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**Women's decisions regarding breast reconstruction after  
mastectomy: A developmental perspective**

Ross, Alison, Ph.D.

City University of New York, 1989

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A

**WOMEN'S DECISIONS REGARDING BREAST RECONSTRUCTION  
AFTER MASTECTOMY: A DEVELOPMENTAL PERSPECTIVE**

**by**

**ALISON ROSS**

A dissertation submitted to the Graduate Faculty in Psychology  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy, The City University of New York.

1989

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**This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.**

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**ABSTRACT****WOMEN'S DECISIONS REGARDING BREAST RECONSTRUCTION  
AFTER MASTECTOMY: A DEVELOPMENTAL PERSPECTIVE**

by

Alison Ross

Advisor: Professor Laurence J. Gould

This study utilized a developmental framework in its investigation of the factors associated with mastectomy patients' decisions regarding breast reconstruction and their postmastectomy adjustment. By assessing both current and adolescent developmental phenomena, this study was primarily designed to answer the following questions: (1) What factors differentiate those women who choose breast reconstruction after mastectomy from those who do not?; and (2) What factors differentiate those women who have greater or lesser difficulties in their adjustment postmastectomy?

Forty-one white, married women who had undergone a unilateral modified radical mastectomy for cancer of the breast were divided into two decision groups: women choosing to reconstruct (N = 20) vs. women choosing not to reconstruct (N = 21). At the time of the study, none of the women had undergone breast reconstruction although it was an option available to all of them.

Both empirical and more qualitative, exploratory research techniques were used in this study. A packet of paper-and-pencil

measures were mailed to each participant's home and completed prior to meeting in person with this investigator. The measures included the Beck Depression Inventory, Spielberger's State-Anxiety Inventory, Levenson's Internal-External Locus of Control Scale and a Body Image Scale. The personal interview was comprised of two parts. The first part included questions about the women's early adolescent pubertal experiences, particularly with regard to the timing of maturational events, self image and body image issues in adolescence as well as parental and peer relationships at the time (The Adolescent Development Interview). The second part of the interview asked the women about their experiences having breast cancer and a mastectomy and their decisions regarding breast reconstruction (The Mastectomy and Breast Reconstruction Interview).

Comparisons between the decision groups on postmastectomy adjustment revealed that the women choosing to reconstruct and the women choosing not to reconstruct did not differ on feelings of depression, anxiety and level of marital functioning. However, a number of developmental factors were found to differentiate the two decision groups. With regard to adolescent development experiences, the findings indicated that the women in the reconstruction group were more likely to have developed breasts at an earlier age (i.e., to be "early maturers") and to state that their appearance was more important to them in adolescence in comparison to the women in the non-reconstruction group. The timing of maturational events was also found to be associated with postmastectomy adjustment such that

greater levels of anxiety postmastectomy were associated with women who reported developing breasts and experiencing menarche at younger ages. Additional developmental phenomena as well as more current adult body image attitudes (e.g., closeness with father and mother in adolescence, confidence in adult appearance, satisfaction with breasts prior to the mastectomy) were also found to differentiate the women choosing to reconstruct from the women choosing not to reconstruct.

The results are discussed in the context of psychodynamic theory, developmental theory, and recent research on early adolescent developmental experiences and their impact on adult personality functioning. In addition, anecdotal and descriptive data regarding a number of important clinical issues related to the study's topic are provided along with discussions of the study's limitations, and its implications for clinical practice and future research.

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A very special thanks to all of the people who helped make this study possible. To Doris Hoyer at the American Cancer Society, Long Island Division, who was the first to believe in the value of this project and whose efforts to help me recruit participants was inestimable. Along with Ms. Hoyer, I also want to express my appreciation to Sandy Fentin from Adelphi's Oncology Support Program, Cathy Emerson from the Westchester ACS Division and Marilyn Campbell from the Queens ACS. It soon became clear to me that their willingness to help me in my work stemmed from the dedication and genuine caring that characterized their own work helping breast cancer patients and their families. Most importantly, I want to express my appreciation and admiration for the women who volunteered to participate in this study. They could not have been more generous in sharing their thoughts and feelings about their experiences and it was their honesty, strength and humanity that has made this project so important and meaningful.

Where malignant disease is concerned it may be more important to understand what kind of patient has the disease rather than what kind of disease the patient has.

(The Lancet, May 11, 1985)

...She was twelve and her breasts were beginning to grow and she wanted to discuss this astonishing fact with her mother. She wanted to understand what it meant...

(The Prince of Tides, P. Conroy, p.357)

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## CHAPTER I

### INTRODUCTION

In the United States today, one woman in ten can expect to develop breast cancer at some point in her lifetime. Of the 135,000 women diagnosed each year with new breast malignancies, nearly a third (42,000) will not survive the disease (Cancer Facts & Figures, 1988). It is not only women in their later, postmenopausal years who must deal with this life-threatening disease but increasing numbers of younger women in their thirties and forties. In fact, breast cancer is the second leading cause of cancer death among American women today (lung cancer is the first) and it is the leading cause of death among women between the ages of 40 to 45 (Rennie, 1988). While the medical treatment for breast cancer remains an area of continuing controversy (Ray & Baum, 1985; Steinberg, Juliano & Wise, 1985; Time, 1987), mastectomy, total removal of the malignant breast, is still the treatment of choice among the majority of surgeons today (National Cancer Institute, 1988). With the number of women undergoing a mastectomy exceeding 50,000 each year and with increasing survival rates, the psychosocial sequelae of this traumatically disfiguring procedure have become of increasing importance to clinicians and researchers alike.

Until twenty years ago, the conventional treatment for breast cancer was the Halsted radical mastectomy which was developed in the late 1800's by William Halsted. This operation which involved the removal of the entire breast, major and minor pectoral (chest) muscles and axillary (underarm) lymph nodes often left the patient

with a sunken chest wall and the possibility of developing arm swelling and shoulder stiffness. While some surgeons in the 1950's and 1960's considered less extensive surgeries, it was not until the 1970's that the majority of surgeons began to adopt a more conservative surgical approach to the treatment of breast cancer. In 1979, a large-scale National Cancer Institute study revealed that survival rates for patients in the early stages of breast cancer (Stage I and Stage II) were not significantly affected by less extensive surgeries. These findings and those of similar studies resulted in the increased use of the modified radical mastectomy and the total (or simple) mastectomy as the treatments of choice for early stage breast cancer patients. In contrast to the Halsted radical mastectomy, both the modified radical mastectomy and the total mastectomy leave the major chest muscles intact. In the modified radical mastectomy the entire breast is removed along with the lining over the chest muscles and most of the underarm lymph nodes. In the total mastectomy only the breast and possibly some lymph nodes are removed. In the past ten years even more conservative surgical procedures than these are being practiced and have been under extensive investigation. These procedures (e.g., lumpectomy, quadrantectomy and segmental mastectomy) leave some of the breast tissue intact and are almost always performed in conjunction with adjuvant therapies (e.g., radiation therapy or chemotherapy). Because the treatment efficacy of these more conservative surgical procedures remains controversial, it is the modified radical mastectomy that is the most common treatment for breast cancer in the United States today (National Cancer Institute, 1988).

Until recently, the only readily available alternative for a woman who after her mastectomy sought to regain the semblance of a normal appearance was wearing an artificial breast form (i.e., a prosthesis). While a prosthesis can be designed to closely resemble a woman's original figure prior to the mastectomy, problems with dislodgement, discomfort and limitations in dressing are frequently suffered by the woman who wears a prosthesis (Clifford, 1979; Schain, Wellisch, Pasnau & Lansverk, 1985). The fact is, however, that breast reconstruction after a mastectomy is a viable alternative for virtually any woman who has had a mastectomy (National Cancer Institute, 1984). This is due to a variety of factors. The trend towards early breast cancer detection has resulted in more women being diagnosed with the disease in its early stages thereby improving survival rates as well as enabling less radical surgical treatment interventions to be practiced. In addition, recent improvements in plastic surgery techniques have made restoration of the surgically removed breast a more realistic alternative. Yet despite the increased availability of this option, less than twenty percent of women who have a radical mastectomy undergo breast reconstruction (Luce, 1983). While it is not entirely clear why such a low percentage of women opt for breast reconstruction after a mastectomy, surgeons' negative attitudes regarding reconstruction, patients' lack of knowledge about this alternative and the potential costs of the surgery are most likely some of the contributing factors. In addition, it is this researcher's contention that the woman's experience of her mastectomy and the meaning she attributes to the loss of her breast are also important factors

influencing her decision regarding postmastectomy breast reconstruction.

While there has been a great deal of literature written on women's adjustment to mastectomy, the focus of most of the research in this area has been on identifying the psychosocial sequelae of having breast cancer and a mastectomy and the factors that put women at risk for psychological morbidity. Similarly, researchers investigating breast reconstruction have primarily focused on the impact of breast reconstruction on women's post-mastectomy adjustment. Altogether, the emphasis among these empirical researchers has been to identify the current factors (i.e., those immediately preceding or following the surgery) that influence women's postmastectomy adjustment. Researchers have not investigated the influence of other factors which may be less immediate yet equally powerful in affecting the adult woman's postmastectomy experiences. That is, investigators have not explored the extent to which developmental phenomena (i.e., experiences related to a woman's physical development in puberty) influence the adult woman's emotional responses to having breast cancer, to the loss of the breast and in deciding whether to undergo breast reconstruction.

In adolescence, a girl undergoes the dramatic and rapid bodily changes through which she achieves sexual maturity. These profoundly affect her sense of herself and her ultimate identity as a woman (Hurlock, 1973; Benedek, 1979b; Brooks-Gunn & Peterson, 1983). The physiological and physical changes that occur in puberty (e.g., the development of breasts and the onset of menstruation) all

impact upon the girl's growing sense of self and her relations with others and it is the young adolescent's acceptance and integration of her changed body that is viewed by many as the major developmental task of this time (Deutsch, 1944; Blos, 1962; Rosenbaum, 1979; Lerner & Foch, 1986). Developmental psychologists interested in the psychology of women have only recently begun to explore the impact of early pubertal experiences on female development. Their research has revealed that factors such as the timing of the onset of development, parental and peer group relationships and sociocultural values play an important role in defining the young girl's experiences at the time of puberty (Brooks-Gunn & Peterson, 1983; Levine & McAnarney, 1988; Peterson, 1983). In addition, their findings suggest that these experiences in puberty may have long-lasting effects which persist into adulthood as they provide the basis for a woman's self-concept and her internal sense of femininity vis-a-vis her physical body and her body image (Shipman, 1964; Woods, Deny & Most, 1983).

By taking into account both current and developmental phenomena, this study was designed as an initial effort in providing a more comprehensive understanding of the factors that influence women's adjustment to mastectomy and their decisions regarding breast reconstruction. More specifically, this study addressed the following question: Do events in early adolescence concerning puberty and one's physical development provide a context within which to understand the adult woman's response to the loss of a breast and her decision concerning its replacement?

In the following chapter, a comprehensive review of the literature will be presented to provide a more indepth understanding

of the theoretical and conceptual framework that underlies this study. The following areas that will be reviewed include: (1) Adjustment to Mastectomy; (2) Psychodynamic Theories of the Impact of Mastectomy and Other Breast Surgeries; (3) Theories and Research on Female Adolescent Development; and (4) Issues Regarding Breast Reconstruction. In addition, a statement of the purpose of this study and the hypotheses to be tested will be provided.

## CHAPTER II

### LITERATURE REVIEW

#### Adjustment to Mastectomy

A great deal of literature has been written by a variety of health care professionals (e.g., surgeons, nurses, psychiatrists, psychologists) about the psychosocial aspects of adjustment to mastectomy. Much of this literature is anecdotal and impressionistic in nature, frequently based upon the authors' personal experiences dealing with a mastectomy or with mastectomy patients seen in their clinical practices (Bard & Sutherland, 1955; Ervin, 1973; Goldsmith & Alday, 1971; Harrell, 1972; Klein, 1971; Lorde, 1980; Quint, 1963; Renneker & Cutler, 1952; Rollin, 1976; Silberfarb, 1984). Lacking an empirical foundation, these works have been limited in their generalizability yet have oftentimes provided thoughtful, clinically meaningful information concerning the issues facing breast cancer patients.

The empirical research that has been conducted in more recent years has, to a great extent, furthered our understanding of the psychosocial aspects of adjustment to mastectomy despite many of these studies' methodological limitations. Frequently there have been limitations in the studies' sample populations (e.g., small sizes; discrepancies among the subjects in terms of their demographic and medical characteristics) and in the assessment measures utilized (e.g., only clinical interviews used without the

inclusion of standardized tests). In addition, the findings of these studies and the conclusions reached by investigators have varied considerably. For example, some researchers have concluded that the emotional impact of a mastectomy is minimal and that most women subjected to a mastectomy "accept the loss of their breast with equanimity" (Goldsmith & Alday, 1971, p. 1673; Krouse & Krouse, 1982; Worden & Weisman, 1977). Despite the findings of these few studies, however, this author agrees with the majority of clinicians and researchers who consider having breast cancer and a mastectomy a life crisis in which the psychological trauma of the experience can have powerful and potentially long-lasting repercussions on the quality of a woman's life (Asken, 1975; Ervin, 1973; Klein, 1971; Margolis & Goodman, 1983; Meyerowitz, 1980).

### Psychosocial Sequelae of Mastectomy

One main area of research has focused on identifying the psychosocial sequelae associated with having a mastectomy and determining the severity and duration of patients' emotional responses to this type of surgery. Overall, researchers agree that the two most prominent emotional reactions following a mastectomy are depression and anxiety (Asken, 1975; Clifford, 1979; Dean, 1987; Holland & Mastrovito, 1980; Maguire et al., 1978; Roberts & Forrest, 1972; Torrie, 1971). Other emotional responses frequently cited in the literature are lowered self-esteem, feelings of mutilation and an altered body image, a loss of feelings of femininity and impaired sexual functioning (Bransfield, 1983; Dean,

1987; Jamison, Wellisch & Pasnau, 1978; Kriss, 1981; Lewis & Bloom, 1978; Meyerowitz, 1980; Polivy, 1977; Schain, 1988).

One of the earliest, large-scale empirical studies conducted on women's adjustment to mastectomy found significant psychological symptomatology. Torrie (1971) conducted a retrospective study of 1400 postmastectomy patients and found that a year after surgery 83% reported periods of depression that included feelings of despair, weeping, withdrawal and a sense that their life was over. Nearly a quarter of the women in Torrie's study reported that they were unable to return to work after having the mastectomy. Another retrospective study which evaluated 196 breast cancer patients (Maguire, 1975) found significant psychosocial morbidity among its postmastectomy patients. Immediately after the surgery, 73% of the women reported experiencing moderate to severe anxiety and 56% reported experiencing severe emotional distress. Four months postsurgery, nearly half of the women had severe impairments in their sexual functioning and a third were suffering moderate to severe levels of anxiety and depression. Maguire et al.'s prospective, controlled study (1978) which compared 75 mastectomy patients with 50 women who had benign breast biopsies found significantly higher psychiatric morbidity in the mastectomy patients one year after the surgery. Maguire et al. found that 25% of the postmastectomy patients had moderate to severe feelings of anxiety and depression as compared to 10% of the benign breast biopsy patients. In addition, 33% of the postmastectomy patients reported moderate to severe sexual problems a year after the surgery compared to 8% in the control group. Overall, the

findings of these studies were consistent with the findings of other researchers such as Roberts and Forrest (1972) and Polivy (1977). Roberts and Forrest found that 50% of the 86 mastectomy patients they evaluated postsurgically reported feelings of anxiety and depression with nearly 40% seeking psychiatric help a year after their surgeries. Polivy's study comparing mastectomy patients, benign biopsy patients and non-cancerous surgical patients found that six months after surgery, the mastectomy patients experienced a significant decline in their body image and overall feelings of self-esteem in comparison to the benign biopsy and non-cancerous surgical patient groups.

Jamison et al. (1978) and Morris, Greer and White (1977) conclude from their studies that while problems in adjustment are present among postmastectomy patients, their overall psychosocial morbidity is less severe than had been reported by other investigators. Jamison et al.'s retrospective study found that the majority of their postmastectomy patients reported good to excellent overall postmastectomy emotional adjustment. In addition, the majority reported no change in their marital and sexual relationships. Morris et al. conducted a controlled, prospective study that followed benign breast biopsy and mastectomy patients for two years after their surgeries. These researchers found that 70% of the breast cancer patients in their study reported that they no longer felt stressed one year postmastectomy. In addition, they found that by two years there were no significant differences between the mastectomy patients and the benign breast biopsy patients in their social adjustment

(i.e., in their interpersonal relationships as well as in their marital and sexual relationships). However, both groups of researchers found noteworthy indicators of significant emotional distress among subgroups of the mastectomy patients they evaluated. Jamison et al. found that subsequent to the surgery more than a third of the women (36%) had significantly increased their use of tranquilizers and 15% reported significantly increased alcohol usage. In addition, nearly a quarter of the women reported having postoperative suicidal ideation. Similarly, Morris et al. found that two years after having a mastectomy more than one-quarter of the breast cancer patients they evaluated had not adequately adjusted to the surgery. Twenty-two percent of the breast cancer patients in their study reported depressive symptomatology two years postmastectomy and 29% were unable to return to work since having undergone the operation.

In contrast to these findings, there are several researchers whose studies have led them to conclude that the psychological symptomatology among breast cancer patients is either less than or not significantly different from patients being treated for other types of cancers. Comparing feelings of depression, lowered self-esteem, and impaired body image, these researchers report either no differences between the groups or much more prominent psychosocial morbidity in the patients with other types of cancers. Worden and Weisman (1977) compared mastectomy patients with patients being treated for colon cancer, malignant melanoma, and Hodgkin's disease. While they found that 20% of the breast cancer patients reported feelings of depression, lowered self-esteem and impaired body image six months after surgery, a similar percentage of

patients in all groups reported equivalent levels of symptomatology. Krouse and Krouse (1982) comparing three groups of female patients, breast cancer, gynecological cancer and benign breast biopsy patients, found that feelings of depression, lowered self-esteem and impaired body image were not significant among the mastectomy or breast biopsy patients either before or after the surgeries but were prominent among the gynecological patients. They conclude from their findings that the gynecological patients are more traumatized by their surgery because they have lost a functional body part whereas the mastectomy patients are less traumatized and experience less emotional upset because they have lost a body part that has only cosmetic value and/or symbolic meaning. A recent large-scale prospective study conducted by Penman et al. (1986) also refutes the findings of studies which report substantial psychosocial morbidity among mastectomy patients. Penman et al. assessed the degree of psychological morbidity and disability in 1,715 female patients who were categorized into five groups. These groups included women who had no surgery at all, non-cancerous surgery, benign breast biopsy, mastectomy alone and mastectomy with adjuvant therapy. These researchers found the incidence of psychosocial morbidity to be much less than had been previously reported, with the incidence of actual disturbance extremely small. In comparison with the other patient groups, only the women who had a mastectomy with adjuvant therapy reported significantly more body image dissatisfactions and concerns about their self-images with regards to their femininity and sexual attractiveness.

### Factors Influencing Adjustment To Mastectomy

In an effort to account for the variability in the psychosocial morbidity among mastectomy patients, researchers have directed their attention towards identifying those factors that may facilitate or impede adjustment. Some researchers view coping with a mastectomy as a process in which adjustment involves an integration of cognitive and emotional responses (Klein, 1971; Morris, 1979). Patients' coping styles and, in particular, their use of denial are considered important factors that impact upon mastectomy patients' health care behaviors and in exacerbating or minimizing their psychological distress (Ray & Baum, 1985; Watson, Greer, Blake & Shrapnell, 1984). The differences in body image and total self image that Polivy (1977) found between mastectomy patients as compared to benign breast biopsy and non-cancerous surgical patients were not apparent immediately after the surgery but months later. It is the break down of the mastectomy patient's denial in dealing with her illness that she sees as the primary factor in accounting for these changes. Both Worden and Weisman (1978) and Jamison et al. (1978) identify peak periods of distress as accounting for variations in patients' symptomatology. In Jamison et al.'s study, patients reported the most stressful time being immediately after discovering the lump whereas Worden and Weisman's patients reported being most distressed two to three months after the mastectomy.

Other researchers have focused on individuals' premorbid personality traits as predictors of adjustment. Locus of control is

one personality trait that has been extensively investigated. Lefcourt (1982) defines the concept of internal locus of control as "the perception of events, whether positive or negative, as being a consequence of one's own actions and thereby potentially under personal control" (p. 35). He claims that the extent to which individuals believe they can determine their own fate is of critical importance in their ability to cope with stress and engage in challenges. Studies of medical patients have generally found that patients who have an internal locus of control tolerate the stress of their illness better and are frequently more active participants in their health care, more cooperative, and less depressed than patients with an external locus of control (Bowers, 1968; Kobasa, 1982; Taylor, 1982) Penman et al. (1986) found that locus of control was a consistent predictor of adjustment. They found that across all patient groups, women with an external locus of control were at greater risk for psychosocial maladjustment than those with an internal locus of control. Other predisposing factors that Penman et al. identify as related to postmastectomy psychosocial morbidity include pre-existing chronic illnesses, lower expectations of social support and other significant life stressors occurring in the three months preceding the surgery.

Other personality traits that have been cited as predisposing factors for maladjustment postmastectomy include a predisposition to depression and emotional lability (Dean, 1987; Morris et al., 1977; Worden & Weisman, 1977). In addition, age has also been considered a possible predisposing factor. Some researchers have hypothesized that younger women are more at risk for psychosocial morbidity

(Maguire, 1976; Jamison et al., 1978; Schain, 1988). Other researchers, however, claim that the older woman's reactions to a mastectomy may look different from her younger counterpart but are not lessened. Holland and Mastrovito (1980) contend that for young women feelings of attractiveness and fertility may be paramount whereas for older women it may be the threat to their life that is most important, particularly when other losses in their social environment may be occurring (i.e., the death of a spouse and/or friends). Goin and Goin (1981) cite anxieties about aging, fears of dependency, financial concerns and general declining health as midlife issues that contribute to the emotional distress older women experience in response to having a mastectomy.

Mastectomy patients' social support systems are also considered significant factors influencing the woman's postmastectomy adjustment. One important support group includes the health care providers upon whom breast cancer patients depend. The role of the surgeon in providing information, reassurance and emotional support is seen as central in alleviating mastectomy patients' anxiety and emotional distress (Asken, 1975; Holliand & Mastrovito, 1980; Quint, 1963; Ray & Baum, 1985; Silberfarb, 1984; Margolis & Goodman, 1983). By highlighting the positive, hopeful aspects of the patient's situation and by being sensitive to the needs of the patient's husband and family (i.e., in providing information and support), the surgeon can aid in a patient's rehabilitation (Goldsmith, 1971). In addition, health care support groups such as Reach for Recovery and Cancer Care, Inc. are also seen as important

in providing the mastectomy patient with information and emotional support (Asken, 1975; Klein, 1971; Holland & Mastrovito, 1980).

Another aspect of a patient's social support system that is seen as integral to her postmastectomy adjustment is the quality of her marital and sexual relationships with her spouse or partner both before and after the surgery (Bransfield, 1983; Dean, 1987; Jamison et al., 1978; Klein, 1971; Lewis & Bloom, 1979). Wellisch et al. (1978) conducted a study which assessed husbands' responses to their wives' mastectomies and its impact on their marital and sexual relationships. For these couples, resuming their sexual relationship was a difficult yet critical point in their adjustment to the surgery. Overall, the study found that the impact of the mastectomy was significantly lessened the better the marital relationship prior to the surgery. Those husbands who were included in the decision-making process surrounding their wives' mastectomies and who reported more satisfying sexual relationships prior to the surgery were ultimately less affected by the mastectomy. Schain (1988) contends that sexual morbidity in breast cancer patients and their partners is more widespread and more disruptive than has been previously noted. She states that impairments in a couple's postmastectomy sexual functioning can be the result of psychological, medical and/or relational factors. In particular, she identifies women who are young, have a high emotional investment in their breasts and who have not had the number of children they desire as being at increased risk for psychosexual difficulties postmastectomy.

