceptual change in the breast affects the woman's perception of her "self" as well as her physical being (13).

### ATTITUDES TOWARD MASTECTOMY

The breast cancer patient's attitudes and expectations regarding her adjustment to mastectomy are important variables related to her psychological outcome and self-esteem. Attitudes are personal evaluations of an object or symbol in a positive or negative manner that guide and direct overt behaviors (14). Attitudes toward mastectomy are expressed evaluations of the significance of the breasts, feelings about potential loss of a breast, and meanings associated with breast cancer and mastectomy.

### WOMEN'S FEELINGS ABOUT THEIR BODIES

Actual or perceived changes in the body may impact on the physical or psychological self. Secord and Jourard (12) confirmed that feelings about the body are commensurate with feelings about the self and noted that low body-cathexis (the degree of feeling satisfied with the body) was associated with anxiety and insecurity. Compared with women who have undergone limited surgical procedures for breast cancer, women who have had total mastectomy tend to have less intact perceptions of body boundaries and experience a greater reduction in body satisfaction (15).

Some women postmastectomy are concerned about their interactions with others following the loss of a significant body part. Schain (16) noted that women may fear rejection from friends and/or spouse, in part due to society's values and emphasis on breasts as symbols of sexuality and nurturance. Peters-Golden (17) observed that both having cancer and losing a breast can affect interaction with significant others. Positive interaction can maintain or improve one's self-concept and sense of control over the illness situation (18,19).

### SEXUALITY CONCERNS OF POST-MASTECTOMY WOMEN

Breast loss has been linked to a decline in self-image as well as to impairment of sexual identity (20). Wellisch (21) reported that patients who underwent breast-conserving surgery felt significantly more sexually desirable and thought that their bodies looked as good as prior to surgery. The frequency of sexual relations correlated directly with the wife's rating of her perceived femininity.

One of the most pervasive assumptions about mastectomy is that it has profound negative effects on sexual relationships (22). Between 20–40% of married couples express concerns about sexual adjustment related to breast cancer (23). Several researchers have observed that the type and quality of support by the spouse is heavily determined by the quality of the relationship prior to the breast cancer (2,3,22,24–26). Woods and Earp (26) explained that women who were very satisfied with their sexual relationships were those who felt they could confide in their husbands and who perceived their husbands as understanding their needs and problems.

### EMOTIONAL CONCERNS OF WOMEN POSTMASTECTOMY

The breast cancer patient is strongly influenced by attitudes that significant others exhibit toward the disease (27). Surveys from the National Cancer Institute (28) reveal that both men and women perceived breast cancer as the most serious type of cancer for women, with breast cancer viewed as synonymous with breast loss. In fact, 31% of healthy persons said they would tell no one if they had cancer, and 58% would name only one person whom they would tell (17). Others (29) have reported that women who were vulnerable to poorer emotional outcome postmastectomy would be those who have lower expectations of good-quality social support.

Women indicate a variety of emotional concerns following mastectomy: depression, anxiety, isolation, worry about recurrence, and the effects of disfigurement. Bloom et al. (30) noted that postmastectomy, women experience moderate psychological distress and disruption in their everyday lives, and that this level of distress continues for over a year after surgery. For women with stage II cancer, the levels of distress were greater. Taylor et al. (31) reported that poor prognosis and more radical surgery were predictors of poor psychological adjustment; they indicated that these were mediated in sexual and affectional patterns of marriage.

Mastectomy can assume a positive connotation when it is believed to be a life-saving procedure. Heyl (32) found that women who had mastectomies had more favorable attitudes toward mastectomy than healthy women. Furthermore, healthy women tended to emphasize breast loss more than cancer, compared with mastectomy patients (17).

The knowledge and attitudes of healthy support

persons affected their interactions with breast cancer patients (18,19). When disease-free support persons have negative feelings and attitudes related to the breast cancer patient, they evidenced this by avoidance of the patient; lack of open, honest communication with the patient; and lack of congruence between verbal and nonverbal cues (19). Theoretically, this fairly consistent rejection and negative feedback could cause the patient to feel worthless and unloved. The patient's need for social validation and support could be overwhelming. Over time, the patient internalizes the views she perceives others to hold, which could affect her self-esteem (6).

### METHOD

#### Background

Data for this article were collected as part of a comprehensive study focusing on the educational needs, social support, and self-esteem of women postmastectomy. A 10-page questionnaire was sent to 2,000 women who had had surgery within the past 24 months and had received a Reach to Recovery visit. Of these women, a total of 979 returned the questionnaires. (See part I for a more complete description of the survey method and demographic characteristics.)

