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Postmastectomy Attitudes in Women Who Wear External Breast Prostheses Compared to Those Who Have Undergone Breast Reconstructions

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Sixty-four women who postmastectomy wore an external breast prosthesis and 31 women who had breast reconstruction participated in the present study. It was hypothesized that the breast prosthesis group would exhibit more negative attitudes towards their mastectomy experience compared to the breast reconstruction group. Using the Mastectomy Attitude Scale (MAS) the results indicated that both groups were satisfied with their bodies, had a positive outlook towards their lives, implied that sexuality entailed more than having breasts, and felt that mastectomy treatment was necessary to save their lives. Neither group concealed that they had a mastectomy, however, they were not prone to discuss their mastectomy experiences. The findings from the study indicate that the women postmastectomy already had or developed positive attitudes towards themselves and life in general and the method chosen for breast restoration had no apparent impact on these attitudes. Reasons for the sample's positive attitudes are discussed.

KEY WORDS: mastectomy; attitudes; external breast prosthesis; breast reconstruction.

INTRODUCTION

Breast cancer is at epidemic proportions in many industrialized countries, making it a major health issue. In Australia, 1 in 16 women will

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develop breast cancer in her lifetime. Last year over 5000 Australian women were diagnosed as having this disease and each year more than 2000 Australian women die from breast cancer (Commonwealth Department of Health, Housing and Community Services, 1992).

Women diagnosed with breast cancer may require a mastectomy where the affected breast is surgically removed. According to the Coordinator of the Australian New Zealand Breast Cancer Trials Group, between 1985 and 1990 approximately 20,000 women in Australia have had mastectomy as treatment for breast cancer (J. Forbes, personal communication, May 12, 1992).

Breast cancer and mastectomy provoke anxieties in a woman about dying but they also elicit enormous fears about living. The woman must cope initially with the anxiety associated with a major surgical procedure plus all the realistic fears surrounding cancer. She must adjust to a potentially fatal disease in addition to the concerns about the loss of a breast and her image as a woman. She also faces an evaluation and redefinition of certain premastectomy attitudes that may direct her overt behavior after mastectomy. These attitudes are based on breast significance, feelings about breast loss, and meanings and experiences attached to breast cancer and mastectomy (Feather and Wainstock, 1989).

The literature abounds with studies examining psychological adjustment after mastectomy but only one study was found that specifically focused on attitudes. Feather and Wainstock (1989), using a 35-item scale, assessed the postmastectomy attitudes of 524 women. Their findings indicated that the women had positive outlooks about their lives and were fairly satisfied with their bodies but were not as positive about their emotions and thoughts regarding sexuality issues. The women felt that concealing their mastectomy from others would enhance their sexuality.

There are researchers, when examining the psychological reactions specific to a mastectomy, who postulate that it is the fear of death which cancer evokes rather than the loss of the breast that underlies a woman's depression, anxiety, and subsequent negative attitudes (Aaronson *et al.,* 1988; Goldsmith and Alday, 1971; Kemeny *et al.,* 1988; Margolis *et al.,* 1990). However, most researchers in this field propose that the woman's psychological reaction is related more to the loss of the breast and the importance she places on this body part in defining her femininity (Clifford, 1979a; Colette *et al.,* 1984; Margolis and Goodman, 1983; Mock, 1993; Polivy, 1977, Rosser, 1981; Schover, 1991). A woman whose self-esteem primarily stems from physical beauty and traditional values of femininity is more likely to be devastated by mastectomy (Schain, 1988).

Authors stress the fact that the breast has been a universal symbol of womanhood since recorded history (Kincaid, 1984), making us a "breast

fixated society" (Weatherly-White, 1980), and that mastectomy is equivalent to castration in the male (Renneker and Culter, 1952; Small, 1982). Therefore, breast amputation has potentially devastating effects on a woman's feminine self-image, sexuality, and physical attractiveness that may ultimately affect her postmastectomy attitudes regarding herself and her role as a woman. These negative effects may be the main reasons why the majority of women attempt to rectify the obvious chest defect the mastectomy causes by either wearing an external prosthesis (false breast) or, by having surgical reconstruction, a procedure that rebuilds the breast.