There has been some speculation, though not empirically tested, that informing women of the option for breast reconstruction prior to surgery can minimize the psychological distress of a mastectomy (Asken, 1975; Cocke, 1977; Solomon, 1986). Dowden, Horton, Rosato and McCraw (1979) suggest that it may be therapeutic for the surgeon to discuss the possibility of breast reconstruction with patients because it gives them a more hopeful outlook toward living with the disfigurement of the surgery as well as providing them with a sense of the doctor's faith in the probability of the patient's survival. The Breast Cancer Digest (1984) states that "whether or not reconstruction is chosen, knowing it is available is a source of comfort and strength to many women who must undergo removal of a breast" (p. 85).

A woman's reaction to having a mastectomy and her emotional adjustment to this event also depends, to a large extent, upon the meaning she attributes to the loss of her breast and the degree to which this body part is connected to her sense of femininity, self-esteem and feelings of attractiveness (Bard & Sutherland, 1955; Goin & Goin, 1981; Margolis & Goodman, 1983; Renneker & Cutler, 1952; Schain, 1988). Each woman's reaction to having breast cancer and a mastectomy is unique, depending upon both the objective reality of her situation as well as the ways in which she interprets this event in light of her past and present experiences. Each woman's personal history determines the extent to which the loss of a breast affects her self-image and body image. For instance, Maguire concludes from his study of postmastectomy patients (1976) that a critical factor in each woman's adjustment to the loss of the breast

is the degree of emotional investment she had in her breasts prior to the mastectomy. Maguire observed that problems postsurgery were more likely among those women who considered their breasts a crucial feature of their figure.

As with any major surgery in which an important body part is altered or amputated, issues involving the changed body and one's body image become important in understanding the impact of the experience on the individual. The following section explores these issues in greater depth by providing a review of the literature on psychodynamic theories concerning the impact of mastectomy and other breast surgeries.

### **Psychodynamic Theories on the Impact of Mastectomy and Other Breast Surgeries**

In The Ego and the Id Freud stated that "the ego is first and foremost a bodily ego" and that "a person's own body... is a place from which both external and internal perceptions may spring" (Freud, 1923, pp. 15-16). These statements indicate Freud's view of the primacy of bodily experience in the development of one's self-image. Freud considered bodily experiences as fundamental to the development of the ego and as the means through which the initially undifferentiated organism develops an internal psychic organizational structure. He theorized that the intactness and integrity of one's body image are integral to the development and functioning of basic aspects of the self.

Schilder (1935), one of the earliest theorists on body image, viewed it as a dynamic, psychological process molded by interpersonal, environmental and temporal factors. Schilder defined body image as "the picture of our own body which we form in our mind, that is to say the way in which the body appears to ourselves" (p. 11). In this context, body image refers to the body as a psychological experience and focuses on the individual's feelings and attitudes, both conscious and unconscious, towards his/her own body.

Altogether, body image is considered by many theorists to be an integral part of one's self-image. There are numerous studies which demonstrate the impact of one's body image on other personality traits (Fisher & Cleveland, 1968; Jourard & Secord, 1955; Secord & Jourard, 1953). Secord and Jourard conducted a study (1953) on "body cathexis" which they defined as the degree of satisfaction reported by a person concerning aspects of his or her own body. Their findings revealed how integrally related an individual's body cathexis is to his or her self-concept. Secord and Jourard found that feelings of dissatisfaction with one's body were associated with general feelings of anxiety, insecurity and low self-esteem along with anxiety over pain, disease and bodily injury. In addition, they found that women were more highly cathected to their bodies than were men. Other researchers have also found that women, as compared to men, evidence a greater awareness of and concern about their physical appearance. In addition, researchers have found sex differences in terms of the ways in which men and women evaluate their bodies. Studies suggest that women tend to

judge their bodies more in terms of aesthetics whereas men tend to judge their bodies in terms of potency and activity (Cash, Winstead & Janda, 1986; Kurtz, 1969; Lerner, Orlos & Knapp, 1976). Not only is a person's physical appearance, in and of itself, a powerfully influential factor in other people's perceptions of them (e.g., the "what is beautiful is good" notion), but particularly for women, physical attractiveness has been shown to be even more directly connected to others' evaluations of them and to their own evaluations of themselves (Dion, Berscheid & Walster, 1972).

### The Psychodynamic Implications of a Mastectomy

Adamson, Hershberg and Shane (1976) state that depression is an expectable reaction to the removal of any part of the body, even when the surgical change is elective and for the better, because it produces a loss of something one previously had. Any major surgery disrupts one's sense of body integrity and intactness and the almost universal reaction to such a loss is that of grief, accompanied by depression and anxiety. As with the loss of any body part, Schoenberg and Carr (1970) state that the loss of a breast will be experienced as the death of a body part and may symbolize or be psychologically comparable to the loss of a significant person.

In considering the psychological reactions specific to a mastectomy, some researchers posit that it is the fear of death which cancer evokes rather than the loss of the breast which underlies their depression and anxiety (Goldsmith & Alday, 1981). The majority of researchers, however, understand the woman's

reaction as relating more to the loss of the breast and the importance she places on this body part in defining her womanhood (Bard & Sutherland, 1955; Clifford, 1979; Margolis & Goodman, 1983; Polivy, 1977; Renneker & Cutler, 1952; Rosser, 1981; Worden & Weisman, 1977). Understood in this context, the breast is seen as a symbol of femininity and motherhood; a body part intimately tied to a woman's gender and sexual identity. As distinct from other types of surgeries, the emotional impact of the amputation of the breast is expected to differ because of its potentially devastating effects on a woman's feminine self-image, sexuality and physical attractiveness.

Two seminal studies written in the 1950's consider the psychological implications of a mastectomy from a more indepth, psychodynamic perspective. Based upon the authors' clinical impressions of patients seen in their practices, Renneker and Cutler (1952) and Bard and Sutherland (1955) found that the loss of the breast was an emotionally traumatic experience for the majority of their patients. In their view, the mastectomy not only threatens the woman's internal feelings of body intactness and integrity but the change in her outward physical appearance also has important implications for her sexuality and relations with others. Even though these authors adopt a similar approach (i.e., a psychodynamic orientation) in their efforts to understand the woman's experience of a mastectomy, there are important differences in their interpretations of the intrapsychic meanings they attribute to the loss of the breast.

Renneker and Cutler (1952) claim that most women after a mastectomy will suffer a "postmastectomy depression" that includes persistent feelings of depression, anxiety, insomnia, suicidality, and feelings of shame and worthlessness. They conclude that this emotional response is not primarily due to the fear of cancer or death but to the loss of one of the woman's "most prized physical possessions" whose absence threatens "the very core of her feminine orientation" (p. 834). These authors believe that women define themselves solely through their bodies and their feminine roles and they see the breast as the emotional symbol of her sexuality and motherliness. Consequently, Renneker and Cutler assert that the trauma of losing a breast is in direct proportion to the degree to which "feminine achievement" has been attained through sexuality, husband and children. They conclude that younger, premenopausal women will be more traumatized by the surgery than older, postmenopausal women because the latter's breasts will have less dynamic significance since "they have served their purpose and she is now ready to accept their retirement" (p. 834).

Bard and Sutherland (1955) contend that there is no one general response to having a mastectomy, that each woman's individual reactions depend upon the meaning of the experience for her and the ways in which she has integrated her breasts into the framework of adult feminine functioning. These authors argue that an individual's reactions to breast development in puberty can vary (i.e., a girl can have feelings of pride, shame or resentment) and that the young girl's reactions depend, to a large extent, upon the mother-daughter relationship at this time. As an example, they describe a

young adolescent girl whose strivings for independence and sexual identity occur within the context of a restrictive and controlling mother-daughter relationship. In response to her mother's negative reactions to her developing body, the young girl may come to experience her developing breasts with guilt and anxiety and as a mature woman these feelings may be evoked in her unconsciously experiencing her mastectomy as punishment for her adolescent wishes of defiance. These authors conclude that experiences in puberty not only determine the meaning the young girl attributes to her breasts at that time but also impact upon the adult woman's experience of herself and of her mastectomy. In contrast to Renneker and Cutler (1952) who see the loss of the breast as the predominant concern of mastectomy patients, these authors claim that anxieties about the diagnosis of cancer, concerns about undergoing surgery and fears of death can also be the primary issues underlying patients' emotional reactions to having a mastectomy. In addition, they consider the importance of the woman's ability to cope with stress and the availability of social supports (e.g., her husband and surgeon) as important factors in facilitating the woman's adjustment postmastectomy.

There is a considerable range of opinions among psychodynamic theorists about the importance of the loss of the breast for the mastectomy patient. Goldsmith and Alday (1971) claim that for most patients the loss of the breast is insignificant and they suggest that women who react with overwhelming concern and depression in response to having a mastectomy may be unconsciously attempting to transfer a terrifying fear of death to the loss of their femininity.

Theorists such as Worden and Weisman (1977) emphasize the uniqueness of each woman's reactions to losing a breast. They claim that a woman's concept of her own femininity and its relation to her body image can range "from an inner sense of worth to an almost exhibitionistic devotion to physical appearance" (p. 170).

Theorists such as Margolis and Goodman (1983) and Rosenbuam (1979) agree with Renneker and Cutler's (1952) contention that the loss of the breast is the most devastating aspect of having a mastectomy. They hypothesize that for most adult women the breast is a highly invested body part and an integral part of their body image. They cite a number of reasons for the centrality of the breasts in women's self-images. First, they claim that the physical changes the adolescent girl experiences in puberty are more dramatic than for the adolescent boy in that the girl suddenly develops brand new body parts (i.e., breasts) that until then were entirely absent. With breast growth an entirely new body part is added, going well beyond enlarging upon already existing structures. These drastic physical changes lead the young girl to pay greater attention to this aspect of her physical appearance. In addition, the female's genitals are hidden from the self and others and, thus, are not readily available for consensual validation. The breasts are the most visible physical personal symbol of the girl's femininity which differentiates her from boys. Breasts provide physical evidence of a girl's sexual identity and, as a result, have great psychological importance to her. Also, the young girl hopes for and looks forward to developing breasts because they are like mother's and, as such, provide a concrete way in which she can identify with mother and

thus consolidate her own sexual and gender identities. Lastly, the fact that breasts become an important source of sexual pleasure is also considered a reason for their becoming psychologically significant. For all of these reasons, Margolis and Goodman argue that the loss of the breast for the mastectomy patient is almost always traumatic and may have long-lasting effects on the woman's body image, sense of femininity and sexuality.

### The Psychological Significance of Other Breast Surgeries

Clinicians and researchers considering the psychodynamic implications of other types of breast surgeries such as breast augmentation and breast reduction provide additional insights into women's feelings about this part of their body. Several of these authors highlight the importance of developmental events in shaping the adult woman's feelings about and satisfaction with her breasts. Goin, Goin and Gianni (1977), in writing about eight patients who chose to undergo breast reduction surgery, note that they all recalled feeling shy and self-conscious in early adolescence about having large breasts and that the majority reported that their breast development occurred early in relation to their peers. In adulthood, the majority of these patients were unable to experience sexual pleasure from their breasts. While these authors acknowledge that patients can differ widely in their emotional reactions to breast reduction surgery, they assert that those patients who manifest conscious and unconscious conflicts concerning their breasts (i.e., in evidencing feelings of disgust, hatred and/or shame) fair worse

postoperatively. These authors assert that for some breast reduction patients "their breasts had never been incorporated into their self-image but instead had always been seen as obstacles and handicaps, external to the patients themselves" (p. 533). In writing about this phenomena, Rosenbaum (1979) describes it as a disassociative phenomena in which the young girl experiences her new breasts as separate, "not me" appendages which do not belong to the rest of her body.

Baker, Kolin and Bartlett's study (1974) on patients seeking breast augmentation surgery also considered the women's developmental experiences as central in understanding their adult attitudes and self-perceptions. These researchers found that for these small breasted women adolescence was a period marked by feelings of inadequacy, self-consciousness and inhibited sexuality and that these feelings extended into their adulthood. Of the 132 breast augmentation patients who responded to Baker, Kolin and Barlett's mailed questionnaire, 65% reported that in adolescence their small breast size caused them to experience moderate to severe feelings of inadequacy; 43% reported feelings of depression and 47% reported feelings of inferiority and low self-worth.

Druss (1973) intensively interviewed six women who had undergone breast augmentation surgery. He also found that his adult patients' feelings of low self-esteem and concerns about their femininity and sexuality had begun at the time of puberty and possibly even earlier. Druss' questioning of his patients' preadolescent and adolescent experiences revealed significant disturbances in the mother-daughter relationship with most of the

women experiencing insufficient early maternal care. Druss concludes that the desire for breast augmentation stems from long-standing intrapsychic defects in which the absence or unavailability of the mother rendered the work of maternal identification incomplete in childhood and adolescence. He asserts that for these women, the breasts unconsciously symbolize the mother and that these patients are seeking a reunion with their mothers through a narcissistic identification with her. Through the surgery, these women are then able to obtain the feminine self-esteem their mothers had not provided for them at an earlier time in their lives.

Many of the researchers and clinicians cited in previous sections have indicated that adolescent developmental experiences can have a significant impact upon a woman's body image and self-concept, and consequently, may influence the way in which she experiences her mastectomy in adulthood. The following section will review current theories and research on female adolescent development in order to provide a more indepth understanding of the psychological implications of these maturational events and the ways in which they may influence the adult woman's experience of her mastectomy.

### **Theories and Research on Female Adolescent Development**

In the past fifteen years there has been a renewed interest in the psychology of women with a number of researchers adopting an interdisciplinary perspective that integrates biological, psychological and sociocultural factors. In recent years these researchers

have been particularly interested in studying early adolescence, viewing this time in the process of female development as having immediate as well as long-term significance (Brooks-Gunn, 1983; Lerner & Foch, 1987; Peterson, 1987).

Menarche, the girl's first menstrual period, has been traditionally viewed as the most important developmental event in puberty despite the fact that it occurs fairly late in the developmental process. Because most researchers and theoreticians have until now viewed the onset of menstruation as *the* critical developmental event in a female adolescent's development, extensive literature has been written on the psychological implications and reactions of girls to their first and subsequent menstrual experiences (Brooks-Gunn, 1983; Deutsch, 1944; Horney, 1967; Notman, 1983). In referring to menarche Peterson (1979) states, "It is a milestone but represents only one event, and a relatively late one, in a lengthy and complex biological process which transforms a physically immature girl into a physically mature woman" (p. 24). There has been surprisingly little interest in and attention directed towards understanding the psychological implications of the changes occurring prior to menstruation. Very few authors have written about adolescent girls' experiences of breast development although several have recognized its importance and have cited the need for more information concerning this long-neglected topic (Benedek, 1979; Brooks-Gunn, 1983; Deutch, 1944; Hurlock, 1973).

## Physical and Psychological Aspects of Adolescence

Adolescence is viewed as a distinct life stage, as a period of transition when an individual changes both physically and emotionally from a child into an adult. The term adolescence refers to all the phases of growth that occur, physical, cognitive and emotional, and it can extend from the early teens into young adulthood when the individual attains sexual maturity along with some degree of independent functioning. Puberty refers specifically to that aspect of adolescent development that involves sexual maturation and the biological changes that ultimately lead to reproductive maturity (Hurlock, 1973).

Puberty is a complex biological and maturational event spanning several years and is characterized by dramatic and rapid body changes that prepare the female body for reproduction. These major bodily changes include: (1) a growth spurt in height along with increased weight; (2) proportional changes in body composition (i.e., redistributions of fat which create a waistline, roundness of hips, broadening of shoulders); (3) the development of secondary sex characteristics such as the growth of pubic hair and the development of breasts; (4) the onset of menstruation (i.e., menarche). Menarche occurs fairly late in the sequence of maturational events with the average age of onset 12.8 years in the United States today. Secondary sex characteristics typically precede menstruation by several years. Regardless of whether a girl is an early or late maturer, breast development usually precedes menstruation by two

years with development occurring between the ages of eight and thirteen (Benedeck, 1979; Warren, 1983).

### Psychodynamic Theories on Adolescence

While psychoanalytic views of adolescent development are changing, psychodynamic theorists continue to view adolescence as a time of intense emotional struggle during which there is the reemergence of unresolved childhood sexual and aggressive conflicts. Within the context of reawakened oedipal strivings, castration anxieties along with issues involving separation-individuation and competition are prominent. In adolescence, sexual desires once fantasized about and previously repressed become more intense and have the possibility of being realized. Acceptance from same-sex and opposite-sex peers becomes extremely important as the adolescent strives to separate from the family and develop his or her own individual identity (Blos, 1980; Deutsch, 1944; Freud, 1962).

The young girl's ability to integrate her changing body and body image into her concept of self is considered to be one of the fundamental tasks of adolescence and one which has profound implications for her character development. Many of the important developmental challenges the female adolescent faces (e.g., individuation-separation, developing ego continuity and a sexual identity) involve the individual's perception and ultimate acceptance of her changing body and body image (Blos, 1962; Benedek, 1979). Many theorists consider the girl's resolution of these issues as the most

important albeit difficult developmental tasks of this period. Yet their understanding of the meaning and the implications of these changes with regard to one's personality development differ depending upon their theoretical orientation.

Traditional psychoanalytic theorists following the writings of Freud, posit a primarily phallogocentric view of female development. These theorists emphasize intrinsic biological factors as formative influences on the intrapsychic or fantasy life of women which then become the basis for their character development (Deutsch, 1944; Kestenberg, 1964; Rheingold, 1964). Within this theoretical framework, the basis for female development emanates from a wish for a penis followed by feelings of castration and genital inferiority when the girl discovers that this desired body part is missing. The occurrence of menarche in puberty is seen as "one of the traumata within the female castration complex " because the experience of menstruation evokes earlier feelings of bodily injury (i.e., castration) as symbolized in the literally bloody and painful experience of menstruating (Kestenberg, 1964, p. 24). As a result, narcissistic concerns for the welfare of the body predominate during this time. Deutsch (1944) sees the "feminine core" of personality as being narcissistic, passive and masochistic based upon this theoretical developmental construct. Rheingold (1964) and Margolis and Goodman (1983) claim that adolescents developing breasts experience tremendous emotional conflicts which stem from these earlier, unresolved genital organ conflicts. They contend that feelings of penis envy and genital inadequacy lead the girl to value her breasts as a substitute for the penis she does not have. This "upwards

displacement" results in girls harboring ambivalent attitudes towards their developing breasts, vacillating between feelings of narcissistic valuation and feelings of shame and inferiority. Along these same lines, they see girls' excessive interest in the hair on their heads as an upwards displacement from their genital hair which is a source of chagrin because it is associated with feelings of disfigurement (it lacks a penis) and revulsion. Rheingold also claims that most girls react with shame, guilt and terror to the first appearance of breasts because it evokes breast-rivalry with the mother along with the aforementioned conflicts around bodily mutilation.

Moving away from a primarily biological view of development, other psychodynamic theorists emphasize the importance of environmental factors such as sociocultural values and interpersonal experiences as having a significant influence on the adolescent girl's responses to puberty. These theorists consider the adolescent's relationship with her parents and, in particular, her relationship with her mother as central factors influencing the young girl's experiences in puberty. The mother's role is seen as twofold: (1) as an educator of sexual issues; and (2) as the primary object of identification regarding her sexuality (Lorand & Schneer, 1964).

Horney (1967) considers oedipal issues within the family constellation and the guilt and fear reactions they evoke as the primary determinants of the young adolescent girl's response to her increasing sexual desires. In response to the anxieties she experiences at this time, she may deny the changes occurring in her body

in order to ward off competition with mother or she may cling to men and develop an "insatiable thirst for male adoration" in her efforts to defeat mother (p. 238). Horney also sees the male response to female development as primarily one of envy. "Woman has in motherhood...a quite indisputable and by no means negligible physiological superiority....This is most clearly reflected in the unconscious of the male psyche in the boy's intense envy of motherhood" (p. 60). Horney asserts that the breasts symbolize the woman's capacity for pregnancy, childbirth and motherhood and thus are the focus of intense envy for men.

Benedick (1979) emphasizes familial dynamics, particularly oedipal issues, as integral to understanding the girl's early pubertal developmental experiences. In her view, breast development engenders feelings of rivalry with mother along with conflictual feelings of dependency and identification. Unconscious sexual fantasies evoked in the father from his daughter's emerging sexuality may result in his avoidance of her which she experiences as rejection or in seductive behaviors which create anxiety and discomfort. Benedick explains the frequent inability of adult women to recall the age of onset of breast development (while they can most often recall the age of onset of menstruation) as evidence of the extent to which repression and denial are used to cope with the confusion, anxiety and discomfort that this early stage of sexual development engenders. This "conspiracy of silence" around feelings of sexuality prior to menstruation is due to the unclarity surrounding the young adolescent's role in the family in that she is no longer a child but not yet an adult.

### Empirical Research On Adolescence

Altogether, only a few empirical studies have been conducted which focus on the psychological implications of early female pubertal development on adult behavior and personality development. Jourard and Secord's study (1955) of woman's perceptions of and feelings about selected body parts revealed that for all areas of the body, except breasts, smaller size was associated with greater satisfaction. Both Jourard and Secord (1955) and Fisher (1973) found that greater feelings of anxiety and negative affect were associated with women who perceived themselves as having breasts which were smaller than their ideal images for this body part. Kelly and Menking (1979) were also interested in the relationship between adolescents' early ideal images concerning their breasts and later behaviors and feelings of satisfaction with them. Their study consisted of interviewing 113 college women who were between 18 and 23 years old. As a general rule, they found the timing of development to be an important factor. Those women who were early and late maturers tended to recall more significant events and vivid feelings about their developing breasts than women who were average aged maturers. While they found that the timing of breast development had little effect on same-sex relationships, early and late maturers reported more problems in their opposite-sex relationships. Of those women who were able to remember their early developmental experiences (64% of those interviewed), nearly half (42%) remembered feelings of anxiety and distress while a somewhat greater percentage (58%) noted more positive feelings of

eagerness and hopefulness. The primary sources for all the women's ideal images were from observations of their own mothers as well as from peers and the media. In addition, Kelly and Menking found that nearly half of the women (43%) were dissatisfied with their present breasts, mostly because of size. Overall, however, these authors were unable to find a significant relationship between early ideals and later adult levels of satisfaction and behavior with regards to dress (e.g., going braless).

Other researchers have investigated the effects of the timing of maturation on the personalities of boys and girls. These researchers claim that adolescents who mature very early or very late have more emotional difficulties than other children their age (Shipman, 1964). Although the findings vary concerning the differential effects of the timing of maturation on boys and girls, a number of studies indicate that early maturation is more stressful for girls than for boys. Whereas early maturing boys tend to be more independent, more relaxed, more self-confident and popular, early maturing girls typically tend to be more anxious, self-conscious and more dissatisfied with their bodies and their physical appearance (Dwyer & Mayer, 1968; Peterson, 1987). Shipman (1964) found correlations between the timing of maturation and adult personality traits such that those women who in adolescence were early maturers tended to be more submissive, dependent and trusting as adults whereas women who were late maturers tended in adulthood to be more assertive, independent in their thinking and less dependent on others for approval. In explaining these differences, Shipman suggests that early maturing girls are cast into a passive-

receptive feminine role by virtue of their early development and typically remain this way into adulthood. In contrast, the late developing girl sublimates her sexuality and invests instead in intellectual pursuits and in developing a sense of mastery of her environment.