#### Measurement of variables

##### *Self-esteem*

Rosenberg's Self-Esteem Scale (RSE) was selected because it has been identified as one of the five best instruments to measure the self-acceptance aspect of self-esteem (33). The RSE (8) consists of 10 items in easily understood, brief statements. A four-point scale, strongly disagree to strongly agree, is used to respond to the items.

##### *Social Support*

The Norbeck Social Support Questionnaire was used to measure multiple dimensions of social support and was described in part I (34).

##### *Attitudes*

Heyl (32) developed the Mastectomy Attitude Scale (MAS) to assess women's attitudes toward mastectomy. She surveyed women with and without breast cancer. In this study, the MAS was modified by eliminating two items and rewording items to apply specifically to women postmastectomy.

### Demographics

In part I, age was treated both as a continuous and a categorical variable (1); in part II, age is treated as a categorical variable with four divisions: less than 50, 50–59, 60–69, and 70 and over. Education was designated as less than 12 years, high school graduate, 13–16 years, and more than 16 years. Marital status had a dichotomous division: “married,” which included currently married (as well as women who lived with a mate but were not married) and widowed, and “not married,” which included divorced or never-married women. The rationale for the marital status categories was presented in part I. Adjuvant chemotherapy was added as a fourth demographic variable because several researchers (17,29,35,36) have found the chemotherapy experience can affect women’s attitudes and their social interaction.

### Statistical Procedures

All computations for statistical analyses were performed using the statistical analysis systems computer program and the general linear model procedures. Principal components factor analyses were used to identify factors in the MAS. To identify significant relationships, Pearson correlations, multiple regression, and stepwise regression procedures were used. Analysis of variance was used to test regression procedures for significance. The 0.05 level of significance was established a priori.

**TABLE 1.** Comparison of demographic variables for total sample and regression sample

Demographics	Total sample			Regression sample		
	No.	%	Mean	No.	%	Mean
Marital status	929			550		
married	643	69.2		443	80.5	
not married	286	30.8		107	19.5	
Education (years)			12.4			13.0
<12	216	23.3		76	13.8	
12	391	42.2		249	45.3	
13–16	166	17.9		115	20.9	
17–22	154	16.6		110	20.0	
Age categories (years)			59.0			54.0
<50	243	26.0		206	37.5	
50–59	211	22.6		148	26.9	
60–69	247	26.5		140	25.5	
70–92	232	24.9		56	10.2	
Treatment						
no treatment	564	60.5		299	54.4	
treatment	369	39.5		251	45.6	

**TABLE 2.** Mastectomy Attitude Scale factor names, means, standard deviations, reliabilities, eigenvalues, and percentage of variance

Factors	No. <sup>a</sup>	Means <sup>b</sup>	SD	r	Eigen value	% of variance
1. Emotions	8	3.1	5.4	0.79	4.1	23.6
2. Sexuality	10	3.2	7.3	0.86	3.7	21.0
3. Appearance	6	3.5	3.2	0.66	2.6	14.7
4. Life outlook	3	3.8	1.4	0.39	2.1	12.2
5. Concealment	2	1.8	2.0	0.74	1.9	10.9
6. Openness	3	3.3	2.1	0.42	1.7	9.8
7. Necessity	1	3.9	0.5	—	0.7	4.1

Variance for seven factors = 17.529 on 33 items = 53.12% variance.

<sup>a</sup> Numbers of items in the named factor.

<sup>b</sup> The means of the factor, when all items are stated in the positive direction.

### Samples

When multiple regression procedures are used, it is necessary to have responses for all variables in the analyses. As comparisons were made between variables, the number of responses decreased because respondents did not answer every item. Usable questionnaires were received from 933 respondents; however, not every person provided responses to all requested information. A comparison of the total sample and the regression sample is shown in Table 1. As the number of respondents declined, the following pattern emerged: the age mean decreased; the educational level increased; the percentage of married people increased; and the number of women receiving treatment increased.

## RESULTS

### Preliminary Analysis

Principal components factor analysis with varimax rotation was used to factor analyze the 33-item MAS. The factors that resulted are shown in Table 2. The MAS was factor analyzed until the eigenvalue reached 1.0; the size of the eigenvalue relates to the amount of variation being explained by each factor. The total scale accounted for 53% of the variance. While all factors were retained for conceptual reasons, the reliabilities were low for life outlook and openness factors. Nunnally (37) indicates that  $r = 0.5$  or  $0.6$  is acceptable for exploratory work, and the following interpretations of findings are tempered in view of those reliabilities. The factors were used separately in

regression, intercorrelations, and stepwise regression analyses.

