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Current Directions in Psychological Science 2002 11: 111
DOI: 10.1111/1467-8721.00180

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Psychological Adjustment to Breast Cancer

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Abstract

Breast cancer remains a highly prevalent and extraordinarily stressful experience for hundreds of thousands of women each year in the United States and around the world. Psychological research has provided a picture of the emotional and social impact of breast cancer on patients' lives, and of factors associated with better versus worse adjustment. Psychosocial interventions have been beneficial in decreasing patients' distress and enhancing their quality of life. Recent research also suggests that psychological factors may be related to potentially important biological disease-related processes. In addition to providing an understanding of the psychological factors in breast cancer, research in this area has provided a framework for research on adaptation to health-related stress in general.

Keywords

breast cancer; psychological adjustment; coping

Breast cancer is a major public-health problem for women in the United States and internationally. Annually, more than 180,000 women in the United States are diagnosed with breast cancer, and more than 40,000 die from the disease; currently, a woman in the United States has a one in eight

chance of developing the disease in her lifetime (American Cancer Society, 2001). The extraordinarily stressful aspects of the disease and its treatment have made research on its psychological effects a high priority.

Early research on the psychological effects of breast cancer dealt with a disease that typically had a relatively poor prognosis and was treated with aggressive forms of surgery (e.g., total mastectomy) and adjuvant therapies (e.g., chemotherapy) that were accompanied by debilitating negative side effects. The picture of psychological adjustment to breast cancer offered by early studies was, not surprisingly, one characterized by significant distress and trauma. Notable advances in early detection, diagnostic methods, and surgical and medical treatments have improved the prognosis of the disease, and new forms of treatment (e.g., anti-emetic medications) have dramatically reduced adverse side effects that formerly plagued many patients. Approximately 50% of women with breast cancer can now expect to survive at least 15 years, and over 95% of women with localized disease will survive 5 years or more (American Cancer Society, 2001).

Despite these advances, however, the diagnosis of, treatment of, and recovery from breast cancer remain highly stressful. Psychological research has played an essential role in helping investigators understand the impact of breast cancer on the lives of patients and their families, develop interventions to decrease distress and enhance

quality of life, and understand possible relationships between psychological factors and biological disease processes. In addition, research on the psychological aspects of breast cancer provides a valuable paradigm for studying coping with health-related stress in general.

PSYCHOLOGICAL IMPACT OF BREAST CANCER

The psychological effects of breast cancer have been documented by using patients' self-reported mood and psychological symptoms to assess their psychological distress, sexual functioning, and overall quality of life; more rarely, investigators have used structured diagnostic interviews to assess psychiatric diagnoses. Findings indicate that the diagnosis of breast cancer is associated with heightened levels of negative emotions and psychological distress, especially symptoms of anxiety and depression. Elevated symptoms of anxiety and depression near the time of diagnosis are typically reported in 30% to 40% of patients, a rate that is approximately three to four times that found in the general population (e.g., Epping-Jordan et al., 1999). Rates of psychiatric diagnoses among breast cancer patients are less clear, as studies have varied widely in the methods used. Recent evidence suggests, however, that the rates of psychiatric diagnoses may not differ from those found in community studies. For example, Andrykowski, Cordova, Studts, and Miller (1998) found that rates of posttraumatic stress disorder (6% current and 4% lifetime) among newly diagnosed patients were comparable to rates in the general population.

There is considerable evidence that breast cancer and its treatment are associated with problems with

body image, sexuality, and sexual functioning. For example, a recent study of patients 1 to 2 months after surgery reported avoidance of and decrease in sexual activity and disruption in arousal, orgasm, and satisfaction with sexual activity following all types of breast surgery (Yurek, Farrar, & Andersen, 2000). Women who received modified radical mastectomies with reconstructive surgery had greater disruptions in sexual functioning than women who received modified radical mastectomies without reconstruction and women who received lumpectomy surgery (Yurek et al., 2000). These findings are consistent with results of a meta-analysis² that found that lumpectomy (which conserves the breast) was associated with small but significant advantages in body image and sexual adjustment compared with mastectomy (Moyer, 1997).