Recent researchers such as Brooks-Gunn and Peterson (1983) and Lerner and Foch (1987) have been interested in understanding young adolescent girls' experiences of puberty and, in particular, their attitudes about and reactions to menarche. They emphasize the role of expectations, socialization and contextual (family) factors as central in formulating the young girl's experiences. Four of the factors they consider most important include: (1) the timing of maturation; (2) preparation before menarche; (3) maternal attitudes about puberty; and (4) relations with and status among peers. Their findings indicate that girls have mixed reactions to menarche depending upon the "goodness of fit" between the girl's changing body and her expectations and values as determined by her family and peers. These researchers found that early maturing girls tended to have poorer body images and higher psychopathology than on-time maturers. Early maturers who were unprepared for their first menstrual period reported significantly more negative experiences associated with the first and subsequent menstruations (e.g., increased bodily discomfort, increased self-consciousness). Altogether, menarche had more immediate and longer-term negative associations among girls who not only matured early and were unprepared but who also were members of families in which there were prohibitions against talking about these issues. Brooks-Gunn's

research also included some preliminary questions about breast development. While her current, ongoing research is exploring this aspect of development in greater depth, her initial findings suggest that the young girl's perceptions of her parent's reactions to her growing breasts and her ability to discuss these changes with her parents and peers are integral factors in determining her feelings about her body and feminine self-image.

Altogether, one issue about which empiricists and theoreticians in this area of study tend to agree is that experiences in adolescence involving the young girl's physical (i.e., pubertal) development can have significant and potentially long-lasting effects on the adult woman's body image as well as her sense of self. For a variety of reasons, breasts are especially important to the young girl in adolescence and they continue to be an important aspect of her sexual and gender identity in adulthood. If a fuller, more complex understanding of each woman's response to having a mastectomy is to be realized, investigators need to consider the influence of these adolescent developmental experiences on the woman's experience. Similarly, these factors may also be influential in determining women's responses to the option of breast reconstruction. That is, the same issues that may influence women's emotional responses to the loss of a breast may also influence their reactions to and decisions regarding the regaining of the lost breast through reconstruction. In the following and last section of this chapter, a review of the literature on breast reconstruction will be provided before proceeding with the statement of purpose and hypotheses upon which this study is based.

## Issues Regarding Breast Reconstruction

Plastic surgeons have been experimenting with methods of breast reconstruction since the late 1800's. However, significant advancements in the technical and cosmetic aspects of this surgery were not realized until the 1960's when plastic surgeons began to use silicone implants in the reconstructive procedure. Today, there are several methods of breast reconstruction which rebuild the breast contour for the mastectomy patient. In one method, the simple implant procedure, a silicone or saline gel implant is placed under the chest muscle. Sometimes a temporary tissue expander may be used to stretch the skin at the mastectomy site so that when the permanent implant is inserted it will match the size of the opposite breast. Other methods of breast reconstruction are more complicated and involve the moving of tissue from one part of the body to the other. The implant-flap procedure (also called the latissimus dorsi reconstruction) involves taking a tissue flap, usually from the back, and transferring it to the mastectomy site. This is done when more extensive tissue has been removed or if the remaining skin after the mastectomy is unsuitable for a simple implant. The abdominal advancement reconstruction is often used for women who are large breasted. In this procedure, the surgeon advances skin and fat from the chest and abdomen below the mastectomy site to the breast area. Lastly, the rectus abdominus reconstruction involves the transfer of one of the abdominal muscles along with skin and fat from the abdomen to the breast area. The surgeon then shapes this flap of muscle, skin and fat into

the contour of the breast. Of all the procedures, the simple implant is the most common one chosen by mastectomy patients who opt to reconstruct their breasts. An optional procedure following all types of breast reconstruction involves reconstruction of the nipple and areola. Oftentimes, skin from other parts of the body (e.g., the upper inner thigh, skin from behind the ear, the vaginal lips) is used for these reconstructions (National Cancer Institute, 1986; Solomon, 1986).

The timing of reconstruction is an area of continuing controversy. The issue for many clinicians is not whether to reconstruct a patient's breast but to determine when is the best time to perform the reconstructive surgery (Schain et al., 1985). While clinicians' definitions vary regarding the time periods in which breast reconstruction might occur, there are basically two options. Immediate reconstruction generally refers to breast reconstructions done at the time or within days of the mastectomy. Delayed reconstructions are done some time postmastectomy, ranging from a number of months to years. While the debate still remains, the majority of reconstructions are done approximately six months postmastectomy (National Cancer Institute, 1986; Teimourian, 1982). Many surgeons favor delayed reconstruction for medical reasons (e.g., to insure that the wounds from the mastectomy have healed and that postoperative pathologic exams confirm that the cancer has been completely removed) as well as psychological reasons which include allowing the patient time to deal with the loss of her breast and to reassess her desire for reconstruction. These surgeons assert that patients who live for a

period with the deformity will be more accepting of the limitations of the reconstructive surgery and, as a result, their degree of satisfaction will be enhanced (Luce, 1983).

### Medical and Psychological Considerations

Despite the fact that continuing medical improvements have made breast reconstruction a realistic alternative for virtually all mastectomy patients, only a small percentage, less than 20%, afford themselves of this opportunity (Luce, 1983; Temourian, 1982). Goin and Goin (1981) suggest that patients' use of denial in dealing with the mastectomy may impact upon their decision regarding reconstruction. They claim that patients who are in denial will minimize the importance of the lost breast and consequently will initially reject the option of reconstruction. These authors assert that as the denial diminishes with time, these patients will often change their minds and decide to have reconstruction done. Goin and Goin (1981) also found that with older patients' feelings of shame and embarrassment about desiring breast reconstruction are frequently experienced as these women tend to harbor the idea that this issue shouldn't matter to women their age. Lack of knowledge about the affordability and the availability of this procedure may also, in part, explain the low percentage of women who opt to reconstruct (National Cancer Institute, 1984). General surgeons' negative attitudes may also be a factor contributing to the low percentage of women who opt for the procedure. In fact, a number of studies have shown that the majority of mastectomy patients who opt to

reconstruct report that they did not learn about breast reconstruction through their general surgeons but through literature, television and other women who had undergone the surgery themselves (Filiberti et al., 1986; Schain et al., 1985; Teimourian, 1982). An additional factor may be that mastectomy patients are reluctant to have the reconstruction surgery out of concern that it is not medically safe or that the procedure will not be successful (Broadwater, 1988; Goldrich, 1988).

Overall, general surgeons have been opposed to breast reconstruction after a mastectomy for a variety of reasons. The foremost concern of the majority of general surgeons is to cure the patient of cancer (i.e., to save her life). Oftentimes, they are uncomfortable dealing with the emotional needs of their patients and, consequently, are less likely to take into account the whole patient or to consider the importance of the quality of her life once it has been saved (Goin & Goin, 1981; Teimourian, 1982). In addition, many general surgeons view breast reconstruction as meddling and unnecessary and adopt the attitude that women who have undergone mastectomies should learn to live with the deformity (Luce, 1983; Mendelson, 1981).

Another reason general surgeons have been reluctant to encourage breast reconstruction after mastectomy is because they have claimed that the medical risks associated with doing the surgery far outweigh the potential benefits. They have voiced concerns that breast reconstruction may either incite the local recurrence of cancer or impede the detection of a recurrence if it should occur. They have also expressed concern that breast

reconstruction may impede treatment if there is a recurrence of the breast cancer. Proponents of reconstruction claim that, to date, there is little or no evidence to support these medical concerns (Luce, 1983; National Cancer Institute, 1986; Schain et al., 1985). However, others have confirmed that complications with detection may occur and that they warrant serious consideration. For example, Granick, Bragdon and Hanna (1987) express concern about the masking of a recurrent tumor with reconstruction and cite instances in which undetected recurrent carcinomas were not found until the time of the reconstructive procedure. In addition, there are some dangers associated with the procedures. With the implants, two of the most common medical problems are: (1) encapsulation, a constriction of the scar tissue which makes the breasts look and feel like a baseball; and (2) rupturing of the implant from stress or trauma which may result in pain, toxicity or autoimmune diseases like lupus or rheumatoid arthritis (Goldrich, 1988; Solomon, 1986). The financial costs of the surgery have also been cited as problematic despite the fact that most major health insurance policies provide coverage for this procedure because they consider the reconstruction surgery rehabilitative rather than simply cosmetic (Dowden et al., 1979).

Some physicians have asserted their belief that the desire for breast reconstruction signifies a basic characterological defect in these women. Goldsmith and Alday (1971) claim that the woman's desire for breast reconstruction reflects an inability on her part to accept the loss of her breast. From their perspective, these patients have an abnormal obsession with the lost breast and they recommend

disregarding the patient's request for breast reconstruction, claiming that with time most patients will ultimately change their minds. Cocke (1977) suggests that those women who seek reconstruction may have been extremely breast-conscious all their lives and that the development of breast cancer simply accentuates this long-standing body image problem. He warns surgeons to be wary of patients who insist on reconstruction, claiming that because of their intense interest in their self-image they may have unrealistic expectations of the surgery and consequently will feel dissatisfied with the results. Patients' dissatisfaction with the aesthetic results of the reconstructive surgery along with concerns that providing the option of breast reconstruction may lead to false hopes and unrealistic expectations of cure have also been frequently voiced concerns (Cocke, 1977; Dowden et al., 1979; Mendelson, 1981).

Other physicians, however, view the desire for reconstruction in a more positive light and some have expressed admiration for these women, describing them as possessing courage as well as initiative (Teimourian, 1982). Clifford (1979) agrees with Asken (1975) that breast reconstruction is the only realistic solution to the problem of disfigurement caused by a mastectomy. He views the woman's desire for reconstruction as "a healthy drive for bodily restitution"; as an effort to achieve normalcy by rejecting what appears to them to be a remedial physical defect (Clifford, 1979, p. 30).

Some recent researchers contend that the demand for breast reconstruction is on the rise and that it will increase considerably

in the future. They attribute this increased demand to the public's greater awareness of and knowledge about this type of surgery as well as to the changing attitudes among surgeons and general practitioners who were once more skeptical but are now aware that this operation has no effect on the course of the disease or on the chance of recurrence (Filiberti et al., 1986).

While these medical and psychological issues have been important to consider with regard to breast reconstruction, researchers interested in the psychosocial aspects of breast reconstruction have focused on assessing the impact of breast reconstruction on the psychosocial adjustment of postmastectomy patients and, to a lesser extent, in determining women's reasons for choosing reconstruction after mastectomy.

### Research on Breast Reconstruction

There are relatively few published studies that evaluate the psychosocial aspects of breast reconstruction following mastectomy. Of these few, the major focus has been to determine the extent to which breast reconstruction impacts upon postmastectomy adjustment. A secondary concern among researchers has been to assess whether the timing of the reconstruction also plays a role in effecting patients' psychosocial functioning. These studies have also sought information concerning patients' reasons for choosing reconstruction and their level of satisfaction with the surgical results (Clifford, 1979; Dean, Chetty & Forrest, 1983; Goin & Goin, 1981; Noone, Frazier, Hayward & Skiles, 1982; Schain et al., 1985;

Stevens et al., 1984; Wellisch, Schain, Noone & Little, 1985). The methodological limitations previously noted in the studies of patients' adjustment to mastectomy hold true for these studies as well. Frequently interviews alone are used to collect information without validation from standardized tests and subjects vary greatly in terms of age, course of treatment and time since mastectomy and reconstruction. None of these studies compare women who had chosen reconstruction with those who had not done so although several acknowledge the importance of doing so (Goin & Goin, 1981; Stevens et al., 1984). In addition, these studies take into consideration only current factors that might be impacting upon the patient's situation. They do not take into account the patient's history or the past developmental experiences which may influence her experience of the mastectomy and her decision regarding breast reconstruction.

Overall, the findings of these studies provide consistent, empirical evidence that contradicts many physicians' biases about the psychological characteristics and problems in adjustment of breast reconstruction patients. The research has shown that the women who choose reconstruction do not evidence significant characterological or emotional problems. Goin and Goin (1981) found no evidence in their research that the women who opted for reconstruction were particularly breast-conscious before mastectomy. From his interviews of 65 postmastectomy breast reconstruction patients, Clifford (1979) found that the majority of women did not evidence significant emotional difficulties in accepting the loss of their breast nor did they choose reconstruction

to solve emotional problems. Schain et al. (1985) and Clifford (1979) found that the majority of women who choose breast reconstruction do so for neither unrealistic reasons (e.g., to improve their marriages) or because of pressure from significant others. Both studies found that the most common reasons women gave for choosing breast reconstruction were to get rid of the external prosthesis, to be able to wear more types of clothes and to restore to them feelings of wholeness and body integrity. Their findings suggest that the external prosthesis is not incorporated into the woman's body image but instead is continually experienced as a foreign object, a nuisance and a reminder of the disease. They conclude that the majority of women who choose to reconstruct do so because of a personal need that stems from their having an internal sense of their femininity and body image as damaged by the mastectomy. The women express these feelings in terms of wanting "to feel whole again", "to feel more balanced" and "to feel more feminine" (Schain et al., 1985, p. 42).

As to surgeons' concerns that patients will be dissatisfied with the results, the overwhelming majority of patients, typically greater than 90%, report being satisfied with the surgery. In addition, most women report feeling less self-conscious, more self-confident and comfortable with their bodies after the reconstruction has been done (Clifford, 1979; Noone et al., 1982; Schain et al., 1985; Stevens et al., 1984; Wellisch et al., 1985).

Overall, studies evaluating the effects of the timing of reconstruction have found that patients who undergo immediate reconstruction evidence less psychosocial morbidity than those

having delayed reconstruction. Dean et al. (1983) in comparing women who were randomly assigned to undergo immediate versus delayed reconstruction, found that after three months the psychological morbidity among the immediately reconstructed patients was significantly lower than in the delayed reconstruction group. At both three and twelve months, significantly fewer women in the reconstruction group regarded their appearance as ugly or mutilated. Stevens et al. (1984) found that the women who were immediately reconstructed were less depressed, reported less feelings of mutilation and less impairments in their sexual functioning as compared to the women who underwent delayed reconstructions. In addition, these researchers found that the women who had immediate reconstructions experienced their reconstructed breast as a restoration of the previous breast rather than as a replacement for it. They conclude that when breast reconstruction is done immediately the reconstructed breast is better integrated into the woman's body image and thus facilitates better postsurgical adjustment. Wellisch et al. (1985) found that a significantly lower percentage of patients who undergo immediate reconstruction report high levels of distress in recalling their mastectomy experience. They conclude that "the maintenance of a breast contour throughout the mastectomy period lessens the trauma of the ablative experience and, indeed, may influence subsequent adjustment in a positive manner" (p. 718).

## Summary

Overall, the numerous studies reviewed in this chapter highlight the powerful emotional repercussions that a mastectomy incurs. Of the hundreds of thousands of mastectomy patients each year who must cope with having breast cancer and the loss of a breast, many will experience depression, anxiety, lowered self-esteem, feelings of mutilation and an altered body image, a loss of feelings of femininity and impaired sexual functioning. In their quest to help women cope with this potentially devastating experience, investigators in the field of psychosocial oncology have identified a variety of current, situational factors that can affect a woman's postmastectomy adjustment. These include her age, marital status, coping style, premorbid personality traits and the quality of her social support network. In addition, studies have shown that the impact of a mastectomy may be lessened for those women who opt for breast reconstruction.

It is this researcher's contention that in formulating a more complete understanding of women's adjustment postmastectomy, it is necessary to consider the constellation of intrapersonal factors that contribute to her interpretation of the experience and the meaning she attributes to the loss of her breast and the possibility of its restitution through reconstruction. The extent to which a woman is emotionally invested in her breasts and the centrality of this aspect of her body in defining her womanhood and sense of self are integrally tied to her emotional reactions to having a mastectomy as well as her subsequent postmastectomy adjustment.

A substantial number of studies have confirmed that there is a connection between adolescent development experiences and adult personality functioning, particularly with regard to body image issues. Specifically, it is the young adolescent's experiences in puberty which are seen as central in defining her sense of femininity and sexuality in adolescence as well as in adulthood. Despite the importance and relevance of this work for the field of psychosocial oncology, to date this perspective has not been incorporated into the research of investigators in this field of study. It is this researcher's contention that a fuller, more complex understanding of the issues concerning women's adjustment to mastectomy and their decisions regarding breast reconstruction can only be achieved when the past as well as the present in women's lives are considered.

### **Statement of Purpose and Hypotheses**

This research project sought to identify the current as well as the developmental factors that impact upon women's postmastectomy adjustment and their decisions regarding breast reconstruction. The two primary questions this study was designed to answer were:

- (1) What factors differentiate those women who choose breast reconstruction from those who do not?
- (2) What factors differentiate those women who have greater or lesser difficulties in their emotional adjustment postmastectomy?

Both empirical and more qualitative, exploratory research techniques were utilized to obtain the data for this study. By incorporating both approaches in this research project, this investigator sought to uncover new, unexpected findings in addition to confirming or disconfirming the findings of previous empirical studies. In the following chapter a detailed description of the measures utilized in this study will be provided. The specific hypotheses that were tested by this study are described below.

With regard to the factors differentiating the decision groups, it is hypothesized that:

- (1) The women who choose to reconstruct will be younger at the time of the mastectomy than the women who choose not to reconstruct;
- (2) The women who choose to reconstruct will evidence a greater decrease in self image (i.e., in terms of feelings of femininity, physical attractiveness, sexuality and sense of wholeness) as a result of the mastectomy than the women who choose not to reconstruct;
- (3) The women who choose to reconstruct will evidence a greater investment in their appearance in adolescence as well as in adulthood than the women who choose not to reconstruct.

With regard to the factors differentiating postmastectomy emotional adjustment, it is hypothesized that:

- (1) Poorer psychosocial adjustment will be associated with having a greater decrease in self image as a result of the mastectomy;

(2) Poorer psychosocial adjustment will be associated with having an external locus of control;

(3) Poorer psychosocial adjustment will be associated with a greater investment in one's appearance in adolescence as well as in adulthood.

## Chapter III

### METHOD

#### Overview of Procedure

Forty-one women who had undergone a unilateral modified radical mastectomy for cancer of the breast were the participants in this study. At the time of the study, none of the women had undergone breast reconstruction. However, for all of the women postmastectomy breast reconstruction was an option available to them. Of the 41 women who were the participants in this study, half of them ( $N = 20$ ) had decided in favor of breast reconstruction and were planning to undergo reconstructive surgery at some time in the future. The remaining half of the participants ( $N = 21$ ) had decided they were not interested in breast reconstruction after mastectomy and thus were not planning to pursue this option.

Standardized measures and personal interviews were used to obtain the information sought in this study. Four of the measures were paper-and-pencil tests which were mailed to the participants prior to their meeting with this researcher for an indepth interview. These measures were: (1) Beck Depression Inventory, (2) Spielberger's State-Anxiety Inventory, (3) Levenson's Locus of Control Scale, and (4) a Body Image Scale. Appendix B contains copies of these measures.

The personal interviews used in this study were the Adolescent Development Interview and the Mastectomy and Breast Reconstruction Interview. Appendices C and D contain copies of these interviews. Thirty-two of the 41 participants (78%) readily

agreed to have the interview conducted in their homes. Twelve percent of the participants (8 women) met with this researcher in their places of work and one interview was conducted in a neighborhood diner. The interview typically lasted about 90 minutes.

Ninety-three percent of the women completed the tests as instructed and had them available for collection at the time of the interview. Of the 3 participants (7%) who did not have the tests completed for the interview, all of them subsequently returned their completed tests by mail with only 1 of the participants failing to complete one test. On average, the women reported that it took them between 30 to 45 minutes to complete all of the paper-and-pencil tests.

## **Participants**

### **Recruitment**

After presenting this study to members of the Board of Directors of the Long Island Division of the American Cancer Society (ACS), they agreed to help recruit participants for this research project by contacting women through the mail who had recently been seen in their Reach to Recovery program. For the purpose of maintaining confidentiality, ACS volunteers handled the mailings so that this researcher did not know to whom the recruitment packets were sent. The packets contained three items: (1) a letter of introduction and support written by the Long Island ACS Director of Medical Affairs; (2) a letter written by this researcher describing the study's purpose and design as well as the criteria for

participants' inclusion in the study; and (3) a stamped, ACS-addressed postcard. Women who were interested in participating in the study were asked to write their name, address and telephone number on the back of the postcard and return it by mail. After the postcards were received at ACS headquarters, they were forwarded to this researcher who then telephoned the respondents to confirm that they were viable participants (i.e., that they met the selection criteria outlined in the recruitment letter) and to schedule the personal interview. In addition, each woman was asked at this time about her decision concerning breast reconstruction. The woman's answer (whether she was or was not planning to reconstruct) determined into which decision group she was placed. Appendix A contains the letters included in the recruitment packet.

In determining which Reach to Recovery patients would receive a recruitment packet, only patients' addresses could be used as selection criteria since additional information (e.g., the patient's age, marital status, date and type of surgery) was not accessible on the ACS computer filing system. Consequently, packets were mailed to 250 randomly selected postmastectomy patients who were living on the North Shore of Long Island. This area of Long Island was selected because its residents tend to be similar in terms of income (middle to upper middle class) and level of education. The response rate to this first mailing was surprisingly low. Altogether, only 4% responded to the mailing. Of these, only 3% (7 women) ultimately participated in the study because several of the women who responded did not meet the selection criteria. While it was unclear exactly why the response rate was so low, at the time the most

likely explanation seemed to have to do with the sample of patients to whom the recruitment packets were sent. It seemed likely that the low response rate reflected the large percentage of women who had received the packets but who did not meet the selection criteria (e.g., they were over 60 years old, unmarried, had undergone a lumpectomy, etc.). A second mailing of 250 packets was sent with two criteria extended (age and time since surgery) in the hopes of increasing the response rate. Again, however, the return was surprisingly low with only 5% responding in total. Of these, only 3% met the eligibility requirements enabling them to participate in the study. Altogether, the ACS mailings recruited only 14 participants (34%) of the total study sample.

Clearly, additional recruitment efforts were needed if a viable sample size was to be realized. When asked if they knew other women who might want to volunteer to be in the study, participants who had already been recruited provided nine women (22% of the study sample) and this researcher's personal contacts recruited three participants (7%). The remaining 37% of the participants (15 women) was obtained through a variety of other breast cancer support groups located in the tri-state area (e.g., two ACS chapters in Westchester and Queens, the Oncology Support Program at Adelphi University's School of Social Work and several other breast cancer support groups located in New York City and on Long Island). Table 1 contains a summary of participant recruitment sources.

Throughout this phase of the study, this researcher experienced a surprising amount of difficulty recruiting participants. In addition to the Long Island ACS mailings, 250 recruitment packets

Table 1Participant Recruitment Sources

Sources	Number of Participants	Percentage of total
Long Island Division, ACS*	14	34%
Participant Referrals	9	22%
Westchester Division, ACS	5	12%
Adelphi Univ., School of Social Work Oncology Support Program	4	10%
Other Breast Cancer Support Groups	4	10%
Personal Contacts	3	7%
Queens Division, ACS	2	5%
<b>Total</b>	<b>41</b>	<b>100%</b>

\*American Cancer Society

were subsequently mailed from the ACS chapter in Queens. This mailing resulted in a zero response rate; not one woman returned a postcard! Similarly, several self-help group leaders who expressed enthusiasm for the study and agreed to talk to the women in their groups were unable to obtain any volunteers. It was only when this researcher attended three support group meetings and spoke in person about the study that 3 women (out of the 40 who attended these meetings) volunteered to participate.