In Table 3, the individual items are presented by factor as well as the item mean, standard deviation, and factor loading. These items were scored with 1 = disagree, 2 = mildly disagree, 3 = mildly agree, and 4 = agree. For the appearance satisfaction factor, item 6, "After having a mastectomy, I am still satisfied by life," loaded 0.451 on the appearance factor and 0.351 on the life outlook factor. This item was retained on the factor with the highest factor loading. Two items (sexuality, number 10, and appearance, number 6) had factor loadings slightly below 0.4, but were retained because of the researchers' particular interest in women's responses.

Women's attitudes toward their mastectomy were reflected in each of the factors. As shown in Table 3, responses to the eight items of the emotion factor indicated women encountered a range of emotional challenges. In general, women agreed that they worried no more than other women worried about their health. The responses to the sexuality factor revealed that women perceived sexuality to involve more than having two breasts. Generally, women felt quite satisfied with their outward appearance, with slight disagreement because shopping for clothing was embarrassing. Women demonstrated an attitude of openness, with ambivalence about someone seeing the scar because it might frighten them. Of all the items, the greatest agreement was for the item related to necessity—that mastectomies had saved lives.

### Social Support and Attitudes Toward Mastectomy

Pearson correlation coefficients were used to examine the interrelationships among the mastectomy attitude factors. Sexuality was interrelated moderately with emotions ( $r = 0.619$ ) and appearance satisfaction ( $r = 0.617$ ). Attitudes about emotions were moderately related to appearance satisfaction ( $r = 0.658$ ). The outlook factor was related to the sexuality factor ( $r = 0.409$ ). All other correlations, while significant, were not strongly related.

Emotional support and aid were the only social support variables significantly related to the MAS attitude factors. These correlations were all less than  $r = 0.3$ .

Relationships were examined between social network providers and the attitude factors to ascertain the effectiveness of specific providers. There were several significant but not strong relationships ( $r = 0.10$  or less.)

### Relationship Between Social Support, Women's Attitudes Toward Mastectomy, Demographic Variables, and Patients' Self-esteem

Regression analysis was used to reveal the partial effect of each independent variable (social support, MAS factors, and demographic descriptors) on the dependent variable (self-esteem) while controlling for the effects of all other independent variables in the regression. The forward selection technique of the stepwise regression procedure begins with no variables in the analysis. This procedure calculates the  $F$  statistic for the variables to be included in each step and selects the variable with the largest  $F$  value. After each step, the  $F$  statistic is again calculated for each variable; only those variables that meet the 0.95 criterion level are considered for entry into the analysis.

In part I of this two-part series, the demographic variables of age, marital status, and education were found to relate to social support (1). Therefore, these variables were entered in categorical rather than continuous form to identify specific differences. Treatment was added to the analysis because of findings in the research literature and statements made during interviews with subjects in this study. Because of significant relationships identified in part 1, emotional support and aid were the only two social support components entered into the stepwise regression. Likewise, network providers were not entered into the stepwise regression because there were no significant relationships with social support components.

Of the 16 variables entered in the stepwise regression, seven variables accounted for approximately 34% of the variance for self-esteem, as shown in Table 4. Women's attitudes toward sexuality, outlook, appearance satisfaction, and emotions accounted for 31.4% of the variance. Sexuality, appearance satisfaction, and emotions were moderately interrelated. The outlook factor was the second variable to enter the regression model for self-esteem; however, the reliability of this factor was low ( $r = 0.39$ ). Three additional demographic variables—a college education, having treatment, and being in the 60-year-old age category—were significantly related to greater self-esteem.

## DISCUSSION

These findings suggest that women's attitudes toward the mastectomy experience are related more

**TABLE 3.** Means, standard deviations, and rotated factor loadings of the Mastectomy Attitude Scale items by factors, *n* = 524