Most women after mastectomy wear an external breast prosthesis and a diverse range is available. Studies have shown that the external prosthesis is never incorporated into a woman's image of her own body. It is often experienced as a foreign object, a nuisance, or an irritating reminder of the disease and feelings of vulnerability (Bostwick, 1989; Clifford, 1979b; Luckman and Sorensen, 1987; Schain *et al.,* 1985). Many women have felt embarrassed by the external prothesis due to displacement when swimming and other physical activities (Walsh, 1991). Some women complain of embarrassing noises when the prosthesis is bumped due to the formation of air pockets within the prosthesis (Mabbutt, 1991). Conversely, the external prosthesis has none of the medical or surgical complications associated with breast reconstruction.

Many of the women who undergo breast reconstruction do so because they find the external breast prosthesis to be repugnant and demeaning. They feel the external prosthesis does not improve body image or relieve the sense of deformity (Bostwick, 1988). The external prosthesis constantly reminds them of their life-threatening illness (Bostwick, 1989). In many cases, breast reconstruction assists women to feel good about themselves after mastectomy (Daniel and Maxwell, 1983; Dean *et al.,* 1983; Filiberti *et al.,* 1986; Luce, 1983; Schain *et al.,* 1985; Stevens *et al.,* 1984). Schain *et al.* (1985) and Clifford (1979b) found in their studies that the most common reasons given by the women for choosing reconstruction were to get rid of the external prosthesis, to be able to wear a greater variety of clothing, and to restore their feelings of wholeness and body integrity.

Even though it may not be apparent to others, women who have had a mastectomy without breast reconstruction are reminded of their disfigurement visually, as well as by the need to wear a removable prosthesis (Luckman and Sorensen, 1987). It is, therefore, reasonable to suggest that these women would have different postmastectomy attitudes and expectations regarding themselves and others than women who have had breast reconstruction. The researchers in the present study hypothesized that women who wear an external prosthesis would exhibit more negative atti-

tudes towards their mastectomy experience compared to women who have had breast reconstruction.

Attitudes are defined in this study as personal evaluations of an object or symbol either in a positive or negative manner. These evaluations guide and direct outward behaviors (Fishbein and Ajzen, 1975).

METHOD

Subjects and Recruitment Procedures

Three general surgeons from the metropolitan Sydney area forwarded 200 letters of invitation to join the study to their female patients who had breast cancer and subsequent mastectomy surgery. The surgeons were requested to include only women who had mastectomy surgeries between 1986 and 1990 and to exclude women who had recurrent cancer.

Ten letters were returned undelivered. Two letters were returned by relatives stating that the women were deceased. A total of 147 women returned the demographic and background questionnaire (78% response rate), and of those 106 consented to participate in the study. One woman was excluded because she had breast-conserving surgery instead of mastectomy. Five of the 106 women could not be contacted for interview and 5 women withdrew from the study. The final number of women who participated in the study was 95 (50.5% response rate): 64 women with external breast prostheses and 31 women who had undergone successful postmastectomy breast reconstructions.

Measures

Demographic and Background Questionnaire

The women in both the prosthesis and the reconstruction groups completed a self-administered demographic questionnaire that included information on age, marital status, ethnic background, educational level, religious preference, annual household income, and private or public health insurance status. They were also asked the number of years since the mastectomy surgery, if they had one or both breasts removed, whether they received chemotherapy or radiation therapy, their postmastectomy chances for a cure of breast cancer, and how satisfied they were with either their external breast prosthesis or their breast reconstruction.