Prospective studies in which symptoms of psychological distress are measured at multiple points during treatment have provided a relatively consistent picture of the course of adjustment to breast cancer: Psychological distress is highest near the time of diagnosis and declines over the ensuing months (e.g., Carver et al., 1993; Epping-Jordan et al., 1999). The steepest drop in distress occurs during the first 3 months after diagnosis and surgery, or before the completion of adjuvant therapy for most patients. However, although the mean level of distress generally declines over the course of treatment and recovery, some patients continue to experience high levels of anxiety and depression many months or even years after diagnosis.

PREDICTORS OF ADJUSTMENT

The process and course of adjustment to breast cancer have been

studied in relation to five broad factors: characteristics of the disease, characteristics of the patient, social relationships and interpersonal resources, cognitive appraisals and attributions (e.g., perceptions of the disease and its causes, sense of control over the course of the disease), and coping methods. These factors have been examined in prospective studies to determine their contribution to increases or decreases in psychological symptoms and quality of life over the course of diagnosis, treatment, and recovery.

There is little evidence of a direct association of psychological distress with disease prognosis and type of treatment (e.g., surgical procedures, chemotherapy). The association between disease characteristics and psychological distress is far from simple, however, as it may change over the course of treatment and recovery. For example, one study (Compas et al., 1999) found that cancer stage (as an indicator of severity of the disease) was not associated with distress near the time of diagnosis, but was related to distress 6 months later. These findings suggest that patients' prognoses may become more salient once treatment is completed, as patients with a positive prognosis may recover psychologically more rapidly than patients with a poor prognosis and greater risk of recurrence.

Patients' characteristics that have been examined as predictors of distress include demographic factors (e.g., age, education) and personality characteristics (e.g., optimism). There is consistent evidence that age is inversely related to distress, such that younger women report more symptoms of anxiety and depression than older women (Stanton et al., 2000). Less formal education is associated with poorer psychological adjustment, including attempts to cope with the stress of breast cancer by avoiding emotions, thoughts, or information

related to the disease (Epping-Jordan et al., 1999). Among the various personality characteristics that have been studied, dispositional optimism, or the tendency to expect positive outcomes, has been most consistently associated with lower symptoms of anxiety and depression and higher quality of life (e.g., Carver et al., 1993; Epping-Jordan et al., 1999).

In addition to patients' personal characteristics, social relationships and interpersonal resources available to patients are associated with the course of adjustment to breast cancer. Foremost among these resources is the quality of social support available to women during their treatment and recovery. Emotional support (other individuals' verbal and nonverbal communication of caring and concern for the patient) shows the most consistent relationship to lower distress and higher quality of life. Evidence for beneficial effects of emotional support has been stronger in descriptive studies of naturally occurring support in patients' lives than in studies of the effects of peer-led support groups (Helgeson & Cohen, 1996).

Cognitive processes, including the patient's thoughts concerning her control over the disease or role in causing it, are also central in adaptation to breast cancer. As we have already noted, holding relatively optimistic beliefs about future outcomes is associated with better psychological adjustment (Carver et al., 1993). The tendency to attribute one's cancer to one's own stable characteristics (characterological self-blame) or to one's behavior is related to higher current psychological distress, and characterological self-blame is uniquely related to increases in distress over time.

The ways that patients attempt to cope with their disease and the effects of treatment are central in determining the course of psychological distress and adjustment. Coping methods that involve disengage-

ment from (avoidance of) the source of stress or one's negative emotions are predictive of poorer psychological adjustment and poorer health outcomes (e.g., Carver et al., 1993; Epping-Jordan et al., 1999). In contrast, coping methods that reflect engagement with the stressor and one's emotions are generally related to more positive psychological outcomes (e.g., Carver et al., 1993; Stanton et al., 2000). Furthermore, coping responses function as both mediators and moderators³ of the effects of other factors on adjustment. At least two prospective studies have found that coping mediates the relationship between optimism and distress—optimism is associated with greater acceptance and humor, and pessimism is associated with greater avoidance and wishful thinking (Carver et al., 1993; Epping-Jordan et al., 1999), and these differences in coping style are in turn associated with different levels of distress. Coping also moderates the association between perceptions of personal control and distress in adjustment to breast cancer (Osowiecki & Compas, 1999). Distress is lowest when patients who have a sense of personal control over their cancer cope by using active, problem-oriented methods of coping. Research on predictors of adjustment to breast cancer has identified a set of processes that warrant attention in research on adaptation to other health-related stressors.