Items by factor	Means	SD	Loadings
<b>Factor 1, emotional concerns</b>			
1. I feel sorry for myself after having a mastectomy.	1.906	1.159	0.789
2. Following my mastectomy, I became depressed.	2.204	1.259	0.779
3. Following a mastectomy, I often felt lonely.	1.861	1.144	0.710
4. Following mastectomy surgery I don't think I worried more about my health than other women worry about their health.	2.655	1.254	0.614
5. After my mastectomy, I was ashamed of the scar.	3.052	1.175	0.521
6. I think that a mastectomy could generally cause a woman to be emotionally harmed for life.	2.019	1.108	0.463
7. I feared being physically hurt by others while in crowded places.	1.618	1.023	0.456
8. I feel that I will never be as happy after having a mastectomy as I was before the surgery.	1.621	1.021	0.446
<b>Factor 2, sexuality</b>			
1. I think that breasts make me desirable and acceptable as a woman.	2.418	1.189	0.674
2. To me, having breasts is not an important part of being a woman.	2.689	1.151	0.674
3. I think breasts are not necessary for me to attract a mate.	3.038	1.159	0.593
4. In my opinion, having breasts is important in keeping a mate.	1.418	0.794	0.570
5. I feel that a mastectomy makes me less desirable to my sexual partner.	1.550	0.909	0.536
6. I think that a man could enjoy sexual relations with me following a mastectomy as much as he did with me when I still had my breast(s).	3.502	0.893	0.487
7. I feel that a man would rather not marry me if he knew that I had had a mastectomy.	1.992	0.892	0.473
8. After the recovery period, I enjoyed sexual relations as much as I did before having the mastectomy.	3.401	0.972	0.428
9. I believe that after my mastectomy that I did not feel less of a woman than other women who have not had mastectomies.	3.439	0.937	0.412
10. I feel that my mastectomy caused me to lose my sexual desire.	1.468	0.892	0.385

**TABLE 3.** Continued

Items by factor	Means	SD	Loadings
<b>Factor 3, appearance satisfaction</b>			
1. I think that there is no way one could look at me and tell if I had a mastectomy.	3.605	0.798	0.675
2. It is my opinion that wearing a prosthesis (contoured form which fits into a bra) does not make me see myself as being disfigured.	3.582	0.841	0.609
3. Following a mastectomy, I think I am as feminine as women who have not had mastectomies.	3.569	0.833	0.607
4. After having a mastectomy, I feel I was no more concerned about my appearance than other women are concerned about their appearance.	3.084	1.130	0.509
5. After having a mastectomy, I am still satisfied by life.	3.799	0.521	0.451
6. After having a mastectomy, it has been embarrassing for me to shop for clothes.	1.468	0.892	0.393
<b>Factor 4, life outlook</b>			
1. A mastectomy wrecked my marriage.	1.069	0.365	0.649
2. After a mastectomy, I don't feel that I get sick any more often than any other women do.	3.729	0.744	0.615
3. After the recovery period following a mastectomy, I was able to participate in the same activities I engaged in before the surgery.	3.662	0.766	0.406
<b>Factor 5, concealment</b>			
1. Following a mastectomy I think a padded bra (prosthesis) worn during sexual relations would make me more desirable.	1.634	1.045	0.842
1. I feel that covering the mastectomy scar with clothing while having sexual relations makes me more desirable.	1.882	1.185	0.833
<b>Factor 6, openness</b>			
1. After having a mastectomy I liked to talk with others about their feelings concerning the mastectomy.	3.179	1.045	0.745
2. I have tried to keep my mastectomy a secret from others.	1.269	0.717	0.619
3. I avoid letting others see the mastectomy scar for fear of frightening them.	2.002	1.159	0.414
<b>Factor 7, necessity</b>			
1. I think my mastectomy was needed, it saved my life.	3.899	0.414	0.718

1 = disagree, 2 = mildly disagree, 3 = mildly agree, 4 = agree.

**TABLE 4.** Stepwise regression of self-esteem on mastectomy attitude factors (MAS)<sup>a</sup>, social support (NSSQ), and demographic and medical variables

Variables	B value	Partial R <sup>2</sup>	R <sup>2</sup>	F value
MAS sexual	0.081	0.211	0.211	121.94 <sup>b</sup>
MAS outlook	0.270	0.058	0.269	35.90 <sup>b</sup>
MAS appearance	0.099	0.031	0.300	19.78 <sup>b</sup>
MAS emotion	0.039	0.013	0.314	9.14 <sup>c</sup>
College graduate	0.356	0.012	0.326	8.04 <sup>c</sup>
Treatment	0.204	0.006	0.332	3.96 <sup>d</sup>
Age, 60–69	0.243	0.006	0.338	4.42 <sup>d</sup>
College	0.185	0.003	0.341	2.12
High school graduate	0.245	0.004	0.345	2.41
Emotion (NSSQ)	0.18	0.004	0.349	2.66
MAS openness	0.02	0.002	0.350	1.17
Aid (NSSQ)	−0.086	0.002	0.352	1.20
MAS concealment	0.031	0.002	0.354	1.23
MAS necessity	0.091	0.001	0.355	0.43
Married	0.135	0.000	0.355	0.19
Age, 50–59	−0.024	0.000	0.355	0.04

Percentage of variance explained by overall model = 0.355; *df* = 16,450; *F* value = 15.12; *p* = 0.0001.