The Mastectomy Attitude Scale (MAS)

The original MAS was developed by Heyl (1977) to assess the attitudes of women towards mastectomy using a 35-item scale. She studied women both with and without breast cancer. In 1989 Feather and Wainstock modified the MAS. Their scale applied specifically to women who had mastectomy surgery and contained 33 items. Using a 4-point Likert scale along an agree-to-disagree continuum, these items elicited data from women about their attitudes and expectations regarding their adjustment to mastectomy. A principal-components factor analysis with varimax rotation was used by Feather and Wainstock and revealed seven factors within the scale. These included (1) emotional concerns (8 items), (2) sexuality (10 items), (3) appearance satisfaction (6 items), (4) life outlook (3 items), (5) concealment (2 items), (6) openness about mastectomy (3 items), and (7) necessity of mastectomy (1 item).

Procedure

The women in both the prosthesis and the reconstruction groups who agreed to participate in the study returned in a preaddressed envelope the completed demographic and background questionnaire to the researchers. They were then contacted over the telephone to arrange an interview in their home. After being interviewed (results of which will be reported elsewhere) the women completed the MAS.

RESULTS

Demographic and Background Data

It is not possible to indicate how many of the original 200 letters of invitation were sent to women who wore a breast prosthesis versus those who had reconstruction. It would be highly unlikely that equal distribution between the two groups occurred since, in Australia, postmastectomy breast reconstruction remains a rarer event than the wearing of an external breast prosthesis. However, the demographic and background data of the women in the breast prosthesis and reconstruction groups (n = 65) who consented to participate in the study were compared with those of the women in these two groups (n = 95) who chose not to participate to determine representativeness of the sample. Chi-square analysis indicated that there were no significant differences between the groups.

Sample Characteristics

The majority of women in the present study were married at the time of mastectomy (70%), had not changed marital status since mastectomy (93%), were Australian-white (80%), were Protestant (59%), had completed secondary schooling (58%), and had private health insurance (83%). Chi-square analysis indicated a significant difference between the two groups on age (p = .0001). More young women were in the reconstruction group (M = 49.5 years) compared to the prosthesis group (M = 63 years). Yearly household income also yielded a significant difference (p = .015), with the reconstruction group (M = $42,758) in the higher-income categories compared to the prosthesis group (M = $28,443).

The majority of women in both groups had only one breast surgically removed (91%), reported that they had an excellent to a very good chance for a cure (65%), and required no postmastectomy radiation (86%) or chemotherapy (72%). The mean time since mastectomy surgery for both groups was 3.2 years.

The women were also requested to indicate satisfaction levels with either their external breast prosthesis or their breast reconstruction. Two women in the prosthesis group did not provide a response. Chi-square analysis showed no significant difference between the two groups regarding satisfaction levels. As Fig. 1 shows, the prosthesis group (n = 62) indicated that 22 (35%) were very satisfied, 26 (42%) were satisfied, 10 (17%) had mixed feelings, 2 (3%) were dissatisfied, and 2 (3%) were very dissatisfied.

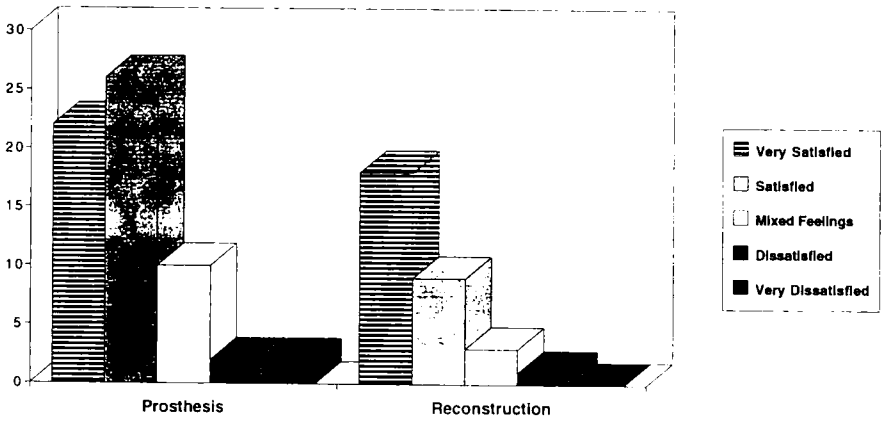

Fig. 1. Satisfaction levels for breast prothesis and reconstruction.