There are several possible explanations for the low response rate to the ACS mailings and to the difficulties encountered in recruiting participants for this study. While it is still unknown what percentage of the women who received recruitment letters were ineligible simply because of the study's exclusion criteria, the low response rates in other settings suggest there may be other contributing factors. It is possible that the impersonal nature of the letters along with people's increasing tendencies to distrust researchers and the studies they conduct may, in part, explain the high refusal rate. The fact that nearly a quarter of the participants in this study were recruited by other participants suggests that these women are more likely to get involved when someone they know personally and thus like and trust encourages them to volunteer. In addition, given the extremely personal nature of having a mastectomy, many women may still feel reluctant to identify themselves as having had this type of surgery and to talk openly about their experiences with "outsiders" despite the recent publicity surrounding breast cancer and the increasing awareness of its prevalence among American women today.

### Criteria for Selection

The criteria for the selection of participants in the study were:

1. All participants had to have undergone a unilateral modified radical mastectomy within the past 7 years.
2. All of the participants had to have the *option* of postmastectomy breast reconstruction available to them. In addition, all of the participants had to have made a decision about reconstruction (either in favor of it or against it) by the time of the study although none of the participants could as yet have undergone any phase of the reconstruction surgery.
3. None of the participants could *currently* be undergoing either chemotherapy or radiation therapy.
4. All participants had to be 60 years of age or younger.
5. All participants had to have a minimum of a high school education.
6. All participants had to be married or with a long-term partner.
7. All participants had to have equivalent monetary resources (e.g., sufficient insurance coverage and/or financial savings) to cover the cost of breast reconstruction surgery.

### Sample Characteristics

All of the participants in this study were married or partnered, white women who had undergone a unilateral modified mastectomy for cancer of the breast. For the purpose of this study, the 41 participants were divided into two groups: those who were choosing to reconstruct ( $N = 20$ ) and those who were choosing not to

reconstruct ( $N = 21$ ). See Table 2 for a summary of the sample characteristics described in this section.

The mean age of the women in the reconstruction group (RG) was 45.2 with the women's ages ranging from 36 to 60 years. In this group, the majority of the women (85%) were under 50 years of age. The mean age of the women in the No Reconstruction Group (NRG) was 49.6 with the women's ages ranging from 35 to 60 years old. In this group, the women were almost evenly divided with 52% of the women under 50 years of age and 48% between 50 to 60 years of age.

Among the RG, the surgery had occurred, on average, 14.4 months ago with the months ranging from 2 to 56. Among the NRG, the surgery had occurred, on average, 33.4 months ago with the months ranging from 9 to 74. In addition, the mean age at the time of the mastectomy was 46.3 for the RG whereas for the NRG the mean age was 52.5.

With regard to education, the majority of the participants in both groups (approximately 65%) had completed college and post-college degrees and an additional 8 participants (20%) had at least some years of a college education. In addition, approximately 80% of the women in both groups were currently employed. Of those not employed, 3 were retired, 4 were homemakers and only 1 woman was on disability since being treated for breast cancer. With regard to religious affiliations, 39% of the participants were Catholic; 39% were Jewish; and 10% were Protestant. Across both decision groups, the average household income for the previous year was estimated at \$50,000 and above. Thus, the overwhelming majority of the participants in this study (90%) were in the upper-middle income

Table 2Sample Characteristics

Variable	Reconstruction Group (N = 20)	Non-Reconstruction Group (N = 21)
<u>Mean Age</u>	45.2 (5.76)*	49.6 (7.67)
<u>Mean Months Since Mastectomy</u>	14.4 (11.12)	33.4 (22.24)
<u>Education</u>		
High school	15%	19%
Some College	20%	19%
College Graduate	25%	19%
Postcollege	40%	19%
<u>Employment</u>		
Employed	80%	81%
Unemployed	20%	19%
<u>Total Household Income</u>		
Mean Income per year	\$45,000 (1.10)	\$46,000 (0.67)
% over \$40,000	90%	90%
<u>Religion</u>		
Catholic	35%	43%
Jewish	45%	33%
Protestant	5%	14%
Other	10%	5%
None	5%	5%
<u>Mean Years Married</u>	18.1 (10.12)	20.00 (9.79)
<u>Location of Surgery</u>		
Left Side	35%	57%
Right Side	65%	43%
<u>Adjuvant Therapies</u>		
Chemotherapy &/or Radiation therapy	55%	57%
Hormone therapy	15%	5%

\* Standard Deviation

ranges. With regard to the marital status of the participants in this study, 93% were married and 7% were partnered for at least five years. On average, the RG was married for 18.1 years and the NRG was married 20.0 years.

Concerning medical characteristics related to the breast cancer, 46% of the participants in this study had had the mastectomy on their left side and 54% on their right side. While none of the women were undergoing chemotherapy or radiation therapy at the time of the study, slightly more than half of the women in both groups had undergone one or both adjuvant therapies postmastectomy. In addition, only 4 of the women (10%) were receiving hormone therapy treatment (e.g., Tamoxifen, Prednisone) at the time the study was conducted.

## **Instrumentation**

### **Paper-and-Pencil Measures**

(1) **Beck Depression Inventory:** This measure is a 21-item, 4-point Likert-scale test that measures the physical, behavioral, affective and cognitive manifestations of depression. The range on this inventory is from zero to 63 with higher scores representing increasing severity of depressive symptomatology. Using Chronbach's Alpha, the internal consistency for this measure was determined to be .82 which was consistent with the findings of Beck and Steer (1987) for nonclinical populations.

(2) **State-Anxiety Inventory:** This measure was designed by Spielberger et al. (1973) and is a 20-item, 4-point Likert-scale test that evaluates an individual's current level of anxiety. This measure includes questions concerning an individual's current feelings of tension, nervousness, worry and apprehension. Scores range from zero to 80 with higher scores representing higher levels of anxiety. Using Chronbach's Alpha, the internal consistency for this measure was determined to be .94 which was consistent with the findings of Spielberger et al. (1983) for normative adult samples.

(3) **Internal-External Locus of Control Scale:** This scale was designed by Levenson (1974) and is a revised version of Rotter's Internal-External Locus of Control Scale (1966). This test measures the extent to which individuals attribute the locus of control for life events to three possible sources: Internal (I), Powerful Others (P), and Chance (C). Each of the scales consists of eight items in a Likert-scale format totalling 24 items. Levenson reports Kuder-Richardson reliabilities of  $r = .64$  (I);  $r = .77$  (P); and  $r = .78$  (C) and Spearman Brown split-half reliabilities of  $r = .62$  (I);  $.66$  (P); and  $.64$  (C). Unfortunately, the alpha coefficients were found to be much lower in this study such that  $r = .46$  (I);  $r = .64$  (P); and  $r = .79$  (C). In addition, a significant intercorrelation among the three scales was found between the Powerful Others and Chance scales ( $r = .55$ ;  $df = 41$ ;  $p = .001$ ). Because of the low internal consistency of the Internal scale, the findings pertaining to this scale will not be reported.

(4) **Body Image Scale:** This scale is an unstandardized test developed specifically for mastectomy patients by researchers at the University of California Human Sexuality Program and it has been used by Regina Kriss in her research with mastectomy patients (1981 & 1982). This body cathexis scale asks subjects to rate different areas of their bodies from three perspectives. These include the women's feelings toward specific body areas (Scale A); their feelings about touching these body areas (Scale B); and their feelings about having their partners touch these body areas (Scale C). Subjects were presented with a drawing of a female figure and were asked to rate on a 5-point, Likert-scale their degree of like/dislike of the 17 body areas demarcated on the figure. Higher scores correspond with a greater degree of dislike and/or discomfort with areas of one's body and thus represent a more negative body image. The alpha coefficients for these scales were  $r = .78$  (Scale A);  $r = .86$  (Scale B);  $r = .83$  (Scale C).

#### Scales Derived from the Interview

(1) **Mastectomy Impact Scale:** This scale measures the extent to which certain aspects of a woman's self-image and body image have changed as a result of having undergone a mastectomy. The four questions that comprise this scale were scored on a 4-point scale ranging from not at all (0) to extremely (3). The scale was derived from the work of Daniel (1985). Using Cronbach's Alpha, the internal consistency for this measure was determined to be .86. The four questions included in the scale were:

- (a) To what extent do you feel the mastectomy has affected your sense of wholeness?                    not at all/slightly/moderately/ extremely
- (b) To what extent do you feel less physically attractive now since the surgery?                    not at all/ slightly/ moderately/ extremely
- (c) To what extent do you feel less sexually desirable now since the surgery?                    not at all/ slightly/ moderately/ extremely
- (d) To what extent do you feel less feminine now since the surgery?                    not at all/ slightly/ moderately/ extremely

**Marital Functioning:** The following five questions were used to assess the quality of the marital relationship and the sexual functioning of the postmastectomy patient with her husband or partner.

- (a) How would you characterize the quality of your marriage relationship prior to the mastectomy?                    poor/fair/ good/ excellent
- (b) How would you characterize the quality of your marriage relationship now?                    poor/ fair/ good/ excellent
- (c) How would you characterize your sexual relationship with your husband before the mastectomy?                    poor/ fair/ good/ excellent
- (d) How would you characterize your sexual relationship now?                    poor/ fair/ good/ excellent
- (e) On the whole, how would you rate the stability of your marital relationship since the surgery?                    poor/ fair/ good/ excellent

From these preceding five questions, the following scales were derived:

**(2) Overall Marital Functioning Scale:** Using all five questions, this scale provides a score which reflects the overall marital and

sexual functioning of the postmastectomy patient with her husband/partner both before and after the woman's mastectomy. The responses were scored on a 4-point scale ranging from poor (0) to excellent (3). Total scores ranged from zero to 20 with higher scores indicating better overall marital and sexual functioning and lower scores indicating poorer overall marital and sexual functioning. The Cronbach Alpha coefficient for this measure was .81.

**(3) Current Marital Functioning Scale:** This scale is based on the same scoring system described above but only includes questions (b), (d) and (e). Thus, this score reflects the current marital and sexual functioning of the woman and her husband or partner and does not include an assessment of the marriage/partnered-relationship prior to the woman's mastectomy. The Cronbach Alpha coefficient for this measure was .89.

**(4) Difference in Marital Functioning Scores:** These scores were computed by subtracting each participant's evaluations of the marital functioning and sexual functioning before the mastectomy from her evaluations of these same aspects of the relationship after the mastectomy. The resulting scores (Difference in Marital Functioning; Difference in Sexual Functioning) reflect the extent of the difference (either positive or negative) that has occurred in the marital relationship since the mastectomy.

**(5) Menstruation Experience Scale:** The four items in the scale measure the adult woman's overall experience with menstruation.

The questions were scored on a 4-point Likert-type scale with higher scores reflecting greater emotional and/or physical distress associated with the menstruation experience. The Cronbach Alpha coefficient for this scale was .82. The questions included in this scale were:

- (a) How much physical discomfort do you usually experience when you menstruate?                    extreme/ moderate/ mild/ none at all
- (b) In general, how troubled are you by the physical discomfort you experience?                    extreme/ moderate/ mild/ none at all
- (c) How much emotional discomfort do you usually experience when you menstruate?                    extreme/ moderate/ mild/ none at all
- (d) In general, how troubled are you by the emotional discomfort you experience?                    extreme/ moderate/ mild/ none at all

### Interview Questions

(1) **The Adolescent Development Interview:** This interview was developed by this researcher. The purpose of this retrospective interview is to learn more about each woman's recalled experiences in early adolescence as they pertain to her body and its physical development. Thus, questions about the timing of the woman's development (i.e., the ages at which she developed breasts and experienced menarche), her reactions to these pubertal events as well as her thoughts and feelings about her body and its physical attractiveness in adolescence were included in the interview. In addition, information about aspects of her relationships with parents and peers in the context of these developmental events

(e.g., feelings of closeness, openness of communication) is obtained. The majority of the interview questions are closed-ended in design such that the respondent is given several response alternatives and asked to choose one response which most closely approximated her own adolescent experience. These responses are then scored on a Likert-type scale (e.g., when asked the question; "Overall, how close were you to her father in your early teen years?", each participant is given the following response choices: very close = 3; somewhat close = 2; slightly close = 1; not close at all = 0). In addition, a set of questions pertaining to the woman's feelings about her body and her physical appearance in adulthood prior to the mastectomy is included in the last part of this interview. Appendix C contains all of the questions included in this interview and the specific scoring used on each adolescent development item.

**(2) Mastectomy and Breast Reconstruction Interview:** This interview was designed by this researcher with many of its ideas and questions adapted from surveys and questionnaires developed by several researchers in this area of study (Schain and Wellisch,1982; Daniel,1985; Rowland,1985). Along with asking basic demographic information (e.g., age, marital status, education, etc.), the interview includes questions pertaining to all the phases of the woman's experience; from the initial discovery of the breast cancer through her surgical and postsurgical treatments (i.e., her experiences with the mastectomy as well as with chemotherapy and/or radiation therapy) to her posttreatment recovery. The impact of the mastectomy on the woman herself and its effect on her marital

relationship are also assessed. In addition, the issue of breast reconstruction and the reasons contributing to the woman's decision regarding this issue are explored. While these interview questions are primarily open-ended in design, closed-ended questions in which responses are rated on Likert-type scales are also included in this interview. Appendix D contains the questions included in this interview and the specific scoring used on each mastectomy and breast reconstruction item.

## Chapter IV

### RESULTS

#### Data Analysis Strategy

The data contained both categorical and continuous variables which were analyzed statistically to assess differences between the decision groups (i.e., women choosing to reconstruct vs. women choosing not to reconstruct). Chi-square tests of association were used to examine group differences on the categorical variables included in this study.  $t$ -tests were used to evaluate differences between the decision groups on the continuous variables. These results were subjected to a one-way analysis of variance (ANOVA) which replicated the  $t$ -test results while controlling for age. Finally, a hierarchical multiple regression analysis was used to determine if significant differences between the decision groups were redundant or independent of each other. In this regression analysis, the dependent variable was the decision to reconstruct or not, and the first variable entered into the equation was age. On subsequent steps, the significant variables in each of the sets of variables identified in this study (i.e., Adolescent Development Experiences, Adult Body Image Attitudes, Postmastectomy Impact) were added to the equation in their chronological order. Consistent with the developmental perspective of this study, the Adolescent Development Experiences set of variables was entered first; the Adult Body Image Attitudes set was entered second, and the Postmastectomy Impact set was entered third. As a result of this

analysis, several of the variables which were initially found to be significant no longer remained significant. The regression analysis was then rerun using only those variables which remained significant after the first regression analysis.

Two additional sets of multiple regression analyses were run to assess differences among the women in postmastectomy adjustment. Pearson correlations were used to assess significant relationships between depression and anxiety and the variables included in each of the three sets of variables defined in this study. In the first step of the analysis, the significant variables in each set were entered into the equation in chronological order. In the second step of the multiple regression analysis, only those variables which remained significant after the first analysis were included.

Pearson correlations were also used to assess the relationships between depression, anxiety, marital functioning and locus of control traits and the variables included in the developmental sets defined in this study. Though most of these correlations will not be reported, certain of the correlations which were found to be significant will be included to provide corroboration or additional information related to the major findings of this study.

### **Factors Differentiating Decision Groups**

#### **t-Test Results**

The t-tests indicate that the decision groups differ in the three general areas of interest in this study: Adolescent

Development Experiences, Adult Body Image Attitudes, and Postmastectomy Impact. Table 3 contains a summary of the significant  $t$ -test results.

In the group of results categorized as Adolescent Development Experiences, the following specific differences were found. The women choosing to reconstruct reported being significantly younger when they developed breasts than the women choosing not to reconstruct ( $t = 3.28$ ;  $df = 34$ ;  $p = .002$ ). The groups did not differ significantly with regard to age at menarche although a trend towards significance was found ( $t = 1.7$ ;  $df = 39$ ;  $p = .10$ ). The women choosing to reconstruct rated their appearance as significantly more important to them in adolescence than the women choosing not to reconstruct ( $t = 2.20$ ;  $df = 39$ ;  $p = .002$ ). In addition, significant differences were found between the decision groups concerning two sets of relationships in adolescence: those with their fathers and those with their girlfriends. The women in the reconstruction group reported being significantly closer to their fathers in adolescence when compared to the women in the non-reconstruction group ( $t = 2.17$ ;  $df = 39$ ;  $p = .04$ ). Concerning peer relationships in adolescence, the women were asked to evaluate the extent to which the physical changes they experienced in adolescence affected the closeness of their relationships with their girlfriends. With regard to this question, significant differences were found between the decision groups with the women choosing not to reconstruct reporting that they became significantly closer to their adolescent girlfriends after they began to develop physically than the women choosing to reconstruct ( $t = 2.01$ ;  $df = 38$ ;  $p = .05$ ).

Significant t-tests for the Difference Between the Women in the Reconstruction Group and the Women in the Non-Reconstruction Group<sup>1, 2</sup>

<u>Set</u>	<u>Variable</u>	<u>Group</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>I</u>	<u>df</u>	<u>p</u>
Adolescent Development Experiences	Age at Breast Development	RG	19	11.4	1.47	3.28	34	.002**
		NRG	17	13.0	1.41			
	Age at Menarche	RG	20	11.9	1.27	1.68	39	.10 <sup>t</sup>
		NRG	21	12.6	1.47			
	Importance of Appearance	RG	20	2.9	0.31	2.20	39	.03*
		NRG	21	2.6	0.60			
Closeness with Father	RG	20	2.6	1.50	2.17	39	.04*	
	NRG	21	1.6	1.40				
Change in Closeness with Girlfriends	RG	20	0.2	1.06	2.01	38	.05*	
	NRG	20	0.9	0.99				
Adult Body Image Attitudes	Confidence in Appearance	RG	20	1.9	0.79	2.21	39	.03*
		NRG	21	2.43	0.75			
	Women Still Menstruating	RG	20	0.45	0.51	1.81	39	.08 <sup>t</sup>
		NRG	21	0.19	0.40			
	Upset about Menstruation Ending	RG	11	1.82	0.98	3.30	25	.003**
		NRG	16	0.56	0.96			
Postmastectomy Impact	Impact of the Mastectomy	RG	20	6.20	3.46	2.06	39	.05*
		NRG	21	3.90	3.66			

<sup>1</sup> RG = Reconstruction Group; NRG = Non-Reconstruction Group

<sup>2</sup> Specific scoring for interview items can be found in Appendices B & C

\*  $p \leq .05$

\*\*  $p \leq .01$

\*\*\*  $p \leq .001$

<sup>t</sup>  $p \leq .10$

For the group of results categorized as Adult Body Image Attitudes, the following specific differences were found. The  $t$ -test results indicate that the women choosing to reconstruct were significantly less confident about their appearance as adults prior to the mastectomy than the women choosing not to reconstruct ( $t = 2.21$ ;  $df = 39$ ;  $p = .03$ ). The decision groups were marginally significantly different with regard to the number of women in each group who were currently still menstruating ( $t = 1.81$ ;  $df = 39$ ;  $p = .08$ ). However, the  $t$ -test results were significant concerning the degree of upset experienced by those participants in each decision group who had ceased menstruating at the time of the study. On average, the women in the reconstruction group reported being significantly more upset about having stopped menstruating than the women in the non-reconstruction group ( $t = 3.30$ ;  $df = 25$ ;  $p = .003$ ). It is interesting to note, however, that the  $t$ -test investigating the difference between the decision groups on their overall experiences with menstruation in adulthood (as measured by the Menstruation Experience Scale) was not significant.

A difference between the decision groups was found concerning the impact of the mastectomy on the woman's self-image as measured by the Mastectomy Impact Scale. Altogether, the women choosing reconstruction reported being more affected by the mastectomy than the women not choosing reconstruction ( $t = 2.06$ ;  $df = 39$ ;  $p = .05$ ). See Appendix B for the specific scoring used on all of the previously mentioned items.

### Analysis of Variance Results

All the  $t$ -test analyses were redone controlling for age since age was confounded with group membership. Specifically, the women choosing to reconstruct were significantly younger than the women choosing not to reconstruct ( $t = 2.10$ ;  $df = 39$ ;  $p = .04$ ).

Essentially, all except one of the significant  $t$ -test results remained significant after an ANOVA controlling for age was done. The following variables that remained significant in the Adolescent Development Experiences set were: age at the time of breast development ( $F = 9.20$ ;  $df = 1, 33$ ;  $p = .005$ ); importance of appearance in adolescence ( $F = 4.48$ ;  $df = 1, 38$ ;  $p = .04$ ); closeness with father in adolescence ( $F = 5.93$ ;  $df = 1, 38$ ;  $p = .02$ ); and change in closeness with girlfriends ( $F = 4.00$ ;  $df = 1, 37$ ;  $p = .05$ ). Age at menarche remained marginally significant at the .10 level ( $F = 3.15$ ;  $df = 1, 38$ ;  $p = .08$ ).

In the Adult Body Image Attitudes set confidence in appearance remained significant ( $F = 4.82$ ;  $df = 1, 38$ ;  $p = .03$ ). In addition, the degree of upset experienced among those women who had stopped menstruating also remained significant ( $F = 5.17$ ;  $df = 20$ ;  $p = .03$ ). Only impact of the mastectomy was no longer significant after controlling for age.

Three variables which were not significantly different between the decision groups when using a  $t$ -test were found to be marginally significant at the .10 level when controlling for age. The first variable involved the women's satisfaction with their breasts in adulthood prior to the mastectomy. While not significant at the

.05 level, there is a trend towards significance such that the women in the reconstruction group evidence a tendency to be less satisfied with their breasts prior to the mastectomy than the women choosing not to reconstruct ( $F = 3.81$ ;  $df = 1, 38$ ;  $p = .06$ ). The second variable assessed how often the women thought about death or about a recurrence of the cancer since having the mastectomy. When age is held constant, the women choosing to reconstruct evidence a tendency to think less about death and to worry less about a recurrence of the cancer than the women choosing not to reconstruct ( $F = 3.05$ ;  $df = 1, 33$ ;  $p = .09$ ). The third variable measured the difference in closeness experienced between one's father and mother in adolescence. This variable was constructed by subtracting the degree of closeness with father from the degree of closeness with mother. A trend towards significance was found with the women choosing to reconstruct recalling a greater discrepancy in closeness between their fathers and mothers compared to the women choosing not to reconstruct ( $F = 3.69$ ;  $df = 1, 36$ ;  $p = .06$ ). Altogether, the findings reveal that the women choosing to reconstruct recalled feeling closer to their fathers in adolescence and, in addition, recalled a greater discrepancy in closeness between their fathers and mothers in comparison to the women choosing not to reconstruct.

### Multiple Regression Analyses

The developmental perspective upon which this study is based determined the format used in the following hierarchical multiple

regression analysis. The two sets of variables which were found to significantly discriminate the decision groups (Adolescent Development Experiences and Adult Body Image Attitudes) were entered into the equation in their chronological order since it is this researcher's assumption that events in adolescence influence one's experiences in adulthood. Tables 4a & b contain detailed summaries of these results.