PSYCHOLOGICAL INTERVENTIONS FOR BREAST CANCER

Individual and group interventions have been developed to enhance quality of life and decrease distress in breast cancer patients. Treatment techniques have included training patients in relaxation and guided-imagery techniques, providing them with

educational information, providing them the opportunity to express emotions, encouraging the exchange of social support with other patients, and training patients in cognitive and behavioral coping skills for dealing with a range of outcomes (e.g., nausea, pain, emotional distress, changes in quality of life, progression of the illness). Early work focused on behavioral methods for managing the nausea and vomiting associated with chemotherapy. Since the advent of antiemetic medications, psychological treatments have focused increasingly on using group methods to decrease patients' psychological distress and enhance their quality of life. The two treatment models that have been developed and examined most extensively in research are cognitive-behavioral (e.g., stress management, cognitive coping skills; e.g., Antoni et al., 2001) and supportive-expressive (focusing on the expression and processing of emotion; e.g., Classen et al., 2001).

Reviews of psychosocial interventions for cancer patients have shown that such interventions are effective for patients with various kinds of cancer, including breast cancer. Psychosocial interventions consistently show beneficial effects on emotional adjustment, functional adjustment, and treatment- and disease-related symptoms (e.g., nausea, pain). However, no specific type of intervention with breast cancer patients has met the criteria to be considered an "empirically supported" treatment (i.e., beneficial effects in at least two randomized trials conducted by independent investigators).

PSYCHOLOGICAL PROCESSES AND BIOLOGICAL OUTCOMES

Perhaps the most provocative and intriguing area of research in-

volves the possible association between psychological processes and biological disease processes and outcomes. Numerous studies have shown that stress and emotional distress are associated with increased output of the stress-related hormone cortisol, and with suppression of immune function. Stress and the psychological states of depression and anxiety have been associated with compromised immune function in breast cancer patients. In contrast, higher quality social support is associated with lower cortisol output in women with metastatic breast cancer (e.g., Turner-Cobb, Sephton, Koopman, Blake-Mortimer, & Spiegel, 2000). Although results from these and other studies suggest that psychological factors can influence immune functioning, the impact on cancer outcomes has yet to be determined.

Preliminary evidence suggests that psychosocial interventions for breast cancer patients may have beneficial physiological effects, including lowered cortisol, improved immune function, and enhanced survival. One well-known study reported significant survival advantages for women with metastatic breast cancer following participation in psychosocial support groups (Spiegel, Bloom, Kraemer, & Gottheil, 1989). However, several recent studies have failed to find an effect of psychosocial intervention on disease progression or survival time (e.g., Goodwin et al., 2001). Thus, potential physiological or survival benefits of psychosocial intervention for breast cancer patients remain speculative and deserve further investigation.

FUTURE DIRECTIONS

Further research is needed to build on current understanding of psychological processes in breast

cancer in several ways. First, several critical issues pertaining to psychological interventions remain unresolved. The mechanisms that account for the observed benefits of psychological interventions remain unclear. Interventions that facilitate emotional expression and support, as well as those that build coping skills, have yielded beneficial effects. However, the active components in these interventions remain unclear. The most controversial area of research involves the effects of psychological interventions on disease progression and survival. Second, research on breast cancer can benefit from closer integration with research advances in other areas of psychological science. For example, breast cancer is a disease primarily of older women. Understanding adjustment to breast cancer can be informed by basic research and theory on psychological aspects of aging. Also, research on cognitive and affective processes in adjustment to breast cancer will benefit greatly by drawing on emerging methods for measurement that have been developed in cognitive science and the study of emotions. Finally, as breast cancer treatments continue to improve and patients continue to live longer, attention may need to shift from the immediate effects of diagnosis and treatment to the longer-term effects during extended survival.

Recommended Reading

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Acknowledgments—Preparation of this manuscript was supported in part by Grant RO1CA67936 from the National Cancer Institute.

Notes

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2. In a meta-analysis, the findings of multiple studies are analyzed quantitatively by comparing them using a common unit of measurement.

3. Mediators are factors that account for the association between two other variables, whereas moderators are factors that alter the relationship between two other variables.

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