In the reconstruction group (n = 31), 18 (58%) indicated that they were very satisfied, 9 (29%) were satisfied, 3 (10%) had mixed feelings, and 1 (3%) was dissatisfied but none were very dissatisfied.

MASTECTOMY ATTITUDE SCALE

Factor Analysis

The number of subjects in this study (95) is too small for a replication of Feather and Wainstock's (1989) factor analysis. An exploratory analysis, however, revealed essentially the same seven factors (although, in a few cases, slightly different items contributed to some subscales). The exception was Factor 7 (necessity), item 1, "I think my mastectomy was needed, it saved my life," found by Feather and Wainstock (1989). This item contributed in the present study to a subscale the researchers labelled "femininity" that included three other items. These included (1) "I think that a man could enjoy sexual relations with me following a mastectomy as much as when I still had my breast(s)," (2) "Following my mastectomy, I think I am as feminine in appearance as women who have not had mastectomies"; and (3) "I think that there is no way anyone could look at me and know that I have had a mastectomy." Analysis of this new subscale indicated that there was no apparent loss of femininity experienced by the women in either the prosthesis or the reconstruction groups. Since the factor analysis was merely exploratory in the present study, the analysis by Feather and Wainstock was used as the measure for the results presented here.

Item-by-Item Analysis

Mean scores for the prosthesis and reconstruction groups were tabulated for each of the 33 MAS items. In Table I, the individual items are presented by factor, as well as the item mean and standard deviation. These items were scored as 1 = disagree, 2 = mildly disagree, 3 = mildly agree, and 4 = agree. Using a one-way ANOVA, the reconstruction and prosthesis groups' MAS items were compared, with only one item showing a significant difference (p = .004). Factor 3, item 2, stated, "it is my opinion that wearing a prosthesis does not make me see myself as disfigured." The prosthesis group agreed with this statement and the reconstruction group disagreed with it.

The total scores for each of the seven MAS factors were tabulated. A t test showed a significant difference between the prosthesis and the reconstruction groups (t = 2.7, df = 93, p = .01) on the appearance satisfaction subscale. The prosthesis group's scoring of the six items within

Table I. Means and Standard Deviations of Mastectomy Attitude Scale Items by Factors for Prosthesis and Reconstruction Groups[a]

Items by factor	Prothesis (n = 64)		Reconstruction (n = 31)	
	X	σ	X	σ
Factor 1. Emotional Concerns				
1. I feel sorry for myself after having a mastectomy.	1.9	1.3	1.7	1.1
2. Following my mastectomy, I become depressed.	1.9	1.3	1.7	1.0
3. Following a mastectomy, I often felt lonely.	1.5	1.1	1.7	1.1
4. Following mastectomy surgery I don't think I worried more about my health than other women worry about their health.	2.9	1.3	2.6	1.2
5. After my mastectomy, I was ashamed of the scar.	1.8	1.2	1.7	1.0
6. I think that a mastectomy could generally cause a women to be emotionally harmed for life.	2.3	1.3	1.9	1.2
7. I feared being physically hurt by others while in crowded places.	2.0	1.3	2.4	1.4
8. I feel that I will never be as happy after having a mastectomy as I was before surgery.	1.5	1.0	1.6	1.1
Factor 2. Sexuality				
1. I think that breasts make me desirable and acceptable as a woman.	2.7	1.3	2.6	1.3
2. To me, having breasts is not an important part of being a woman.	2.5	1.3	2.3	1.3
3. I think breasts are not necessary for me to attract a mate.	3.0	1.2	2.5	1.3
4. In my opinion, having breasts is important in keeping a mate.	1.4	0.8	1.6	1.0
5. I feel that a mastectomy makes me less desirable to my sexual partner	1.5	0.9	1.4	0.8
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).	3.5	0.9	3.4	1.1
7. I feel that a man would rather not marry me if he knew that I had a mastectomy.	2.0	1.1	1.6	0.9
8. After the recovery period, I enjoyed sexual relations as much as I did before having the mastectomy.	3.2	1.1	3.3	1.2
9. I believe that after my mastectomy that I did not feel less of a woman than other women who have not had mastectomies.	3.4	1.0	3.3	1.1
10. I feel that my mastectomy caused me to lose my sexual desire.	1.8	1.1	1.6	0.9
Factor 3. Appearance Satisfaction				
1. I think that there is no way one could look at me and tell if I had a mastectomy.	3.6	0.9	3.5	1.1
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.	3.7	0.8	2.9	1.3