<sup>a</sup>MAS, Mastectomy Attitude Scale; NSSQ, Norbeck Social Support Questionnaire.

<sup>b</sup>Probability < 0.001.

<sup>c</sup>Probability < 0.01.

<sup>d</sup>Probability < 0.05.

strongly to their self-esteem than their social support, age, education, marital status, or adjuvant chemotherapy. Nevertheless, these variables are related to women's attitudes and do relate to some extent to her self-esteem, as reported in parts 1 and 2.

### Attitudes

It would not be appropriate to generalize the findings of this study to the population. Compared with the total sample shown in Table 1, the women in the regression sample were younger and more educated; more had received adjuvant chemotherapy; and more were "married." The overall trend was for the regression sample to have slightly less positive attitudes compared with the total sample as related to sexuality, emotions, and appearance. For example, on item 4 in the emotion factor, "Following mastectomy surgery I don't think I worried more about my health than other women worry about their health," the mean was 2.8 for the total sample and 2.65 for the regression sample.

The greatest variation in attitudes, as noted by the standard deviations, was for sexuality, followed by emotions, and then appearance satisfaction. An interpretation of the means of the factors could be that women had a positive outlook about their lives

and were fairly satisfied with their bodies as indicated by the appearance factor. Women were not quite as positive about their emotions and thoughts about sexuality issues. These women tended not to agree that concealment would enhance their sexuality. Compared with many earlier studies of postmastectomy women, the findings of this study and recent studies of others (29,30,36) indicate a change to more positive attitudes. Increased openness and awareness about breast cancer in the past 10–15 years has led to less stigmatization for postmastectomy women. More education and support resources are available to help women make informed decisions about treatment and to adjust emotionally and physically.

### Self-esteem

Attitudes accounted for the greatest proportion of variance in postmastectomy women's self-esteem, which is consistent with current research (7,16,21). Women's attitudes toward sexuality revealed feelings about themselves as women and about intimate relationships with men.

The appearance satisfaction factor reflected attitudes toward body acceptance. Postmastectomy women who are concerned about appearance have been shown to be younger and more appearance sensitive (38). Those women may want suggestions related to prosthesis selection and garment design that will enhance and normalize their appearance. As health care providers counsel patients, they should to be sensitive to appearance concerns.

In this study, researchers found that being older (60–69), having more than a college education, having emotional support, and having had adjuvant chemotherapy related to self-esteem. Penman et al. (29) found that women older than 40 years had greater self-esteem than those in their 30s. Bloom (39) reported that women with higher socioeconomic status had a higher self-concept; she suggested that "women of higher social status are likely to be perceived as being more intelligent and educated, and are, therefore, given clear information regarding diagnosis, treatment and prognosis . . ." This support enhanced these women's ability to cope with the disease and, thereby, increased their self-esteem. Penman et al. (29) noted that women more vulnerable to a poorer outcome (low self-esteem, loss of personal control, and more contingent on others) were those with lower expectations of good quality social support.

Women who had treatment in this study had more positive self-esteem than those without treat-

ment. The average time since surgery for these women was 12 months. Because conventional chemotherapy lasts approximately 6 months, most women surveyed probably had completed therapy and were experiencing hair regrowth and resolution of the acute physical side effects. Physical illness and side effects of chemotherapy might be expected to result in disrupted body image and lower self-esteem. Baxley et al. (40) did report lower body image scores for patients receiving chemotherapy that caused alopecia. Even though women receiving chemotherapy have reported disruptions in family relationships and their physical and general life activities, more than 50% indicated they were grateful to take active steps to improve their prognosis (35). Perhaps a sense of personal control results and is a contributing factor to higher levels of self-esteem.

### Limitations

Because there was not a preoperative measure of self-esteem to compare with the postoperative self-esteem score, it is not known whether individual women's self-esteem was affected by their disease and treatments. The reliabilities of some attitude factors need to be improved; these are reported so that future researchers can address the weaknesses. Women in this study had received Reach to Recovery visits that could affect perceptions of emotional support and increase awareness of educational and information sources.

### Implications

While emotional support was not directly related to self-esteem, it did relate to attitudes toward mastectomy that were related to women's self-esteem. Meeting the informational and educational needs of postmastectomy patients is an important component in assisting women to cope effectively with their disease. From this study, women indicated that they had less-positive attitudes related to sexuality and emotional issues. Women who appeared to need greater encouragement and support were younger women and women in unstable relationships. Providing women with current information about their disease and its side effects could allow them a basis for gaining control, coping with their disease, building self-confidence, and enhancing self-esteem. □

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