Since age was confounded with group membership, age was entered as the first step in the analysis. After controlling for age, the next set of variables entered into the equation were the Adolescent Development Experiences. Specifically, this set included the following variables: age at breast development; importance of appearance in adolescence; closeness to father; and change in closeness with girlfriends. The second set of variables entered into the equation were the Adult Body Image Attitudes. Specifically, this set included the following variables: confidence in appearance prior to the mastectomy and satisfaction with breasts in adulthood.

From the Adolescent Development Experiences set of variables, only age at the time of breast development had a large enough, non-redundant effect to remain significant, controlling for age and the other adolescent development variables. The results indicate that age at breast development uniquely accounts for 10% of the group membership variance. From the set of variables categorized as Adult Body Image Attitudes, only the women's confidence in their appearance prior to the mastectomy remained marginally significant at the .10 level with this variable accounting for 7% of the group membership variance.

Table 4a

Summary Table for Hierarchical Multiple Regression Analysis

Dependent Variable = Decision Group (Reconstruction vs. Non-Reconstruction Group)

Step	Set	Variable	Increment to R	F for the Increment	B	sr <sup>2</sup>	t
1	Co-Variate	Age	.14	5.65*	-.03	.14	-2.38*
2	Adolescent Development Experiences		.26	3.19*			
		Age at Breast Development			-.12	.10	-2.20*
		Importance of Appearance			.13	.01	.82
		Closeness with Father			.08	.02	1.03
3	Adult Body Image Attitudes		.10	2.65			
		Confidence in Appearance			-.17	.07	-1.92 <sup>†</sup>
		Satisfaction with Breasts			.08	.02	-1.14

Table 4b

Summary Table for Multiple Regression Analysis Using Only Significant Main Effects

Step	Set	Variable	Increment in R	F for the Increment	B	sr <sup>2</sup>	t
1	Co-Variate	Age	.14	5.65*	-.03	.14	-2.38*
2	Adolescent Development Experiences	Age at Breast Development	.19	9.20**	-.14	.19	-3.03**
3	Adult Body Image Attitudes	Confidence in Appearance	.05	2.35	-.13	.15	-1.53

\* p ≤ .05

\*\* p ≤ .01

\*\*\* p ≤ .001

<sup>†</sup> p ≤ .10

Eliminating redundant effects yielded the following model: group membership = age + age at the time of breast development + confidence in adult appearance. With each variable entered on a separate step, age at the time of breast development again remains significant with this variable accounting for 19% of the variance in women's choosing whether to reconstruct or not. Interestingly, the confidence in appearance variable is no longer significant even though fewer variables are being partialled from it, apparently due to a suppression effect.

### **Postmastectomy Adjustment**

#### **Adjustment Measures**

The six measures used to assess participants' postmastectomy adjustment were: the Beck Depression Inventory, the Spielberger State-Anxiety Measure, a Body Image Scale, an Overall Marital Functioning Scale, a Current Marital Functioning Scale, and Levenson's Locus of Control Scale. Table 5 contains a summary of the  $t$ -test results on all of the adjustment measures for the decision groups.

Overall, the  $t$ -test and ANOVA results were not significant for any of these measures. These findings indicate that there were no differences in postmastectomy adjustment between the two decision groups, even when controlling for age. On average, the Beck Depression Inventory mean score for the sample places them in the normal or asymptomatic range ( $M = 8.0$ ;  $SD = 5.45$ ). However, the

Table 5

Summary of t-Test Results on Adjustment Measures For Decision Groups<sup>1</sup>

<u>Variable</u>	<u>Group</u>	<u>N</u>	<u>Mean</u>	<u>Std Dev.</u>	<u>t</u>	<u>df</u>	<u>p</u>
Beck Depression Inventory	RG	20	8.00	5.45	.66	39	.51
	NRG	21	6.81	6.04			
State Anxiety Inventory	RG	20	44.00	12.93	1.63	39	.11
	NRG	21	38.14	9.95			
Body Image Scale	RG	19	123.42	17.61	.59	38	.56
	NRG	21	126.81	18.33			
Overall Marital Functioning	RG	18	11.06	2.26	.35	37	.73
	NRG	21	10.71	3.57			
Current Marital Functioning	RG	19	4.89	1.33	.31	37	.76
	NRG	20	4.75	1.59			
Difference in Marital Functioning	RG	18	-0.50	1.43	.19	37	.85
	NRG	21	-0.43	.93			
Difference in Sexual Functioning	RG	18	-0.56	1.10	.27	37	.80
	NRG	21	-0.48	.75			
Locus of Control-Chance	RG	20	19.25	4.45	1.78	39	.08 <sup>†</sup>
	NRG	21	22.38	6.58			
Locus of Control-Powerful Others	RG	20	22.00	6.84	.00	39	1.00
	NRG	21	22.00	8.80			

<sup>1</sup>Decision Groups: RG = Reconstruction Group; NRG = Non-Reconstruction Group

\*  $p \leq .05$

\*\*  $p \leq .01$

\*\*\*  $p \leq .001$

$p \leq .10$

Spielberger State-Anxiety Measure mean score of 44.0 ( $SD = 12.93$ ) indicates that this sample is significantly more anxious than a normative adult sample ( $t = 4.36$ ;  $df = 40$ ;  $p = .001$ ). Comparisons between the decision groups' scores on the Body Image Scale yielded no overall or specific body part differences. With regard to the Overall and Current Marital Functioning mean scores, the decision groups also did not differ. Both decision groups reported "fair to good" marital functioning both before and after the mastectomy. While there were no significant differences between the decision groups with regard to changes in the sexual and/or interpersonal functioning within the marriages postmastectomy, both groups did evidence a minimal decrease in both aspects of functioning. Lastly, there were no significant differences between the decision groups on any of the locus of control measures. However, the  $t$ -test results suggest a trend towards significance with regard to the women's belief in chance as the cause of life events. The women in the reconstruction group evidenced a tendency to believe less in chance as a cause of life events than the women in the non-reconstruction group ( $t = 1.78$ ;  $df = 39$ ;  $p = .08$ ). Even when controlling for age, this difference between the decision groups remained marginally significant at the .10 level ( $F = 3.74$ ;  $df = 1, 38$ ;  $p = .06$ ).

### Pearson Correlations

Pearson correlations were used to assess the relationship between depression, anxiety, marital functioning and locus of control traits and the variables included in the developmental sets

defined in this study. Tables 6a through 6d summarize these relationships.

**Depression:** Women who were more depressed postmastectomy were also more anxious, more affected by the mastectomy in terms of their self-image, less confident about their appearance prior to the surgery and had poorer overall and current marital functioning. In addition, depression was greater in those women whose marital and sexual relationships evidenced greater impairments in functioning since the mastectomy. These last two variables (difference in sexual functioning and difference in marital functioning) were constructed by subtracting marital and sexual functioning scores before the mastectomy from the couples' current, postmastectomy marital and sexual functioning scores.

**Anxiety:** Women who were more anxious postmastectomy also tended to be "early maturers" (i.e., they developed breasts and got their first periods at younger ages). In addition, women who were currently more anxious also reported being more affected by the mastectomy, to have less confidence in their appearance prior to the surgery and to have poorer overall and current marital functioning. Women who reported greater levels of anxiety postmastectomy were also more likely to believe that others more powerful than themselves controlled events in their lives.

**Body Image:** There were no significant correlations with the Body Image Scale.

**Overall and Current Marital Functioning:** Women who reported poorer overall and current marital functioning were not only more likely to be depressed and/or anxious (as previously stated) but

Significant Pearson Correlations of Postmastectomy Adjustmenta. Dependent Variable = Depression

<u>Variable</u>	<u>r</u>	<u>r</u>	<u>df</u>	<u>p</u>
Anxiety	.72	.52	39	.001***
Overall Marital Functioning	-.51	.26	37	.001***
Current Marital Functioning	-.43	.19	37	.001***
Difference in Marital Functioning	-.33	.11	37	.04*
Difference in Sexual Functioning	-.41	.16	37	.01**
Impact of Mastectomy	.63	.40	39	.001***
Confidence in Adult Appearance	-.39	.15	39	.01**
Locus of Control - Powerful Others	.31	.10	39	.05*

b. Dependent Variable = Anxiety

<u>Variable</u>	<u>r</u>	<u>r</u>	<u>df</u>	<u>p</u>
Overall Marital Functioning	-.38	.15	37	.02**
Current Marital Functioning	-.37	.14	37	.02**
Impact of Mastectomy	.50	.25	39	.001***
Confidence in Adult Appearance	-.40	.16	39	.001***
Age at Breast Development	-.34	.12	34	.04*
Age at Menarche	-.31	.09	39	.05*
Locus of Control-Powerful Others	.49	.24	39	.001***

\*  $p \leq .05$ \*\*  $p \leq .01$ \*\*\*  $p \leq .001$

Tables 6c & 6d

Significant Pearson Correlations of Postmastectomy Adjustment

c. Dependent Variable = Overall Marital Functioning [OMF] or Current Marital Functioning [CMF]

<u>Variable</u>	<u>r</u>	<u>r</u>	<u>df</u>	<u>p</u>
Locus of Control-Chance/OMF	-.40	.16	37	.01**
Locus of Control-Chance/CMF	-.38	.14	37	.01**

d. Dependent Variable = Locus of Control

<u>Variable</u>	<u>r</u>	<u>r</u>	<u>df</u>	<u>p</u>
Powerful Others/ Confidence in Adult Appearance	-.33	.11	39	.04*
Powerful Others/ Closeness with Mother	-.35	.12	39	.02*

\* p ≤ .05

\*\*p ≤ .01

\*\*\* p ≤ .001

t p ≤ .10

were also more likely to believe in chance as the cause of life events.

Locus of Control: Women who believed that others more powerful than themselves control the events in their lives also reported greater levels of anxiety and depression postmastectomy, were less confident in their appearance prior to the mastectomy and experienced less closeness with their mothers in adolescence.

### Additional Multiple Regression Analyses

A second set of analyses was used to assess differences among the women in postmastectomy adjustment. Pearson correlations were used to determine significant relationships between depression and anxiety and the variables included in the Adolescent Development Experiences, Adult Body Image Attitudes and Postmastectomy Impact sets. These significant relationships were then subjected to two multiple regression analyses. In the first, the variables were entered as sets in chronological order. In the second analysis, only those variables which remained significant after the first multiple regression analysis were included. Tables 7a through 7c include summaries of the multiple regression analyses for depression and anxiety.

The multiple regression analysis for depression included the following variables: confidence in adult appearance prior to the mastectomy; mastectomy impact (as measured by the Mastectomy Impact Scale); anxiety and overall marital functioning. The results

Table 7 (a through c) 85  
Summary Tables for Additional Multiple Regression Analyses

7a. Dependent Variable = depression

<u>Step</u>	<u>Set</u>	<u>Variable</u>	<u>Increment in R</u>	<u>F for the Increment</u>	<u>B</u>	<u>sr<sup>2</sup></u>	<u>t</u>
1	Adult Body Image Attitudes	Confidence in Appearance	.16	6.82**	-2.68	.16	-2.61**
2	Postmastectomy Adjustment		.50	16.09***			
		Impact Anxiety			.54 .18	.10 .08	3.07** 2.86**
		Overall Marital Functioning			-.48	.10	3.07***

7b. Dependent Variable = Anxiety

<u>Step</u>	<u>Set</u>	<u>Variable</u>	<u>Increment in R</u>	<u>F for the Increment</u>	<u>B</u>	<u>sr<sup>2</sup></u>	<u>t</u>
1	Adolescent Development Experiences	Age at Breast Development	.11	4.14*	-2.32	.11	-2.04*
2	Adult Body Image Attitudes	Confidence in Appearance	.11	4.52*	-4.56	.11	-2.13*
3	Postmastectomy Adjustment		.33	7.02***			
		Depression			1.03	.12	2.78**
		Overall Marital Functioning			-.27	.004	-.49
		Impact of Mastectomy			.32	.01	.64

7c. Dependent Variable = Anxiety

<u>Step</u>	<u>Set</u>	<u>Variable</u>	<u>Increment in R</u>	<u>F for the Increment</u>	<u>B</u>	<u>sr<sup>2</sup></u>	<u>t</u>
1	Adolescent Development Experiences	Age at Breast Development	.12	4.52*	-2.49	.12	-2.13*
2	Adult Body Image Attitudes	Confidence in Appearance	.10	4.09*	-4.57	.10	-2.02*
3	Postmastectomy Adjustment	Depression	.37	28.33***	1.34	.37	5.32***

\* p ≤ .05  
 \*\* p ≤ .01  
 \*\*\* p ≤ .001  
 t p ≤ .10

of the multiple regression analysis indicate that all of the variables have a large enough non-redundant effect to remain significant.

Thus, the multiple regression analysis yielded the following model: depression = confidence in adult appearance + mastectomy impact + anxiety + overall marital functioning. Since all the variables were significant at the first step of the analysis, a second step was not included.

The multiple regression analysis for anxiety included the following variables: age at breast development; confidence in adult appearance prior to the mastectomy; depression; overall marital functioning and mastectomy impact. While age at breast development and age at menarche were both significantly correlated with anxiety, this researcher decided to exclude age at menarche in the multiple regression analysis because including this variable would not add much information to the equation and might, in fact, "steal" variance from the age at breast development variable. Age at breast development was included in the equation because it had more significant relationships with other variables in the study than age at menarche.

Each variable from the first two sets of the equation (i.e., age at breast development and confidence in appearance) had a large enough non-redundant effect to remain significant. However, from the Postmastectomy Adjustment set of variables, only depression remained significant. Thus, eliminating the redundant effects yielded the following model: anxiety = age at breast development + confidence in appearance + depression.

## Descriptive Data for the Entire Sample

In the following section, the entire sample will be described with respect to the following areas: Adolescent Development Experiences, Adult Body Image Attitudes, Mastectomy Experience, and Issues Concerning Breast Reconstruction. Table 8 contains a summary of the descriptive data for the entire sample. Appendices C and D include the questions and specific scoring used on these items.

### Adolescent Development Experiences

Overall, age at the time of breast development ranged from 9 to 15 years with the mean age for the entire sample 12.2 years ( $SD = 1.63$ ). For the majority of the women (67%), breast development was reported to have occurred between the ages of 11 and 13 years. With regard to menarche, the ages at which this event was reported to have occurred ranged from 9 to 16 years with the mean age for the entire sample 12.2 years ( $SD = 1.41$ ). For the majority of the women (76%), menarche was reported to have occurred between the ages of 11 to 13 years. Age at breast development was positively related to age at menarche ( $R = .65$ ;  $df = 35$ ;  $p = .001$ ). It is interesting to note that the overwhelming majority of the women in this study (88%) were able to recall their ages when they began developing breasts since some authors contend that few adult women are able to do so (Benedick, 1979).

Overall, the women in this study reported that in early adolescence their appearance was very important to them ( $M = 2.7$ ;

Descriptive Data for Entire Sample

<u>Variable</u>	<u>M</u> (SD)	<u>Percentage</u>
<u>ADOLESCENT DEVELOPMENT EXPERIENCES</u>		
Age at breast development (N = 36)	12.17 (1.63)	
under 9 to 10 years old		14%
11 to 13 years old		66%
14 to 15+ years old		20%
Age at menarche	12.22 (1.41)	
under 9 to 10 years old		12%
11 to 13 years old		76%
14 to 15+ years old		12%
Importance of appearance	2.73 (0.50)	
Appearance compared to peers	-.49 (1.14)	
much more/little more attractive		19%
as attractive as peers		22%
much less/little less attractive		59%
Satisfaction with breasts	-.07 (1.29)	
very/somewhat satisfied		38%
very/somewhat dissatisfied		45%
no feelings about them		17%
Teased about breasts		
never/rarely		76%
sometimes/frequently		24%
Talked with mother about menstruation prior to first period		
yes		37%
no		63%
Tell mother about first period		
yes		98%
no		2%
Importance of breasts in self-esteem	1.61 (1.09)	
not at all important		20%
slightly		27%
somewhat		27%
very		27%
Mother's reaction to first period	3.68 (0.85)	
very/somewhat negative		10%
neutral		27%
very/somewhat positive		63%
Closeness with mother	1.63 (1.11)	
not at all close		22%
slightly		20%
somewhat		32%
very		26%

Table 8 (continued)  
Descriptive Data for Entire Sample

<u>Variable</u>	<u>M (SD)</u>	<u>Percentage</u>
Closeness with father	1.61 (1.05)	
not at all close		15%
slightly		37%
somewhat		22%
very		26%
 <u>ADULT BODY IMAGE ATTITUDES</u>		
Importance of appearance	2.34 (0.83)	
not at all		2%
slightly		15%
somewhat		29%
very		54%
Confidence in appearance	2.17 (0.80)	
not at all		2%
slightly		17%
somewhat		42%
very		39%
Importance of breasts in self-esteem	1.66 (1.04)	
not at all		15%
slightly		31%
somewhat		27%
very		27%
Satisfaction with breasts	0.66 (1.02)	
very/somewhat satisfied		73%
very/somewhat dissatisfied		20%
no feelings about them		7%
Importance of breasts in sex	2.10 (0.81)	
not at all		3%
slightly		20%
somewhat		43%
very		35%
 <u>MASTECTOMY EXPERIENCES</u>		
Mode of detection		
self-exam		17%
self by chance		39%
mammography		22%
doctor' exam		20%
partner by chance		2%
Physical discomfort after surgery	1.1 (0.76)	
none/slight		73%
moderate/severe		27%

Table 8 (continued)  
Descriptive Data for Entire Sample

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<u>Variable</u>	<u>M. (SD)</u>	<u>Percentage</u>
Phantom breast sensations		
yes		63%
no		37%
Difficulty touching &/or looking at mastectomy site currently	0.98 (1.17)	
not difficult at all		51%
slight/somewhat		22%
very		17%
Thoughts about death or recurrence	1.98 (0.85)	
no thoughts		5%
rarely/sometimes have thoughts		66%
frequently have thoughts		29%
Therapy sought postmastectomy		
no therapy sought		39%
self-help group		40%
individual therapy		7%
general therapy group		14%
 <u>BREAST RECONSTRUCTION EXPERIENCES</u>		
Comfort with prosthesis	2.42 (0.67)	
not at all/slightly comfortable		10%
somewhat comfortable		39%
very comfortable		51%
Difficulty with decision	1.22 (1.24)	
not difficult at all		41%
slightly		20%
somewhat		15%
very		24%
Extent of reconstruction surgery being considered (N = 20)		
breast reconstruction only		20%
breast reconstruction with nipple reconstruction		80%
breast & nipple reconstruction & symmetry surgery		42%

SD = .50) and that they felt less attractive than their peers (M = -.49; SD = 1.14). On average, the women reported that their breasts were somewhat important to them in early adolescence (M = 1.6; SD = 1.09) and that they felt somewhat dissatisfied with them (M = -.07; SD = 1.29). The majority of the women (76%) recalled never or rarely being teased about their breasts.

While 76% of the women reported talking to their girlfriends about the physical changes they experienced in puberty, 63% of the participants reported that they had not talked with their mothers about menstruation prior to their first period and 75% reported that they did not talk to their mothers in adolescence about any of the other physical changes they were experiencing at the time. However, 98% of the women did tell their mothers when they got their period for the first time and, on average, they experienced their mothers' reactions to this event as somewhat positive.

### Adult Body Image Attitudes

All of the women's responses to the following set of questions pertained to their feelings about their bodies and physical appearance in adulthood prior to having the mastectomy. Overall, the women in this study reported that their appearance was somewhat important to them in determining their self-esteem (M = 2.3; SD = 1.26) and that their breasts were also somewhat important in determining their sense of femininity, sexuality and/or physical attractiveness (M = 2.3; SD = .83). In addition, 78% of the women reported that their breasts were somewhat to very important to

them in their sexual relations with their partners. Further results related to this area are contained in the Additional Findings section.

With regard to their experiences with menstruation in adulthood, the women reported that, overall, they regularly experienced mild physical and/or emotional discomfort associated with their monthly periods ( $M = 5.4$ ;  $SD = 3.29$ ). Of the women who had stopped menstruating at the time of the study, for 43% this was due to chemotherapy; 29% was because of menopause and 29% because of other medical reasons, most often hysterectomy.

### Mastectomy Experience

While the more qualitative, personal data pertaining to the women's experiences having breast cancer and a mastectomy will be presented in the Discussion Chapter, some of the quantitative findings which were obtained will be presented in this section.

With regard to discovery of the breast cancer, the largest percentage of the women in this study (39%) discovered their breast cancer by chance (e.g., while washing in the shower, while dressing) and the second largest percentage (22%) had the breast cancer detected through mammography. Doctor's exams accounted for 20% of the detections and breast self-exams accounted for 17% of the detections.

Overall, the women reported mild physical discomfort and/or pain after the surgery ( $M = 1.1$ ;  $SD = .76$ ). In addition, the majority (63%) reported experiencing phantom breast sensations (i.e., feelings as if their breast was still there) since the mastectomy. While, on

average, the women reported that presently it was slightly difficult to look at and/or touch the mastectomy site, nearly a quarter (22%) reported that at the time of the study it was moderately to extremely difficult for them to do so. With regard to the percentages of women who sought psychotherapy postmastectomy, 39% did not any treatment whatsoever; 40% joined a local breast cancer support group; and the remaining 21% of the women sought individual psychotherapy alone or along with group treatment.

### Decision Regarding Breast Reconstruction

Overall, the women in this study reported that the decision whether to reconstruct or not was slightly difficult to make ( $M = 1.2$ ;  $SD = 1.24$ ). Nevertheless, more than a third reported that the decision was slightly to somewhat difficult and a quarter of the women reported that the decision was extremely difficult to make. Interestingly, difficulty with the decision was negatively correlated with age such that younger women (49 years old or younger) across both decision groups reported that they had more difficulty deciding about breast reconstruction than women who were 50-60 years old ( $R = -.38$ ;  $df = 28$ ;  $p = .04$ ). In addition, difficulty with the decision was negatively related to deciding in favor of breast reconstruction. That is, those women who had decided in favor of breast reconstruction reported greater difficulty making this decision ( $R = -.36$ ;  $df = 28$ ;  $p = .06$ ).

Overall, the women in this study reported that they were somewhat comfortable with how the prosthesis fit and looked

( $M = 2.4$ ;  $SD = .67$ ). Among the women choosing to reconstruct, 55% had not been to a plastic surgeon as yet for a consultation and the remaining 45% had been to one or more consultations. Interestingly, nearly half of the women in the non-reconstruction group had also consulted with a plastic surgeon at least once. Of those women planning to reconstruct, 80% stated that they also planned to undergo nipple reconstruction.

The women in each decision group were asked to select from a list of reasons those that might be influencing their decision regarding reconstruction. Tables 9a & b contain the list of reasons endorsed by the women in the reconstruction group. Among the women choosing to reconstruct, the two most frequently endorsed reasons were practical ones: to be able to wear more types of clothes (90%) and to be rid of the external prosthesis (85%). Body integrity issues comprised the next three most frequently endorsed reasons which included wanting to feel whole again (75%); to be less preoccupied with their physical state (65%); and to feel more balanced (60%). The least influential factor in deciding in favor of breast reconstruction involved improving the women's marital relations (15%). In addition, the majority of the women who included improving their sexual relations as a reason influencing their decision (60%) indicated that it was their own sexual satisfaction and not their husbands' that determined the importance of this issue.

Tables 10a & b contain the list of reasons endorsed by the women in the non-reconstruction group. Among the women choosing not to reconstruct, the most frequently endorsed reason for their deciding against breast reconstruction involved their not wanting to

undergo anymore surgery (81%). Many of the women claimed that the reconstruction was not essential to their physical and emotional well-being (76% and 67%, respectively). None of the women in the non-reconstruction group claimed that financial constraints influenced their decision regarding reconstruction. In addition, only 5% of the women in this group claimed that other possible external factors such as their husbands' or physicians' opposition to the surgery were factors influencing their decision.