3. Following a mastectomy, I think I am as feminine as women who have not had mastectomies.	3.6	0.8	3.5	1.0
4. After having a mastectomy, I feel I was no more concerned about my appearance than other women are concerned about their appearance.	3.4	1.0	3.0	1.2
5. After having a mastectomy, I am still satisfied by life.	3.8	0.5	3.9	0.2
6. After having a mastectomy, it has been embarrassing for me to shop for clothes.	1.5	0.8	1.7	1.1
Factor 4. Life Outlook				
1. A mastectomy wrecked my marriage.	1.1	0.4	1.0	0.0
2. After a mastectomy, I don't feel that I get sick any more often than any other women do.	3.7	0.7	3.5	1.0
3. After the recovery period following a mastectomy, I was able to participate in the same activities I engaged in before the surgery.	3.7	0.7	3.6	1.0
Factor 5. Concealment				
1. Following the mastectomy I think a padded bra (prosthesis) worn during sexual relations would make me more desirable.	1.4	0.8	1.6	1.1
2. I feel that covering the mastectomy scar with clothing while having sexual relations makes me more desirable.	1.7	1.1	1.7	1.1
Factor 6. Openness				
1. After having a mastectomy I liked to talk with others about their feelings concerning the mastectomy.	2.6	1.3	2.8	1.3
2. I have tried to keep my mastectomy a secret from others.	1.6	1.1	1.7	1.1
3. I avoid letting others see the mastectomy scar for fear of frightening them.	2.1	1.2	1.7	1.0
Factor 7. Necessity				
1. I think my mastectomy was needed, it saved my life.	3.9	0.4	3.9	0.2

[a]1 = disagree, 2 = mildly disagree, 3 = mildly agree, 4 = agree.

this subscale indicated that they had more positive attitudes towards their appearance than the reconstruction group. There were no significant differences between the two groups on the other six subscales.

DISCUSSION

It was predicted that women postmastectomy who wear a breast prosthesis would exhibit more negative attitudes towards their mastectomy

experience compared to women who have had breast reconstruction. The hypothesis was not supported in any of the seven attitudinal subscales. This interpretation was based on the means of the items in the subscales. The appearance factor indicated that the women were fairly satisfied with their bodies. In the area of sexuality, the reconstruction group placed more emphasis on the importance of the breast than the prosthesis group. The reconstruction group felt that breasts were an important factor in attracting a mate, whereas the prosthesis group did not have this attitude. These differences in attitude may have been mediating factors for both groups when they were deciding whether or not to have postmastectomy breast reconstruction. However, the overall impression given by both groups was that sexuality involved more than having breasts, and they did not feel that concealing or covering the mastectomy area enhanced their sexuality.

Feather and Wainstock (1989) study sample's MAS means and standard deviations were very similar to those of the women in this study. There were only two items where opinions differed. Their sample agreed on Factor 1, item 5, that stated that after mastectomy the women were ashamed of the scar. In the present study, both the prosthesis and the reconstruction groups disagreed with this item. Feather and Wainstock's sample also agreed on Factor 6, item 1, that stated after having a mastectomy they liked to talk with others about their feelings. The prosthesis and reconstruction groups disagreed with this item. These differences between the two samples may be culturally linked since Feather and Wainstock's sample was based in North America and this study's sample was Australian based. Generally, both samples indicated positive attitudes after mastectomy. These attitudes may be partially due to the fact that less radical surgery for treating breast cancer has been the norm since the 1980s. Now when mastectomy surgery is performed, only the breast is removed. The surgical technique before the 1980s involved removing not only the breast but also the underlying muscles. This surgery caused more pronounced chest wall disfiguration and many times led to severe arm movement restrictions and lymphoedema. These negative effects had psychological repercussions for the woman that could have adversely affected her postmastectomy attitudes.

Positive postmastectomy attitudes may also be related to the higher profile that breast cancer has been receiving since the late 1980s at both national and international levels. This disease is no longer seen as a terrible stigma and people are more willing to discuss it in the public arena.

All the women in the present study indicated that they felt the mastectomy was necessary to save their lives. A change in body structure must be perceived as negative for a person's attitude to be adversely affected. Possibly, these women did not perceive the mastectomy as a negative threat

to self but a positive step towards life and this perception was reflected in their MAS responses.

The majority of women in both the prosthesis (77%) and the reconstruction (87%) groups were either very satisfied or satisfied with their method of restoring premastectomy breast appearance. This high degree of satisfaction may be a contributing factor to their reported positive attitudes. However, a Hawthorne effect may have occurred since the respondents were interviewed about choices they had made in relation to breast restoration, and then after the interview they completed the MAS scale.

There is a likelihood that the women in this study may be experiencing cognitive dissonance (Kaplan and Sadock, 1985). They have lost a breast(s) and are now faced with the potential negative attitudes of a society that values breasts as the symbol of femininity (Renneker and Culter, 1952) and necessary for desirability and acceptance as a woman (Mead, 1949). These women have chosen a method of breast restoration to accommodate for this loss. Any dissatisfaction with their choice could prevent them from "getting on with their lives." The women, therefore, may have an inflated satisfaction level with their method of breast restoration to accommodate for the dissonance. This theory may also explain the slightly higher satisfaction level of the prosthesis group with their appearance compared to the reconstruction group. In addition, the women may be grateful to be alive having survived disease-free past the 2-year mark. This reality might, therefore, motivate them to deny any emerging negative attitudes in the interests of being able to move forward and be content with their lives.

Health professionals need to be aware that while there is a commonality of mutual experiences associated with breast cancer and mastectomy, the specific concerns and problems experienced by each woman are multidimensional and dependent on many variables. These include stage of illness, prognosis after the operation, availability of support systems, major life disruptions, impact of trauma of self-image, sexual identity, and experience of loss (Felzer, 1988). In addition, the specific problems and concerns experienced by a particular woman are dependent on her presurgical personality, stage of illness, prognosis after mastectomy, and preoperative expectations and preparation. Thus, it is crucial for health professionals to keep in mind that mastectomy has a unique meaning for each woman.

Although the scientific literature frequently focuses on the negative changes in women's lives after having a mastectomy, there are also many positive changes that can occur because of this experience. Meyerowitz (1980) states that most women appear to go through an evaluation process. Their priorities change causing a new perspective on life. There is often a

need for self-actualization and an urgency to achieve those goals that are most important to them. Positive changes may also occur in their personal relationships. Wilkin (1978) has found that the vulnerability of women after mastectomy makes them and their partners usually more open and amenable to constructive change and to actually experience more life satisfaction after the mastectomy than before it. It is possible for these women to achieve better and fuller relationships and attitudes because the trauma interrupts old behaviors and responses. This interruption allows the development of more rewarding patterns with ensuing personal growth and fulfillment. The ultimate aim for health professionals counselling women after mastectomy should be to foster these positive attitudes and developments.

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