### Additional Findings

#### Feelings about Menarche and Breast Development

All of the women in this study were asked to select from a list of feelings those they recalled experiencing in relation to two developmental events: when they got their period for the first time and when they began to develop breasts. Tables 11 and 12 contain summaries of the relationship of group membership to feelings about menarche and breast development. A review of these tables indicates that across both decision groups the women reported experiencing a wide variety of feelings related to these important developmental events.

Chi-square tests of association were used to examine group differences on these variables. With regard to feelings about menarche, a trend toward significance was noted at the .10 level concerning feelings of excitement and shock. This chi-square test

**Table 9a** **96**  
**Reasons for Decision to Undergo Breast Reconstruction** (N = 20)

Reason	Percentage
to wear more types of clothes	90%
to be rid of my external prothesis	85%
to feel "whole again"	75%
to be less preoccupied with my physical state	65%
to feel more balanced	60%
to improve my sexual relations	60%
to feel more feminine	45%
to be less preoccupied with the cancer	20%
to improve my marital relations	15%

**Table 9b**  
**Primary Reasons for Decision to Undergo Breast Reconstruction** (N = 20)

Primary Reason	Percentage
to feel "whole again"	45%
to be rid of my external prothesis	20%
to be less preoccupied with my physical state	15%
to feel more balanced	5%
to feel more feminine	5%
to wear more types of clothes	5%
to improve my sexual relations	5%
to be less preoccupied with the cancer	--
to improve my marital relations	--

**Table 10a****97****Reasons for Decision Not to Undergo Breast Reconstruction (N = 21)**

<b>Reason</b>	<b>Percentage</b>
I don't want anymore surgery	81%
Breast Reconstruction is not essential to my physical well-being	76%
Breast Reconstruction is not essential to my emotional well-being	67%
The risks of surgery outweigh the benefits	62%
The reconstruction might cause a problem related to the cancer	43%
I don't want something unnatural in my body	38%
The results I've seen are not worth the trouble	38%
My partner is against it	5%
My doctor advises against it	5%
I cannot afford the cost	---

**Table 10b****Primary Reasons for Decision Not to Undergo Breast Reconstruction (N = 21)**

<b>Primary Reason</b>	<b>Percentage</b>
I don't want anymore surgery	43%
Breast Reconstruction is not essential to my emotional well-being	19%
Breast Reconstruction is not essential to my physical well-being	10%
The reconstruction might cause a problem related to the cancer	10%
The results I've seen are not worth the trouble	10%
The risks of surgery outweigh the benefits	5%
My partner is against it	5%
I don't want something unnatural in my body	----
My doctor advises against it	----
I cannot afford the cost	----

tentatively suggests that a larger number of women choosing to reconstruct recalled experiencing excitement with regard to their first period ( $\chi^2 = 3.19$ ;  $df = 1$ ;  $p = .07$ ) and a larger number of women choosing not to reconstruct recalled experiencing shock ( $\chi^2 = 3.08$ ;  $df = 1$ ;  $p = .08$ ). In examining the women's feelings about developing breasts, none of the women choosing to reconstruct recalled feelings of sadness about developing breasts and none of them reported having no feelings at all about this developmental event. Chi-square tests of association indicate significant differences between the two decision groups regarding these two reactions. The findings show that significantly more women in the non-reconstruction group recalled feeling sadness about developing breasts ( $\chi^2 = 4.22$ ;  $df = 1$ ;  $p = .04$ ) and significantly more women in the non-reconstruction group reported having no emotional reaction at all ( $\chi^2 = 4.22$ ;  $df = 1$ ;  $p = .04$ ). However, a significantly larger number of women choosing to reconstruct reported feelings of confusion about their breast development ( $\chi^2 = 4.65$ ;  $df = 1$ ;  $p = .03$ ). The findings also tentatively suggest that more women in the reconstruction group recalled feelings of excitement about developing breasts ( $\chi^2 = 2.95$ ;  $df = 1$ ;  $p = .09$ ) and more of the women in the reconstruction group recalled feelings of amazement ( $\chi^2 = 3.36$ ;  $df = 1$ ;  $p = .07$ ) and when compared to the women in the non-reconstruction group.

Table 11

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Relationship of Group Membership to Feelings about Menarche<sup>1</sup>

Feelings	Group	% experiencing the feeling	x	p
Anxiety	FG	15%	1.87	.17
	NRG	33%		
Amazement	FG	15%	1.10	.29
	NRG	29%		
Confusion	FG	40%	.20	.66
	NRG	33%		
Curiosity	FG	35%	.27	.61
	NRG	43%		
Disgust	FG	5%	.31	.58
	NRG	10%		
Embarrasment	FG	55%	1.95	.16
	NRG	33%		
Excitement	FG	45%	3.19	.07 <sup>t</sup>
	NRG	19%		
Fear	FG	15%	.12	.73
	NRG	29%		
Happiness	FG	20%	.41	.52
	NRG	29%		
Pride	FG	30%	1.48	.22
	NRG	14%		
Relief	FG	25%	.01	.93
	NRG	24%		
Shame	FG	15%	1.22	.27
	NRG	5%		
Shock	FG	0%	3.08	.07 <sup>t</sup>
	NRG	14%		
No Reaction	FG	0%	2.00	.16
	NRG	10%		

<sup>1</sup> RG = Reconstruction Group (N = 20); NRG = Non-Reconstruction Group (N = 21)

\*  $p \leq .05$

\*\*  $p \leq .01$

\*\*\*  $p \leq .001$

<sup>t</sup>  $p \leq .10$

**Table 12****Relationship of Group Membership to Feelings about Breast Development <sup>1</sup>**

Feeling	Group	% experiencing the feeling	x	p
Anxiety	FG	10%	.003	.96
	NRG	10%		
Anger	FG	5%	.31	.58
	NRG	10%		
Amazement	FG	25%	3.36	.07 <sup>t</sup>
	NRG	5%		
Confusion	FG	20%	4.65	.03 <sup>*</sup>
	NRG	0%		
Curiosity	FG	50%	1.98	.16
	NRG	29%		
Embarrassment	FG	45%	1.19	.28
	NRG	29%		
Excitement	FG	55%	2.95	.09 <sup>t</sup>
	NRG	29%		
Happiness	FG	35%	.20	.66
	NRG	29%		
Pride	FG	40%	.60	.44
	NRG	29%		
Relief	FG	15%	.12	.73
	NRG	19%		
Sadness	FG	0%	4.22	.04 <sup>*</sup>
	NRG	19%		
Shame	FG	5%	1.00	.32
	NRG	14%		
No Reaction	FG	0%	.12	.04 <sup>*</sup>
	NRG	19%		

<sup>1</sup> FG = Reconstruction Group (N = 20); NRG = Non-Reconstruction Group (N = 21)

\*  $p \leq .05$

\*\*  $p \leq .01$

\*\*\*  $p \leq .001$

<sup>t</sup>  $p \leq .10$

### Adult Feelings Associated with Breasts

All of the women were asked to rank in order of importance (from 1 to 4) the feelings or qualities they most associated with their breasts. These feelings included: femininity, sexuality, maternal/mothering qualities and general physical attractiveness. Table 13 presents the rankings of adult feelings associated with breasts by decision group.

Among the women choosing to reconstruct, half of the women (50%) ranked general physical attractiveness first with the remaining 50% evenly divided between femininity and sexuality. Among the women choosing not to reconstruct, the rankings for first place were more evenly divided: 30% femininity; 30% general physical attractiveness; 20% sexuality and 20% maternal qualities. Inspection of the percentages of participants who ranked maternal feeling first shows that no one in the reconstruction group did so as compared to 20% in the non-reconstruction group. Since many cell sizes were small, a chi-square analysis to examine group differences in rankings was invalid. However, with the rankings collapsed so that there were only two dichotomies: most important feeling vs. other, a chi-square analysis reveals that maternal feelings was significantly different between the two groups ( $\chi^2 = 4.44$ ;  $df = 1$ ;  $p = .04$ ).

Table 13Rankings of Adult Feelings Associated with Breast by Decision GroupReconstruction Group

Rank	Femininity	Sexuality	Maternal Qualities	General Physical Attractiveness
1	25%	25%	0%	50%
2	40%	35%	20%	5%
3	30%	30%	15%	25%
4	5%	10%	65%	20%

Non-Reconstruction Group

Rank	Femininity	Sexuality	Maternal Qualities	General Physical Attractiveness
1	30%	20%	20%	30%
2	25%	30%	15%	30%
3	30%	45%	5%	20%
4	15%	5%	60%	20%

### Mastectomy Impact Scale

A closer analysis of the Mastectomy Impact Scale indicates that aspects of the women's self image and body image were affected differently as a result of the mastectomy. Feelings of femininity were the least affected ( $\underline{M} = 0.75$ ;  $\underline{SD} = 0.95$ ) whereas the women's feelings concerning their sexual desirability ( $\underline{M} = 1.61$ ;  $\underline{SD} = 1.09$ ) and physical attractiveness ( $\underline{M} = 1.45$ ;  $\underline{SD} = 1.11$ ) were the most affected as a result of having undergone the surgery.

## CHAPTER V

### DISCUSSION

#### Major Findings

It is beyond the scope of this chapter to include all of the study's findings. Only those findings that are the most important and relevant to the study's goals will be included in this chapter. In addition, the retrospective nature of the data obtained in this study requires brief mention before proceeding further with a discussion of the study's results. While it is possible that the women's recollections of their developmental experiences in adolescence are distorted due to the passage of time or their more recent experiences having the mastectomy, it seems unlikely that this is the case. The concrete, factual nature of the data obtained and the consistency in the women's recall of the timing of these events suggest that the data is accurate and reliable. In addition, the findings of other researchers whose studies have involved women's recollections of important developmental events (e.g., menarche, menopause) support this author's contention regarding the reliability of the data obtained in this study (Brooks-Gunn, 1987; Golub, 1983).

#### Factors Differentiating the Decision Groups

One of the main goals of this study was to determine the factors that differentiate women who choose to reconstruct after mastectomy from the women who choose not to reconstruct. It was

hypothesized that three factors would differentiate the decision groups.

Hypothesis 1: The women who choose to reconstruct would be younger at the time of the mastectomy;

Hypothesis 2: The women who choose to reconstruct would evidence a greater decrease in self image as a result of the mastectomy;

Hypothesis 3: The women who choose to reconstruct would evidence a greater investment in their appearance in adolescence as well as in adulthood.

The study's empirical findings lend support to all of the hypotheses stated above and thus provide evidence suggesting that it is a combination of past and present factors that differentiate women who choose to reconstruct after mastectomy from those who choose not to reconstruct.

As predicted, the women in the reconstruction group were significantly younger than the women in the non-reconstruction group. In addition, the women choosing to reconstruct reported that the mastectomy had a greater impact on their feelings of wholeness, physical attractiveness and sexual desirability in comparison to the women choosing not to reconstruct. Thus, the results of this study indicate that younger women are more affected by the mastectomy in terms of their self image and feelings of attractiveness and that they are more likely to choose reconstruction after the surgery.

Interestingly, when the variance in age is taken into account, a number of other factors emerge that differentiate the women in each decision group. With regard to adolescent development

experiences, the findings of this study indicate that, regardless of age, the women in the reconstruction group are more likely to have developed breasts at an earlier age (i.e., to be "early maturers") and to state that their appearance was significantly more important to them in adolescence in comparison to the women in the non-reconstruction group. Developmentalists have posited that the impact of early maturation on young adolescent girls is particularly stressful and often results in their feeling more anxious, self-conscious and dissatisfied with their bodies and their physical appearance in comparison to their on-time and later maturing peers (Brooks-Gunn and Peterson, 1983; Dwyer and Mayer, 1968; Hurlock, 1973; Peterson, 1983). With breast development, the young adolescent girl becomes "physically conspicuous" and, as a result, she often has difficulty dealing with the increased attention and the increased intellectual and sexual expectations that her more mature appearance engenders (Shipman, 1964). Thus, girls who develop breasts at an earlier age are likely to be more invested in their appearance, albeit in a negative way, given its far-reaching psychosocial implications. Utilizing this developmental perspective, one might understand this study's findings as evidence which suggests that women who develop breasts at an early age are likely to be more invested in them and, consequently, are more likely to choose reconstruction after mastectomy because the loss of the breast has greater significance for them in terms of their self image and body image.

Two additional factors which pertain to the women's feelings about their bodies and physical appearance in adulthood also

differentiate the decision groups when age is held constant. With regard to adult body image attitudes, comparisons of the two decision groups reveal that the women choosing to reconstruct felt less confident about their overall appearance as adults and also had been less satisfied with their breasts prior to the mastectomy. While this latter factor was marginally significant, it is this researcher's contention that with a larger sample this finding would be significant. In attempting to explain the decision group differences with regard to these two adult body attitude factors, one might postulate that women who are more precarious in their feelings of confidence and satisfaction with regard to their physical appearance may be more affected by the loss of the breast and consequently may be more likely to choose to reconstruct after mastectomy. However, these findings might also be understood within a broader developmental context. Consistent with the developmental model postulated in the preceding paragraph, these findings might also provide evidence which suggests that the early maturer's anxiety and concern regarding her body and physical appearance may extend into adulthood such that she is less confident about her overall appearance as an adult as well as being less satisfied with her breasts. This interpretation of the data appears to be supported by another factor found to differentiate the decision groups: the women choosing to reconstruct are more upset about having stopped menstruating than the women choosing not to reconstruct. Both aspects of a woman's physical self, her breasts and menstruation, may be integrally tied to her sense of herself as a woman and as a sexual being. As with the loss of the breast, the loss

of menstruation may be more upsetting and difficult for the woman who harbors anxieties and insecurities about aspects of her body which are connected to her sexuality and womanhood.

Three additional factors from the adolescent development experiences set also differentiate the two decision groups. The results indicate that compared to the non-reconstructors, the women choosing to reconstruct recalled feeling closer to their fathers in adolescence and, in addition, recalled a greater discrepancy in closeness between their fathers and mothers. Also, the reconstructors recalled experiencing less closeness with their girlfriends after they began to develop in puberty. While there are many possible explanations for these findings, one might adopt a psychodynamic approach and hypothesize that this cluster of factors suggests oedipal phenomena. For instance, one might posit that the lesser recalled closeness with mother and same-sex peers and greater recalled closeness with father suggest an oedipal dynamic in which rivalrous feelings towards mother exist in the context of the girl's increasing sexual feelings and wishes for greater closeness and intimacy with father. Horney (1967) suggests that some adolescent girls may become overly dependent on male attention and adoration in response to the anxieties and conflicts they experience as they begin to develop physically and feel increasingly competitive with mother. A similar oedipal dynamic may characterize the women choosing to reconstruct who may be more invested in their appearance because they matured early and because their physical appearance represents to them the primary means through which they can compete with other women and obtain

male attention and approval. Along similar lines but with a slightly different emphasis, another interpretation of the findings might focus on the separation-individuation issues between mother and daughter that breast development engenders (Benedick, 1979). From this perspective, the discrepancy in closeness between maternal and paternal figures may be understood as a reflection of the young adolescent girl's increased conflictual feelings towards her mother as competitive strivings emerge along with increased feelings of dependency and identification. These conflicts may be more difficult to manage and particularly pronounced among those girls who are early maturers since they may be emotionally less ready to deal with the issues of separation and individuation. Another interesting finding which might pertain to this line of thinking is that the two decision groups were significantly different in their rankings of maternal feelings as qualities associated with their breasts. Among the women choosing to reconstruct, none ranked maternal qualities first as compared to 20% of the non-reconstructors. One possible explanation of this striking discrepancy between the two decision groups is that the absence of maternal feelings among the women in the reconstruction group reflects their greater conflicts concerning issues of maternal identification since breasts are the symbolic representation of the qualities of motherhood, womanhood and sexuality. Thus, this constellation of factors might also be understood from the perspective adopted by Bard and Sutherland (1955) which suggests that a woman's response to the loss of her breast from mastectomy may depend, to a large extent, on her relationship with her mother in puberty and the ways in which she

has integrated her breasts into the framework of adult feminine functioning vis-a-vis this important parental relationship.

### Factors Differentiating Postmastectomy Adjustment

With regard to postmastectomy adjustment, it was hypothesized that three factors would differentiate the decision groups:

Hypothesis 1: Poorer psychosocial adjustment would be associated with having a greater decrease in self image as a result of the mastectomy;

Hypothesis 2: Poorer psychosocial adjustment would be associated with having an external locus of control;

Hypothesis 3: Poorer psychosocial adjustment would be associated with a greater investment in one's appearance in adolescence as well as in adulthood.

The empirical findings lend support to the hypotheses stated above and thus provide evidence suggesting that it is a combination of past and present factors that differentiate women's adjustment to having a mastectomy.

Before discussing the findings on postmastectomy adjustment as they relate to the aforementioned hypotheses, two findings that are particularly important and relevant to the study's goals will be presented first. Comparisons between the decision groups on the women's current feelings of depression, anxiety and their level of marital functioning reveal that there were no significant differences between the women in the reconstruction group and the women

in the non-reconstruction group. Thus, the results of this study indicate that the women who choose to reconstruct do not evidence significantly greater overall emotional problems or greater difficulties adjusting to the loss of their breast than the women who choose not to reconstruct. These findings refute the assertions of surgeons such as Goldsmith and Alday (1971) and Cocke (1977) and, instead, lend support to view that the decision to reconstruct is not pathologically-based but, in fact, reflects a healthy drive towards bodily restitution (Clifford, 1979; Schain et al., 1985; Torrie, 1971). In addition, while there were no significant differences between the decision groups with regard to overall emotional postmastectomy adjustment, the entire sample of women in this study was found to be significantly more anxious than a normative adult sample. This finding is consistent with the findings of others who claim that anxiety is one of the most common emotional reactions to having a mastectomy (Asken, 1975; Dean, 1987; Holland & Mastrovito, 1980).

With regard to the factors that differentiate women's adjustment postmastectomy, the findings provide evidence to support the hypothesis that poorer emotional adjustment is associated with experiencing a greater decrease in self image as a result of the mastectomy (i.e., experiencing a greater loss in feelings of attractiveness, sexual desirability, wholeness). The findings of this study reveal that women who experience greater levels of anxiety and depression postmastectomy also tend to be women who report greater impairments in their feelings of physical

attractiveness, sexual desirability and sense of wholeness as a result of the mastectomy.

Secondly, the findings of this study indicate that poorer emotional adjustment is associated with having an external locus of control. Among the postmastectomy patients in this study, those who were the most anxious were also the most likely to believe that powerful others controlled the events in their lives. Similarly, the women who were the most depressed were also the most likely to believe that life events were under the control of powerful others rather than themselves. These findings are consistent with those of other researchers who have found that patients who have an external locus of control are at greater risk for psychosocial maladjustment because they evidence less ability to cope with the stress of their illness and to actively engage in their rehabilitation (Bowers, 1968; Kobasa, 1982; Penman et al., 1986).

With regard to the locus of control traits among the women in each of the decision groups, no significant differences were found differentiating the women choosing reconstruction from those not choosing reconstruction. However, a trend towards significance was found concerning the women's belief in chance as a determinant of life events. The women choosing to reconstruct evidenced a tendency to believe less in chance as the cause of life events than the women choosing not to reconstruct. While this finding is only marginally significant and requires further investigation with a larger sample of patients, one might offer a tentative explanation of this difference between the decision groups. For instance, one might hypothesize that choosing to reconstruct after mastectomy requires the woman

to be more active and goal-directed since it is something she has to pursue on her own after the surgery. The fact that the women in this study who were planning to reconstruct experienced significantly greater difficulty making the decision as compared to the women who had decided not to reconstruct seems to support this notion. Thus, the women who tend to believe less in chance as a determinant of life events may also tend to be less passive in their efforts towards their postmastectomy rehabilitation and consequently be more likely to pursue reconstruction after the surgery.

The third hypothesis concerning postmastectomy adjustment predicted that poorer emotional adjustment would be associated with having a greater investment in appearance in adolescence as well as in adulthood. The results of this study provide evidence that supports this hypothesis. With regard to the women's level of anxiety postmastectomy, the findings indicate that age at the time of breast development and age at menarche are significant factors. That is, the women in this study who tended to be the most anxious postmastectomy were also the women who were most likely to have been early maturers (i.e., they reported developing breasts and having their first period at younger ages). These findings are consistent with the theory postulated earlier concerning the impact of the timing of maturational events on female development. One might hypothesize that early maturers' greater investment in their physical appearance with its concomitant underlay of anxiety and concern results in their experiencing more anxiety in response to the loss of the breast in adulthood because this body part has more anxiety associated with it and because of the conflictual nature

inherent in the woman's integration of her gender and sexual identities with her body image. Thus, the anxiety experienced by these women in response to having the mastectomy may, in fact, have developmental origins. An additional finding of this study that seems related to this line of thinking is that later age at the time of maturation was found to be significantly associated with having an internal locus of control. That is, those women who were most likely to believe that events in their lives were under their own personal control were also most likely to have been older in age when they began to experience puberty. Consistent with the developmental theory posited by this author, one explanation of this finding might be that the early maturing girl who is psychologically unprepared for the physical changes that occur in puberty is more likely to experience these maturational events as completely outside of her control and thus come to view herself in relation to the world as having less personal control over life events.

With regard to postmastectomy adjustment and attitudes about one's appearance in adulthood, the results reveal that women who had the least confidence in their appearance as adults prior to the mastectomy were more more anxious and depressed postmastectomy. These findings provide evidence which supports the contention that poorer adjustment postmas-tectomy is associated with women whose investment in their appearance in adulthood also has an underlay of anxiety and insecurity. It may be that these women experience greater difficulties postmastectomy because they lack the inner resources needed to help them withstand the impact of the surgery on their self-image and body image. As previously

suggested, there may also be a developmental link which ties these feelings of insecurity and anxiety to early adolescence and the timing of the onset of maturational events in puberty.

### Issues Regarding Breast Reconstruction

In this section, some of the additional findings obtained in this study with regard to the issue of breast reconstruction after mastectomy will be presented. Using empirical and clinical data, aspects of the decision-making process will be discussed with the purpose of highlighting some of the factors that have important clinical and/or theoretical implications.

With regard to the reasons women have for choosing to reconstruct after mastectomy, the findings of this study are consistent with those of other researchers (Clifford, 1979; Noone et al., 1982; Schain et al., 1985). Women do not choose to reconstruct for unrealistic reasons (e.g., to improve their marital relationships) or because of external pressures from their spouses. The following comment from a participant exemplifies the husbands' typically supportive and neutral stance with regard to their wives' decisions about reconstruction. "My husband doesn't think I need it although he would support it if it would make me feel happy. He says it's my decision but that it doesn't matter to him." Among the women choosing to reconstruct, the most common reasons reflect practical issues of convenience and comfort (in their desire to be rid of the prosthesis and to be able to wear more types of clothes) as well as issues involving feelings of wholeness and body integrity. While one

woman joked, "I've never had a warm and intimate relationship with my prosthesis" others articulated specific problems with dislodgement, discomfort and dress. In terms of body integrity issues, the women spontaneously expressed their wishes to "to feel restored", "to feel whole again" and "to feel less lopsided and more balanced" and, in addition, nearly half of the women choosing to reconstruct identified the wish "to feel whole again" as their primary reason for their decision to reconstruct. Interestingly, a noticeably larger percentage of women in this study as compared to those in Schain et al.'s study (1985) cited their wanting to improve their sexual relations as a reason influencing their decision to reconstruct. With regard to this issue, the women's motivation seemed to stem from their own wishes "to feel sexier", "to be less self-conscious" and "to be freer sexually" rather than from concerns about their husbands' attraction and sexual responsiveness to them since the surgery.

Among the women choosing not to reconstruct, the wish to not have any additional surgery was paramount. The women voiced concerns about undergoing anesthesia, the risk of infection from the surgery and the possibility that the surgery might create problems related to the cancer (e.g., in preventing detection of a recurrence). One woman who was having a great deal of difficulty deciding about reconstruction stated, "I'm wavering about it. I don't want to be in a hospital again. I don't want my body traumatized again. I don't want to be under anesthesia again." In addition, many of these women state that reconstruction is not essential to their emotional or physical well-being and that their breasts are not (and never have been) of particular importance in terms of their body image or self

image. As one woman in the non-reconstruction group stated, "My breasts were not that vital to my husband's relationship to me or mine with him." Of less concern were the women's feelings that the results of the surgery were not worth the trouble although there was a minority of women who expressed dissatisfaction with the reconstructed breasts they had seen. A number of women who were not planning to reconstruct had made this decision because they were reluctant to have the symmetry surgery done on their remaining, healthy breasts. One young woman uncertain about whether to reconstruct or not described her experiences in a consultation with a plastic surgeon as follows:

The plastic surgeon said, 'to make the breast uniform, we have to lift this breast up and tuck a little down here'. I said I'm not a piece of material that you lift and tuck and snip and put together. Besides, I didn't want the healthy breast messed around with.

In only one instance did a woman who was not planning to have reconstruction claim that she wanted to but could not because of her husband's adamant disapproval of the surgery.

I'd love to have it done but my husband doesn't want to hear of it. He's totally against it. He says, 'Why do you want to go back into the hospital?' I tell him I'm not doing it for you; I'm doing it for me but he tells me I'm crazy and that I'm just looking for trouble....He just doesn't understand.

The findings of this study also indicate that the decision-making process itself can be difficult and anxiety-provoking for many postmastectomy patients who must wrestle with a variety of

surgery. For instance, both younger and older women expressed age-related decision-making difficulties. Consistent with Goin and Goin's (1981) observations, a number of older women in this study expressed embarrassment and shame about wanting reconstruction. One 60 year old woman wondered, "Why do people say you're too old to have it done?" In addition, however, a number of younger women who were not planning to reconstruct also described feelings of embarrassment and emotional discomfort with regard to their decision. One 43 year old woman felt pressured by her surgeon who upon every visit continued to urge her to see a plastic surgeon by stating, "You're young and attractive, you should have reconstruction" while another 37 year old woman commented that "most people who haven't had breast cancer don't understand. They think why hasn't this [young] person bothered to have breast reconstruction done?" Conversely, another woman referring to the women who opt to reconstruct observed that "there's a lot of pressure among women who are having it done. They want to be reassured that they did the right thing and not just for vanity's sake." Consistent with this clinical picture are the study's empirical findings which indicate that younger women as compared to older women report significantly greater difficulty deciding about reconstruction and that those women who choose to reconstruct report greater difficulty making the decision as compared to those who choose not to reconstruct.

Other factors can interfere with the decision-making process. For two of the women in the non-reconstruction group, conflicts between their religious beliefs and their desire for reconstruction

made the decision-making process extremely difficult for them. One woman stated,

It still bothers me to lose my breast but I don't let it... I do feel something is missing but I can't let it be too important because you're supposed to feel God was good to you. I was brought up Catholic and I was taught it's wrong to be so selfish.

Other women struggle with the decision because it involves issues of control ("It has to do with trusting the doctor; making the decision who to go to and placing myself in someone's hands") or it has to do with their own conflictual feelings about their breasts. One large-breasted woman who had decided not to reconstruct revealed her longstanding discomfort with her breasts when she commented, "Even if I had the other breast removed, I wouldn't have breast reconstruction done. I'd just get a smaller prosthesis and then maybe I'd be normal for a change." In contrast, another woman who recalled her feelings of shame about her small breasts (and had, in fact, debated having breast augmentation surgery as a young adult) was also extremely ambivalent about her decision not to reconstruct even though she imagined that through reconstruction, "I could always get those larger breasts I longed for." A very large breasted woman who greatly valued her breasts and experienced them as a central feature of her appearance expressed great difficulty deciding about reconstruction. For her, the conflict was in determining which she valued more: her private image or public image.

A 'B' breast would be too small. I always had a full size breast, a large cup. How would they make the reconstructed breast large

enough?... It would be hard to compromise and reconcile myself. I want to look as good as I do now in clothes [since] I spend more time in clothes than out of them.

Interestingly, a number of the women who were experiencing the most difficulty coming to a decision about reconstruction commented that they wished the option of immediate reconstruction (i.e., having the reconstruction at the time of the mastectomy) had been available to them.

Despite these areas of difficulty, however, many of the women in this study impressed this researcher with their insightfulness and thoughtfulness regarding these issues. Many of the women had clearly "weighed the pro's and con's" before coming to their decision and several women were striking in their clarity of thinking. The majority expressed realistic expectations about what the reconstructed breast would and would not do for them. A 35 year old woman who was not planning to reconstruct gave the following explanation of her decision: "Reconstruction is not going to replace what I lost. I know me. I don't know if I'd ever feel O.K. about it. Breast reconstruction is not a panacea that's going to make it all better." Another women who was planning to reconstruct stated, "I don't expect to look the way I was before. I'm not expecting to look beautiful nude. When I'm undressed it'll be obvious it's not a natural breast but it'll be more convenient with clothes and better than not having any breast there at all."

## Additional Findings

### Mastectomy Experience

As the vast amount of literature on the psychosocial aspects of mastectomy indicates, there are many issues worthy of discussion related to women's experiences having breast cancer and a mastectomy. Since it is beyond the scope of this dissertation to include all of the findings that were obtained in this study related to this topic, only a few of the findings will be presented in this section.

The experience of having breast cancer and a mastectomy can be understood as involving a continuum of experiences that extends from the time of diagnosis to the period of intervention (i.e., surgery and/or adjuvant therapies) to posttreatment recovery. While there were similarities among the women in terms of their most prominent concerns and feelings at different times within this continuum of experiences, there were also differences among the women that reflected their uniqueness as individuals as well as the variabilities in their personality and interpersonal situations. Consistent with Jamison et al.'s (1978) findings, many of the women stated that the hardest time in this continuum of experience (i.e., the peak period of distress) was the time immediately after the breast cancer has been diagnosed. As one woman stated, "The hardest time is once you know it's cancer and then have to wait for the mastectomy. You know you have something there and you want it out right now. You don't want to wait.... you just want it over."

The overwhelming majority of women in this study stated that prior to the mastectomy, their primary concerns were about having breast cancer and surviving it and that feelings about the loss of the breast were less prominent, if not altogether absent, at this time. One woman stated, "I was more concerned about the medical prospects rather than the emotional or physical. This is my life at stake; my appearance was secondary." However, there was a minority of women who struggled equally with both issues prior to the surgery. One woman gave the following account: "I was frightened about having a mastectomy and of having cancer. Sometimes having cancer was more overwhelming than the mastectomy and sometimes the mastectomy was more overwhelming than having cancer." Another woman stated,

"At the time deciding what surgery to do [mastectomy vs. lumpectomy], the threat to my life was not so vivid as having a body part removed. I was more upset about that than the actual thought of what the cancer could do."

Interestingly, not all of the women who experienced these body integrity and body image concerns so prominently prior to the surgery were planning to reconstruct at the time of the study.

In addition to these immediate emotional issues that the breast cancer patient faces, the women expressed other, long-term psychological reactions in response to having the disease. For some of the women having breast cancer altered their sense of themselves in the world in fundamental, existential ways. One woman commented, "What's devastating is to realize that your body is fragile and that life itself is so fragile." Another 42 year old woman

said, "Breast cancer takes away your feeling of youth. Until I had cancer I felt invulnerable. Like I was going to go on forever. All of a sudden it made me feel old." Another woman experienced anger at the cruelty of the disease:

You get to a certain point in your life where you're really happy.

You have your career, you have your family, you have all these things and then this interruption. I have anger about my age and the disruption this has caused in my life.

In considering women's adjustment to mastectomy, the quality of the the woman's relationship to her surgeon is considered important in providing emotional support and information (Asken, 1975; Holland & Mastrovito, 1980; Ray & Baum, 1985). Interestingly, among this sample of women their experiences with their surgeons varied considerably with one woman describing her surgeon as "the most caring human being in the whole world" to another who described hers as having "a bedside manner like Attila the Hun." Some women experienced their surgeons as informative, responsive and consistently supportive whereas others found their surgeons to be "tactless and unfeeling", impatient and unavailable. One of the husbands who was present during his wife's interview astutely commented, "Husbands can do a certain part but his hands are tied because he doesn't have the information. You have to depend on the professionals and they can make the world of difference for the patient."

It has also been suggested that knowledge of the possibility of breast reconstruction prior to the mastectomy may help women cope with the surgery (Dowden et al., 1979; National Cancer Institute,

1984). Among the women in this study, their response to this question (i.e., "Was it helpful to know prior to the mastectomy that breast reconstruction would be an option?") was mixed. Some of the women claimed that knowing it was an option was helpful because it gave them the feeling that "you didn't have to be disfigured forever" and it comforted them to have some flexibility in the matter and to be able to say to themselves "I may not want it now but five years down the road I might." Others, however, claimed that "it was not a source of comfort whatsoever" because at the time of the mastectomy fears about having cancer and of dying far outweighed any feelings about the loss of the breast. As one woman stated, "At the time of the mastectomy, I was much more concerned with my life than with preserving my breast."

### Psychodynamic Implications of Chemotherapy and the Impact of Mothers' Breast Cancer on their Children

Many important issues involving the women's experiences having breast cancer and a mastectomy were raised when they were given the opportunity to openly discuss their thoughts, feelings and concerns during the interviews. While it is not possible to include discussions of all of the issues raised, two particularly important aspects of the women's experiences will be discussed below.

More than half the women in this study underwent chemotherapy subsequent to their mastectomy and many of them reported experiencing a variety of intense emotional reactions including feelings of fear, anxiety, confusion and rage. While

undergoing the chemotherapy, some of the women felt that "as miserable as the chemotherapy was, it was fighting the cancer. If anything was going to save my life, these horrible drugs will." However, for a larger number of the women in this study, chemotherapy was seen as "the final insult" ("it's like you lost your breast to cancer and now you have to lose your hair") and as a "huge shock"; an experience that was debilitating, demoralizing and extremely painful. As one woman recalled, "During the chemotherapy I remember walking by a mirror and thinking -- no breast, no hair, nothing." In fact, a number of the women in this study claimed that, in retrospect, the loss of their hair from the chemotherapy was far more traumatic than the loss of their breast from the mastectomy.

In response to the loss of their hair, some of the women experienced intense feelings of powerlessness and vulnerability. As one woman stated with regard to her hair loss, "It was a horror. It just all fell out in my hand one day. It was as if my hair had died. It was the worst because I couldn't control it." For other women, the experience of losing their hair was devastating because of its impact on their sense of femininity and physical attractiveness. One woman described herself as feeling degraded and stripped of her femininity after the loss of her hair. For several women (interestingly, several of whom were beauticians), losing their hair was particularly difficult for them given their longstanding investment in this aspect of their appearance. One 43 year old woman stated:

The mastectomy wasn't my greatest concern; it was losing my hair....People raved about my hair. They would stop my mother in

the street when I was with her to ask her about it. That was where the main focus was my whole life. When I had the mastectomy that was not the hardest part. The greatest fear was having the chemotherapy and losing my hair...That was more important to me than my breast. I just wasn't big breasted and neither was my mother nor her mother.

For many of the women, it was the public nature of the hair loss as compared to the more private, more easily concealed loss of the breast that was the most upsetting. As another woman stated,

You're losing your outside image when you lose your hair. Now people can tell there is something wrong... Clothes can hide the breast with a prosthesis. But with the hair, a wig could hide it, but it was so hot and uncomfortable. I couldn't take it.

Another woman's understanding of her devastation with regard to the loss of her hair during her course of chemotherapy treatments also involved similar issues having to do with her self image.

You can camouflage the loss of your breast but you can't camouflage the loss of the hair as easily. A wig would've been very uncomfortable and I would've been very self-conscious. You know, you get up every morning and look in the mirror. If you don't want to look at your breast you don't have to. Without the hair, you have to see a different person in the mirror.

Altogether, the women's emotional responses to the loss of their hair from the chemotherapy were as varied as the reasons underlying their reactions. However, the findings from this study indicate that for many women the trauma of having breast cancer

applies as much to the mastectomy itself as to the adjuvant treatments that follow.

Another important aspect of the mastectomy experience that the women in this study discussed was the impact of the illness on their children. The limited research that has been conducted in this area suggests that the reactions of children to their parent's cancer depend upon a variety of factors which include the age of the child, the severity and chronicity of the parent's cancer, the psychological adjustment of the parent in response to his/her illness as well as the quality of the relationship between parent and child (Lichtman et al., 1984). Several of the women in this study, particularly those with very young children (i.e., under 10 years old), were uncertain about whether they should tell their children about their illness and also about how to do so. A number of these mothers complained that the support groups they joined were not helpful to them because the types of issues of concern to them were not addressed in these meetings, often because the women in these groups were older and with grown children. Concerns about their children's future, their children's reactions to the cancer and their difficulties taking care of their children immediately after the surgery and/or during chemotherapy were prominent among this group of mastectomy patients. One young mother commented:

My biggest fear about having breast cancer was that if I died, I'd be leaving my children. I worried more about my children than I did about my husband. I couldn't think of anyone I'd want to bring up the children; that would bring them up the way I'd want them to be brought up.

Another described the pain she experienced when confronted with her children's rejection during the course of her chemotherapy treatments.

Losing the hair was very difficult for me because my children [three girls ages 7, 11 and 13] didn't want to see me. It made life so hard for me. My children sent out definite signs that they did not want to see what I looked like. They were always hiding.... They didn't want to look at me.

In addition to these mother-child issues, this researcher was struck by the fascinating psychodynamic implications of situations described by several mastectomy patients involving their older, teenage daughters. One mother described her 17 year old daughter who in response to the patient's mastectomy developed debilitating anxiety attacks and who demanded that she undergo breast reduction surgery in response to her longstanding feelings of discomfort regarding her own large breasts. Another daughter's problems with bulimia which had started before her mother's mastectomy worsened after the diagnosis and in the months during her mother's recuperation from the surgery. In denial for years about her daughter's eating disorder, this woman responded with rage and disbelief, angry that "while I was fighting for my life my daughter was just giving hers away....She was choosing to do this to herself. I certainly didn't chose to do this to myself." In another mother-daughter dyad, conflicts around body integrity and issues of control seemed to be central concerns for both women yet were handled in diametrically opposed ways. The mother, a slight, soft-spoken and fragile-looking woman, described herself as struggling painfully

since the mastectomy with feelings of powerlessness and insecurity. In contrast, her 21 year old daughter who was extremely athletic and independent had enlisted in the Marines during that same year. While it is beyond the scope of this study to discuss the psychodynamic implications of these events in greater depth, it is clearly an extremely interesting and important area for clinical researchers to pursue in the future.

### **Limitations**

A discussion of the findings of this study would not be complete without consideration of its limitations. More specifically, aspects of the study's design as well as of some of the measures used will be reviewed. In addition, characteristics of the sample population will also be discussed as they pertain to the generalizability of the study's findings.

In terms of the design of this study, an interesting and revealing difficulty arose concerning the assignment of the women to the decision groups. As the study was designed, the women were asked upon initial contact whether they were planning to reconstruct or not and their response at that time determined into which decision group they were placed. From the outset, however, many of the women were unable to definitively state a decision (i.e., that they definitely were or were not planning to reconstruct) and some were so ambivalent about this issue that assigning them to a decision group based on their inclinations at the present time was not as easy and straight-forward a task as this researcher had

initially anticipated. In addition, from the time of the initial telephone contact to the time of the interview a number of the women seemed to change their minds with regard to the issue of reconstruction. Four women who when initially contacted stated that they were not choosing to reconstruct described themselves as more seriously considering the option at the time of the interview and one woman who initially stated that she was planning to reconstruct was more hesitant about pursuing reconstruction when discussing the issue several weeks later. Since these variations in the women's thinking about reconstruction occurred after the initial telephone contact, they did not alter the decision group assignments. However, this phenomena is important to note because it highlights the fact that mastectomy patients' thoughts and feelings about reconstruction can change with time and that feelings of uncertainty, confusion and anxiety frequently accompany the woman who is in the midst of deciding what she wants to do.

With two of the measures used in this study, the Locus of Control Scale and the Body Image Scale, there were unanticipated problems that impacted upon the results obtained. First, the low internal consistency of the Locus of Control Scales (based upon Chronbach's Alpha) compromised its usefulness in providing information about the degree of internality-externality of the study's participants and thus limits the extent to which conclusions can be drawn from the results obtained. With regard to the Body Image Scale, the decision groups did not differ on any of the variables measured by this scale even though significant differences in body image were found when the women were asked directly about

their feelings of physical attractiveness and body image in the interviews. It seems likely that limitations in the Body Image Scale's design (e.g., confusion as to the left-right orientation of the figure; the exclusion of body parts that may be more central to their feelings of attractiveness) and in its format (i.e., as a paper-and-pencil it is less immediate and thus less affectively charged) may have contributed to its inefficacy as a measure of body image.

Last, characteristics of the sample population will be discussed as they pertain to the generalizability of the study's findings. In addition to the fact that the size of the sample is relatively small, the women who participated in this study also represent a select population of postmastectomy patients. In terms of their demographic characteristics, the women in this study represent a selective subgroup of postmastectomy patients in terms of their marital status, ethnic and racial backgrounds and socioeconomic status. The extent to which the findings of this study apply to women with other demographic characteristics (e.g., women who are single, less educated, non-white) is unclear. In addition, other confounding variables such as the presence of children in the home and their ages at the time of the woman's mastectomy may also have important implications with regard to this study's findings.

The women in this study also represent a self-selected group by virtue of the fact that they volunteered to participate in this research project. Thus, it is possible that this sample of mastectomy patients is biased in ways that have important implications related to the study's findings. The extremely low

response to the American Cancer Society mailings (only 14 women responded out of the 750 recruitment letters that were mailed) suggests that this subgroup of women (34% of the study's sample) may be different in important ways from the women who did not respond to the same letter. For instance, it is possible that the woman who volunteered in response to the recruitment letter did so because they were experiencing significant difficulties adjusting to their mastectomy and they hoped that their participation in this study would enable them to receive guidance and support.

Consequently, the results may be biased in ways that reflect more postmastectomy adjustment difficulties than is normative for a similar sample of women. While it was not possible for this study to ascertain information about the women who did not respond to the recruitment letters, future studies might attempt to obtain such information in order to determine the distinguishing characteristics of those who respond to recruitment letters and those who do not. To some extent, however, this potential confounding factor is minimized because the majority of the women who agreed to participate in this study (66%) were obtained through more personal means (e.g., referrals from other participants, self-help group leaders who called their group members).

### **Implications**

One of the major goals of this study was to obtain information and insight into the issues involved in mastectomy patients' decisions about breast reconstruction that might be useful to health

care professionals as well as to patients themselves. For many women, the process of deciding whether to reconstruct or not is a difficult one in which both practical considerations and psychological issues are inextricably tied.

Overall, the findings of this study reveal that it is a complex combination of present and past experiences which determine the uniqueness of each woman's response to the loss of her breast and the possibility of its restitution through reconstruction. It is this author's belief that the more useful perspective to adopt in attempting to understand women's response to mastectomy and their decisions regarding breast reconstruction is one in which chronology rather than pathology is the emphasis. While attitudes among general surgeons appear to be changing with regard to the woman who opts to reconstruct, the overt and subtle pathologizing characteristic of their orientation has not been supported by the empirical research that has been done nor has it proven to be clinically useful. The findings of this study support the contention that it is not difficulties in adjustment which underly women's decisions about reconstruction but more personal, intrapsychic issues involving the degree and affective quality of the woman's emotional investment in her breasts and the impact of this loss upon her sense of self and body image. It is important for physicians and other health care professionals to put aside their own personal biases, particularly with regard to age (e.g., in believing that all women under forty should reconstruct or that all women over seventy should not reconstruct) and, instead, to adopt a more neutral, non-judgemental stance in which each woman's questions

and concerns are taken into account in this important decision-making process.

With regard to future research in the field of psychosocial oncology, a developmental approach should be incorporated into the research of other investigators in this field of study. The findings of this study point to the need for future research which continues to explore the influence of early adolescent development experiences on adult personality functioning and, in particular, the ways in which these experiences impact upon women's responses to having breast cancer and a mastectomy. With regard to this study, a follow-up of its participants three to five years from now would be extremely useful in providing information as to their long-term adjustment and decisions regarding reconstruction (e.g., What percentage of women who were planning to reconstruct at the time of the study ultimately did so and what percentage did not? What percentage who stated they were not planning to reconstruct ultimately did so and what percentage did not? Of those who did reconstruct, how satisfied are they with the results?). Future studies might take into account some of this study's limitations and thus attempt to answer some of the questions and unclarities that remain. For example, subsequent studies should include larger samples of women in their efforts to replicate this studies' findings, particularly with regard to the timing of pubertal events and their impact on adult experience, as well as to clarify some of the findings which might have proven significant if a larger sample was available (e.g., the significance of the timing of menarche and satisfaction with breasts in adulthood were two variables which

evidenced trends towards significance). Along this same line of thinking, studies which include more diverse populations of breast cancer patients (e.g., single women and non-white women) would also be useful in determining the generalizability of this study's findings. In addition, future studies might incorporate this developmental perspective in assessing the impact of the timing of pubertal events on other different medical phenomena (e.g., to determine whether there is a connection between the timing of menarche and a woman's response to having a hysterectomy).

### **Conclusions**

Altogether, the findings of this study not only confirm the findings of other investigators in this area of research but also provide additional information that contributes in a substantial and meaningful way to our understanding of the issues concerning women's adjustment to mastectomy and their decisions regarding breast reconstruction. Consistent with the findings of other developmental psychologists interested in the psychology of women, the findings of this study indicate that the timing of maturational events in puberty and the emotional reactions that accompany them can have long-lasting effects which persist into adulthood (Brooks-Gunn & Peterson, 1983; Shipman, 1964; Woods, Deny & Most, 1983). The results of this study suggest that these developmental factors influence the mastectomy patient's response to the loss of her breast and the decision she makes concerning its replacement (i.e., whether to reconstruct or not). This developmental perspective has

added a new dimension in our understanding of women's experiences having breast cancer and a mastectomy and it is this author's hope that others will continue to pursue this important area of clinical research.

**APPENDIX A**  
**Recruitment Letters**



LONG ISLAND DIVISION, INC.  
 145 PIDGEON HILL ROAD  
 HUNTINGTON STATION, NEW YORK 11746-4585 (516) 385-9100

HOLM-ANDERSEN, M.D.  
 President  
 GEORGE J. BROWNE  
 Chairman of the Board  
 GARY D. BURD  
 Executive Vice President

Dear Friends:

The American Cancer Society has long been committed to the support of cancer patients. Our Reach to Recovery program demonstrates our belief in providing quality support to breast cancer patients through hospital visitation, volunteer counseling and the quarterly rehabilitation sessions. These sessions are designed to lend support in adjusting after surgery and to offer information about chemotherapy and reconstructive surgery. In keeping with our concern for the needs of patients we are working with a doctoral candidate, Alison Ross from the City College of the City University of New York. Ms. Ross is interested in seeking information from patients which will help to provide greater support to women in adjusting to breast cancer, their treatment by mastectomy, and deciding about possible reconstructive surgery. This information will help doctors and other health care professionals be more sensitive to women during this very difficult period.

Our role is to send you this letter which will explain what the study is all about and invite you to participate should you be interested. WE WILL NOT GIVE YOUR NAME TO MS. ROSS SINCE THAT INFORMATION IS CONFIDENTIAL. IF YOU ARE INTERESTED IN BEING A PART OF THE STUDY YOU WILL NEED TO SEND THE CARD BACK TO OUR OFFICE GIVING US YOUR CONSENT AND INDICATING YOUR DESIRE TO BE A PARTICIPANT. WE WILL THEN SEND YOUR NAME AND ADDRESS ON TO HER AND SHE WILL CALL YOU.

Thank you for your consideration of this matter.

Sincerely,

A handwritten signature in cursive script that reads "Doris R. Hoyer".

Doris R. Hoyer  
 Director of Medical Affairs

DRH/mk

**THE CITY COLLEGE**  
**OF**  
**THE CITY UNIVERSITY OF NEW YORK**  
**NEW YORK, N.Y. 10031**

**THE PSYCHOLOGICAL CENTER**  
**DEPARTMENT OF PSYCHOLOGY**

Hello:

My name is Alison Ross and I am a Ph.D. candidate in clinical psychology at The City College, City University of New York. Along with being an experienced psychotherapist, I have also received training as a public health care specialist. The emphasis of my work has been on issues involving medical illness and its impact upon individuals' psychological and emotional well-being. The study I am conducting through the American Cancer Society is designed to further an understanding of the factors that impact upon women's adjustment to having breast cancer and a mastectomy and to explore some of the issues involved in their decisions regarding breast reconstruction.

I would like to encourage you to participate in this study. I believe the information obtained will be of great benefit to mastectomy patients as well as to surgeons and other health care professionals. The findings from this study will enhance doctors' appreciation of the issues confronting post-mastectomy patients. It will provide doctors with a better understanding of their patients' experiences in dealing with this type of surgery. Before I describe the details of the study below, I want to underscore two important points. First, that this mailing was done through the American Cancer Society in such a way that neither your name nor any information about you has been disclosed to me at this time. Second, that if you choose to be a participant in this study, the information you would provide would remain totally confidential. At no time would your name be used in connection with this study nor would you ever be identified as a participant.

As I have stated, the main focus of this study is to better understand women's experiences of their mastectomy and their decisions regarding breast reconstruction. I am interested in post-mastectomy patients who have decided not to reconstruct as well as those who plan at some future time to have breast reconstruction done. As a participant in this study, each woman would receive a packet in the mail containing several questionnaires that take approximately 45 minutes to complete. In addition, I would meet with each woman for approximately one hour at whatever location is most convenient for her and I to get together (e.g., at her home or at the American Cancer Society in Huntington).

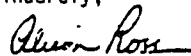
Because of the nature of this study, it is important that the women who participate have certain characteristics in common. These are:

- (1) All participants must have had a unilateral mastectomy within the past five years. In addition, they cannot currently be undergoing any additional therapies such as chemotherapy, radiation therapy or hormone therapy, and if they are planning to reconstruct have not done so at the present time.
- (2) All participants must be 60 years old or younger.
- (3) All participants must be married or have a partner
- (4) All participants must have a minimum of a high school education.

Attached to this letter is a postcard which you can complete and mail to the American Cancer Society if you are interested in participating in this study and have the characteristics described previously. If you have any additional questions or would like to speak with me directly, please feel free to call me at 212-799-6003.

Thank you for giving me your time and consideration. I look forward to working with you and by doing so making a contribution in this important area of health care research.

Sincerely,



Alison Ross  
Masters in Public Health  
Ph.D. Candidate in Clinical Psychology

**APPENDIX B**

**Measures and Informed Consent Form  
Mailed to Participants**

**PLEASE NOTE:**

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These consist of pages: 142-143, BDI

**U·M·I**

# SELF-EVALUATION QUESTIONNAIRE

Developed by Charles D. Spielberger

in collaboration with

R. L. Gorsuch, R. Lushene, P. R. Vagg, and G. A. Jacobs

STAI Form Y-1

Name \_\_\_\_\_ Date \_\_\_\_\_ S \_\_\_\_\_  
 Age \_\_\_\_\_ Sex: M \_\_\_\_\_ F \_\_\_\_\_ T \_\_\_\_\_

**DIRECTIONS:** A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you have been feeling this past week, including today. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

VERY MUCH SO  
 MODERATELY SO  
 NEITHER  
 AT ALL

- 1. I feel calm ..... ( ) ( ) ( ) ( )
- 2. I feel secure ..... ( ) ( ) ( ) ( )
- 3. I am tense ..... ( ) ( ) ( ) ( )
- 4. I feel strained ..... ( ) ( ) ( ) ( )
- 5. I feel at ease ..... ( ) ( ) ( ) ( )
- 6. I feel upset ..... ( ) ( ) ( ) ( )
- 7. I am presently worrying over possible misfortunes ..... ( ) ( ) ( ) ( )
- 8. I feel satisfied ..... ( ) ( ) ( ) ( )
- 9. I feel frightened ..... ( ) ( ) ( ) ( )
- 10. I feel comfortable ..... ( ) ( ) ( ) ( )
- 11. I feel self-confident ..... ( ) ( ) ( ) ( )
- 12. I feel nervous ..... ( ) ( ) ( ) ( )
- 13. I am jittery ..... ( ) ( ) ( ) ( )
- 14. I feel indecisive ..... ( ) ( ) ( ) ( )
- 15. I am relaxed ..... ( ) ( ) ( ) ( )
- 16. I feel content ..... ( ) ( ) ( ) ( )
- 17. I am worried ..... ( ) ( ) ( ) ( )
- 18. I feel confused ..... ( ) ( ) ( ) ( )
- 19. I feel steady ..... ( ) ( ) ( ) ( )
- 20. I feel pleasant ..... ( ) ( ) ( ) ( )



**Consulting Psychologists Press**  
 577 College Avenue, Palo Alto, California 94306

**PLEASE NOTE:**

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These consist of pages: 145-147, LOC SCALE

**U·M·I**

**THE CITY COLLEGE**  
**OF**  
**THE CITY UNIVERSITY OF NEW YORK**  
**NEW YORK, N.Y. 10031**

**THE PSYCHOLOGICAL CENTER**  
**DEPARTMENT OF PSYCHOLOGY**

**INFORMED CONSENT FORM**

I, the undersigned, agree to participate in a study on women's adjustment to mastectomy and their decisions regarding breast reconstruction. I understand that as a participant in this study I will be asked to complete a packet of questionnaires that will be mailed to my home and that I will be interviewed for approximately one hour by Ms. Alison Ross, a doctoral candidate in Clinical Psychology at The City College, City University of New York.

I understand that all of the information I provide for this study will remain completely confidential; that my name will not be used at any time nor will I be identified in any way as a participant in this study. I agree/ do not agree to have my interview with Ms. Ross audio-taped with the understanding that these tapes will be kept in a locked cabinet to insure that no one but Ms. Ross has access to the tape and that it will be erased once the study is completed.

Your signature indicates that you have read and understand the above information and that you agree to be a participant in this study.

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Signature of investigator or witness

**APPENDIX C**

**Adolescent Development Interview**

Subject ID #: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

**Demographic Information**

I would like to start with a few descriptive questions about yourself.

1. What is your age? \_\_\_\_

2. What is the highest level of education you have completed?

- high school graduate  
 some college  
 college graduate  
 graduate or professional school/ degree

3. What is your religion?

- Protestant  
 Catholic  
 Jewish  
 Other \_\_\_\_\_  
 None

4. What is your ethnic background?

- Caucasian  
 Hispanic  
 Black  
 Asian  
 Other \_\_\_\_\_

5a. How many years have you been married? \_\_\_\_\_

b. Do you have children? \_\_\_\_ yes \_\_\_\_ no

(If yes) What are their ages & sex? \_\_\_\_\_

6. Are you currently employed?

yes

no

What is your occupation:  
(title) \_\_\_\_\_

(F/T - P/T) (Pd - Vol)

Which of the following best describes  
your situation:

- seeking work  
 retired  
 manage household  
 unable to work  
 other \_\_\_\_\_

7. Which category approximates your total household income last year? (Show card with the following categories listed):

- \$10,000 - 19,999  
 \$20,000 - 29,999  
 \$30,000 - 39,999  
 \$40,000 - 49,999  
 over \$50,00

**Demographic Information** (continued)

8. Type of surgery: \_\_\_ modified radical mastectomy - Which breast? L / R

Date of surgery: \_\_\_\_\_

Did you have chemotherapy or radiation postsurgery?

\_\_\_ yes \_\_\_ no

(If yes) When and for how long? \_\_\_\_\_

Additional Notes:

Subject ID#: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

**Adolescent Development Interview**

Before we talk about your experiences with breast cancer and your mastectomy, I'd like to ask you the following set of questions. These questions are designed to learn more about your experiences in early adolescence involving your body and its physical development.

**MENARCHE/MENSTRUATION**

(1) At what age was your first menstruation?

- |  |   |
|--|---|
| <input type="checkbox"/> 8 years old & younger | <input type="checkbox"/> 12 years old     |
| <input type="checkbox"/> 9 years old           | <input type="checkbox"/> 13 years old     |
| <input type="checkbox"/> 10 years old          | <input type="checkbox"/> 14 years old     |
| <input type="checkbox"/> 11 years old          | <input type="checkbox"/> 15 years & older |
|  | <input type="checkbox"/> can't remember   |

(2) Regarding your first menstruation and in relation to your peers at the time, would you characterize yourself as an:

- early maturer  
 on-time maturer  
 late maturer

(3) What was your reaction when you got your period for the first time? What were your thoughts and feelings about it?

(4) Listed here are a variety of feelings you may have had the first time you got your period. Which of these did you experience?

- |   |  |  |
|---|--|--|
| 1. <input type="checkbox"/> excitement    | 7. <input type="checkbox"/> shame      | 13. <input type="checkbox"/> anxiety     |
| 2. <input type="checkbox"/> disgust       | 8. <input type="checkbox"/> pride      | 14. <input type="checkbox"/> anger       |
| 3. <input type="checkbox"/> fear          | 9. <input type="checkbox"/> sadness    | 15. <input type="checkbox"/> relief      |
| 4. <input type="checkbox"/> embarrassment | 10. <input type="checkbox"/> amazement | 16. <input type="checkbox"/> no reaction |
| 5. <input type="checkbox"/> curiosity     | 11. <input type="checkbox"/> confusion |  |
| 6. <input type="checkbox"/> happiness     | 12. <input type="checkbox"/> shock     |  |

(5) Of all the feelings you noted above, which one feeling was the strongest or the most prominent? \_\_\_\_\_(6) Had you talked with your mother about menstruation prior to your first period?  yes  no

(7) When you got your period for the first time, did you tell your mother?  yes  no

(If yes) Was her reaction  very negative  
 somewhat negative  
 neutral  
 somewhat positive  
 very positive

(8) When you got your period for the first time, did you tell your father?  yes  no

(If yes) Was his reaction  very negative  
 somewhat negative  
 neutral  
 somewhat positive  
 very positive

(If no) Do you imagine your father knew about your first period anyway?  yes: By whom \_\_\_\_\_  
 no

(9) Do you currently continue to have monthly periods?

yes  no because of  chemotherapy  
 menopause  
 surgery or other reason \_\_\_\_\_

(If period has ended) Overall, how did you feel about your period ending? Did you feel:  extremely upset

moderately upset  
 mildly upset  
 not upset at all

(10a) How much physical discomfort do you / did you usually experience when you menstruate(d) (e.g: cramps, backaches, headaches)?  extreme discomfort

moderate discomfort  
 mild discomfort  
 no discomfort at all

(10b) In general, how troubled are you / were you by the physical discomfort you experience(d)?  extremely

moderately  
 slightly  
 not troubled at all

(10c) How much emotional discomfort do you / did you usually experience when you menstruate(d) (e.g.: feeling moody, depressed, irritable)?

extreme discomfort

moderate discomfort

mild discomfort

no discomfort

(10d) In general, how troubled are you / were you by the emotional discomfort you experience(d)?

extremely

moderately

slightly

not at all

(11) Do you have any particularly vivid experiences and/or memories related to your first or subsequent menstruations?

#### EARLY BREAST DEVELOPMENT

(1) At what age did you first begin to develop breasts? That is, at what age did you first notice that your breasts were beginning to grow?

<input type="checkbox"/> 8 years old & younger	<input type="checkbox"/> 12 years old
<input type="checkbox"/> 9 years old	<input type="checkbox"/> 13 years old
<input type="checkbox"/> 10 years old	<input type="checkbox"/> 14 years old
<input type="checkbox"/> 11 years old	<input type="checkbox"/> 15 years & older
	<input type="checkbox"/> can't remember

(2) Regarding your breast development and in relation to your peers at the time, would you characterize yourself as an:

- early maturer
- on-time maturer
- late maturer

(3) What was your reaction when you first began developing breasts? What were your thoughts and feelings about it?

(4) Listed here are a variety of feelings you may have had when you began developing breasts. Which of these did you experience?

- |                      |                   |                     |
|----------------------|-------------------|---------------------|
| 1. ___ excitement    | 7. ___ shame      | 13. ___ anxiety     |
| 2. ___ disgust       | 8. ___ pride      | 14. ___ anger       |
| 3. ___ fear          | 9. ___ sadness    | 15. ___ relief      |
| 4. ___ embarrassment | 10. ___ amazement | 16. ___ no reaction |
| 5. ___ curiosity     | 11. ___ confusion |                     |
| 6. ___ happiness     | 12. ___ shock     |                     |

(5) Of all the feelings you noted above, which one feeling was the strongest or the most prominent? \_\_\_\_\_

(6) When your body was changing and you began to develop, did you talk to your mother about it?      \_\_\_ yes      \_\_\_ no

(7) Overall, how close were you to your mother during this time in your life?

\_\_\_ very close

\_\_\_ somewhat close

\_\_\_ slightly close

\_\_\_ not close at all

(8) What effect did the changes in your body and physical appearance have on the closeness of your relationship with your mother at this time? That is, did the changes bring you closer together, further apart or have no effect on your relationship with her? The relationship:

\_\_\_ became much closer

\_\_\_ became a little closer

\_\_\_ did not change

\_\_\_ became a little less close

\_\_\_ became much less close

(9) What was your mother's reaction to your developing figure?

(10) Overall, how close were you to your father during this time?

\_\_\_ very close

\_\_\_ somewhat close

\_\_\_ slightly close

\_\_\_ not close at all

(11) What effect did the changes in your body and physical appearance have on the closeness of your relationship with your father at this time? That is, did the changes bring you closer together, further apart or have no effect on your relationship with him? The relationship: \_\_\_ became much closer  
 \_\_\_ became a little closer  
 \_\_\_ did not change  
 \_\_\_ became a little less close  
 \_\_\_ became much less close

(12) What was your father's reaction to your developing figure?

(13) Do you have any particularly vivid memories or experiences of the time when you were developing breasts? Any that involve your mother or father?

#### BODY IMAGE IN ADOLESCENCE

(1) Overall, how important was your appearance in your early teen years? \_\_\_ very important  
 \_\_\_ somewhat important  
 \_\_\_ slightly important  
 \_\_\_ not important at all

(2) When you compared yourself to other girls your age, did you feel you were: \_\_\_ much more attractive  
 \_\_\_ a little more attractive  
 \_\_\_ about the same  
 \_\_\_ a little less attractive  
 \_\_\_ much less attractive

(3) As an adolescent in your early teens, how did you feel about your breasts? \_\_\_ very satisfied  
 \_\_\_ somewhat satisfied  
 \_\_\_ no feelings about them either way  
 \_\_\_ somewhat dissatisfied  
 \_\_\_ very dissatisfied

What did you like and/or dislike about them?

(4) As an adolescent in your early teens, how important were your breasts in determining your sense of femininity and/or attractiveness?

- very important
- somewhat important
- slightly important
- not important at all

(5) When you were in your early teens, were any of the following more important than your appearance in determining your self-esteem?

- school performance
- sense of humor
- athletics
- creative abilities
- being popular
- other(s) \_\_\_\_\_
- political activities

(6) Regarding the way you dressed in your early teen years, did you:

- wear clothes to hide your breasts
- wear clothes to accentuate your breasts
- not consider your breasts when you chose clothes to wear

(7) During these years, were there other aspects of your body or your physical appearance that you were particularly concerned about or particularly proud of? If so, what were they?

### PEER RELATIONSHIPS

(1) Do you recall ever having been teased about your breasts?

- frequently
- sometimes
- rarely
- never

(2) When your body was changing and you began to develop, did you talk to your girlfriends about ?  yes  no

(3) Concerning the physical changes you were experiencing in puberty, what effect did they have on the closeness of your relationships with your girlfriends? In puberty relationships with girlfriends:

- became much closer
- became a little closer
- did not change
- became a little less close
- became much less close

(4) Concerning the physical changes you were experiencing in puberty, what effect did they have on your interest and involvement with boys? Did you:

- become much more involved with boys
- become a little more involved with boys
- experience no change in your relationships with boys
- become a little less involved
- become much less involved

(5) Do you have any particularly vivid experiences and/or memories you have related to these questions?

### BODY IMAGE IN ADULTHOOD

This next and last set of questions have to do with your feelings about yourself as an adult before you had the mastectomy.

(1) As an adult, how important has your appearance been in determining your self-esteem?

- very important
- somewhat important
- slightly important
- not important at all

(2) How confident have you felt about your appearance in comparison to other women?

- extremely confident
- somewhat confident
- slightly confident
- not confident at all

(3) How important have your breasts been in determining your sense of femininity, sexuality and/or attractiveness as an adult?

- very important
- somewhat important
- slightly important
- not important at all

(4) As an adult, how had you felt about your breasts?

- very dissatisfied
- dissatisfied
- no feelings either way
- satisfied
- very satisfied

(5) Rank in order of importance those three feelings you most associate with your breasts (1= the most central quality).

- femininity
- sexuality
- maternal/mothering
- general physical attractiveness

(6) In your sexual relations, how important has breast stimulation been in your experiencing maximum pleasure?

- very important
- somewhat important
- slightly important
- not important at all

(7) If your feelings about your breasts changed significantly from adolescence to adulthood (that is, you have grown more satisfied/comfortable with them or more dissatisfied/uncomfortable with them over that time), to what experiences or events do you attribute the change?

This part of the interview is completed. Any additional thoughts or ideas before continuing to the next section?

**APPENDIX D**

**Mastectomy and Breast Reconstruction Interview**

Subject ID#: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

**Mastectomy Interview**

This next set of questions are about your experiences with breast cancer and its treatment.

1. How was your breast cancer first discovered?

- self breast exam     mammogram  
 self by chance     doctor's exam  
 partner

What was your reaction, your thoughts and feelings at the time?

2. To what extent were you involved in the decision to have a mastectomy? That is, did you consider alternative treatments? Did you consult other professionals prior to making your decision?

3. Prior to having the mastectomy, were you informed about the option of breast reconstruction? (If yes) How did you find out about it? Did knowing about reconstruction influence your decision concerning the mastectomy?

4. At the time the cancer was diagnosed and it was determined that you would have to undergo a mastectomy, what thoughts went through your mind? What were your fears, your concerns prior to having the surgery?

Of all those you've mentioned, which was the most prominent?

5. After the mastectomy, what were your thoughts and feelings. What were your concerns?

6. Since your mastectomy, overall, how much physical discomfort and/or pain have you experienced?

- extreme discomfort/pain  
 moderate  
 slight  
 none at all

Since your surgery, have you ever experienced feelings as if your breast was still there?  yes  no (If yes) How often? \_\_\_\_\_

7. Now in the present, have there been changes in your thinking about the surgery or in your feelings about it since it happened?

8. Currently, how much do you think about death or worry that the cancer will recur?  frequently

- sometimes  
 rarely  
 not at all

9. Have you had any particularly vivid fantasies or dreams since the mastectomy that you can recall?

10. Have you sought counseling or therapy since your surgery?

yes  no

(If yes)  self-help group/Affiliation: \_\_\_\_\_

Duration/Frequency: \_\_\_\_\_

individual Type of therapist: \_\_\_\_\_

Duration/Frequency: \_\_\_\_\_

general group / Affiliation: \_\_\_\_\_

Duration/Frequency: \_\_\_\_\_

Any medication(s) prescribed? \_\_\_\_\_

Why did you seek counseling or therapy? Was it helpful?



6. How satisfactory was your sexual relationship with your husband before the mastectomy?

excellent  good  fair  poor

7. How would you characterize it now?

excellent  good  fair  poor

8. On the whole, how would you rate the stability of your marital relationship since the surgery?

excellent  good  fair  poor

ATTITUDES ABOUT BREAST RECONSTRUCTION:

1. Do you currently wear a breast prosthesis?  yes  no

How comfortable are you with how it fits and how it looks?

- extremely comfortable  
 somewhat comfortable  
 slightly comfortable  
 not comfortable at all

2. What is your bra size? \_\_\_\_\_

3. At the present time, do you feel you would like to undergo breast reconstruction at some future time?  yes  no

(If yes) Which procedures are you considering: (check all that apply)

- breast reconstruction only:  
 nipple reconstruction  
 surgery on the remaining breast to achieve symmetry

4. How difficult has it been for you to decide (to / not to) have reconstruction done?

- extremely difficult  
 somewhat difficult  
 slightly difficult  
 not difficult at all

5. How does your husband feel about it?

6. How have you obtained the information you have about reconstruction? Have you gone for any consultations?

7. Have you ever seen a breast that has been reconstructed, either in pictures or on a person who had reconstruction done? (If yes to either) What was your reaction?

8. What are the reasons for your deciding (to / not to) have breast reconstruction done?

9a. --For no reconstruction group-- On this card are a list of possible reasons influencing your decision not to reconstruct. Which of these are true for you? Indicate all that apply.

1. \_\_\_ reconstruction is not essential to my physical well-being
2. \_\_\_ reconstruction is not essential to my emotional well-being
3. \_\_\_ the risks of surgery outweigh the benefits
4. \_\_\_ I do not want any more surgery
5. \_\_\_ I do not like the idea of something unnatural in my body
6. \_\_\_ I am worried that reconstruction might cause a problem related to my cancer.
7. \_\_\_ my partner does not support the idea
8. \_\_\_ the results I have seen are not worth the trouble
9. \_\_\_ my doctor advises against it
10. \_\_\_ I do not have the financial resources to pay for the costs of the surgery

Which one reason of those you listed above was the most important: #\_\_\_

9b. thru d. --For reconstruction group-- On this card are a list of possible reasons influencing your decision to reconstruct. Which of these are true for you? Indicate all that apply.

1. \_\_\_ to feel more balanced
2. \_\_\_ to feel more feminine
3. \_\_\_ to feel "whole again"
4. \_\_\_ to be less preoccupied with my physical state
5. \_\_\_ to become less preoccupied with my cancer
6. \_\_\_ to be able to wear more types of clothes
7. \_\_\_ to improve my marital relations
8. \_\_\_ to improve my sexual relations
9. \_\_\_ to get rid of my external prosthesis

Which one reason of those you listed above was the most important: # \_\_\_

9c. How satisfied do you imagine you will feel with the results of the reconstructive surgery?

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