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Abstract

African-American women are less likely to be diagnosed with breast cancer than are White women but are more likely to be adversely affected. Although differences in incidence and mortality have been explored in some depth, little attention has been paid to how these women cope with the disease or whether their appraisal of their breast cancer differs from that of White women. Using a comparative design, this study analyzed the differences in appraisal between African-American and White women with breast cancer. The findings suggest that no differences exist between African-American and White women's appraisal of their breast cancer. The type of primary appraisal used most by both groups was harm to their health, safety, and physical well-being. The secondary appraisal used most was that breast cancer was an experience they had to accept. Possible links between appraisal and cognitive representations of illness and suggestions for further research on the appraisal are discussed.

Keywords

cognitive appraisal, coping, race, breast cancer

Comments

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ABSTRACT. African-American women are less likely to be diagnosed with breast cancer than are White women but are more likely to be adversely affected. Although differences in incidence and mortality have been explored in some depth, little attention has been paid to how these women cope with the disease or whether their appraisal of their breast cancer differs from that of White women. Using a comparative design, this study analyzed the differences in appraisal between African-American and White women with breast cancer. The findings suggest that no differences exist between African-American and White women's ap-

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KEYWORDS. Cognitive appraisal, coping, race, breast cancer

Although African-American women are less likely than White women to develop breast cancer, they appear to be more adversely affected. They tend to be diagnosed at more advanced stages, resulting in lower survival rates (Eley et al., 1994; Jacob, Spieth, & Penn, 1993; Klonoff-Cohen et al., 1998; McCarthy et al., 1998). Even when controlling for cancer stage and treatment, their social functioning in relation to self-care, household, occupational, and social and community activities is lower than that of White women (Bourjolly, Kerson, & Nuamah, 1999). Little is known, however, about the particular issues affecting the adjustment of this population to breast cancer. To address this situation, the present research examined the cognitive appraisal of breast cancer among African-American and White women with the disease to determine if race influenced the appraisal process.

In general, personal and environmental resources have been examined for their contributions to the coping process of women with breast cancer. These resources include coping strategies, social support, health beliefs, and socioeconomic status (Bloom & Spiegel, 1984; Burgess & Pettingale, 1988; Northouse & Stetz, 1989; Reynolds et al., 1994; Ross, 1993; Stanton & Snider, 1993). However, the use of these resources among racially diverse groups, especially African-American women, has not received much attention.

Breast cancer is the most common newly diagnosed cancer among women (Jemal et al., 2003) and is among the types most feared. (These data exclude basal and squamous skin cell cancers and in situ carcinomas.) It creates significant stress for many women. The disease can have a disturbing impact on one's life in a number of areas, including family and marital relationships, financial stability, social relations, and self-esteem (Cordoba, Fobair, & Callan, 1993). Some women feel over-

whelmed and anxious in their attempts to absorb complex and often conflicting information regarding options for cancer treatment. The result may be to defer decisions concerning their care entirely to their physicians (Williams et al., 1995). Evidence also suggests that the type of information women receive about their breast cancer is contrary to what they want (Degner et al., 1997).

BACKGROUND

Cognitive Appraisal

Thoughts about illness and what one can do about it can inform health-related behaviors. Cognitive appraisal has been studied for its impact on coping and health outcomes. It also has been used to explain the process of how emotions differ for different individuals. As Lazarus and Folkman (1984, p. 31) stated:

[Cognitive appraisal can be] understood as the process of categorizing an encounter, and its various facets, with respect to its significance for well-being. It is largely evaluative, focused on meaning or significance, and takes place continuously during waking life.

Frijda (1993) conjectured that the process of appraisal mediates between events and emotions and is the clue to why a particular event evokes an emotion in one individual and not in another or evokes an emotion at one moment and no emotion, or a weaker or stronger one, at another moment.

To identify the two main evaluative issues of appraisal, distinctions have been made between primary and secondary appraisal. In primary appraisal, the person evaluates whether he or she has anything at stake in the encounter. For example, is there potential harm or benefit with respect to commitments, values, or goals? Is the health or well-being of a loved one at risk? Is there potential harm or benefit to self-esteem? (Folkman et al., 1986b).

Secondary appraisal is a judgment concerning what might and can be done. It includes an evaluation about whether a given coping option will accomplish what it is supposed to—whether one can apply a particular strategy or set of strategies effectively and evaluate the consequences of using a particular strategy in the context of other internal or external demands and constraints (Lazarus & Folkman, 1984). Various coping op-

tions are evaluated, such as altering the situation, accepting it, seeking more information, or holding back from acting impulsively and in a counterproductive way. Secondary appraisals of coping options and primary appraisals of what is at stake interact with each other in shaping the degree of stress and the strength and quality (or content) of the emotional reaction (Lazarus & Folkman, 1984).

Cognitive Appraisal and the Coping Process

Lazarus and his colleagues have ascribed great importance to appraisal and view it as a critical determinant in the coping process. According to appraisal theory, in a threatening or harmful situation that is appraised as holding few possibilities for beneficial change, the person will use emotion-focused modes of coping. When a situation is appraised as having the potential for amelioration by action, the person will use problem-focused coping to alter the troubled relationship that produced the emotional distress (Folkman & Lazarus, 1980). For cancer patients, how the disease and its treatments are appraised possibly can influence coping and adaptation.

Studies have been conducted that demonstrate the mediating effects of appraisal on outcome measures. For example, appraisal was shown to mediate the effects of symptom distress partially in chemotherapy patients (Munkres, Oberst, & Hughes, 1992). For patients receiving radiotherapy, appraisal had mediating effects on mood dysfunction. It also was shown to mediate the effects of universal self-care burden and partially mediate or reduce the direct effects of symptom distress (Oberst et al., 1991).

In a study of women with metastatic breast cancer who were experiencing pain, Arathuzik (1991) found that the way the patients appraised their pain correlated with their methods of coping with it. Patients who perceived pain as threatening or harmful and as causing greater physiological and psychosocial effects were likely to cope by lying down, remaining still, moaning, groaning, and crying when in pain. Patients who were able to view their pain as challenging with some positive connotations, such as determination to get well, used coping strategies of active behavior, communication, relaxation, distraction, visualization, acceptance, problem solving, and reappraisal. In another study on cognitive appraisals in cancer patients, Jenkins and Pargament (1988) reported that higher levels of perceived threat were related to higher levels of observed behavioral upset and lower levels of observed adjustment to illness.

To understand further the relationship between appraisal and coping, the interrelationships among the various components of these two variables have been examined. Folkman et al. (1986a) found that the forms of coping used varied, depending on what was at stake (primary appraisal) and the options for coping (secondary appraisal).

Cognitive Appraisal and Culture

Although no studies on the appraisal process among African-American women with breast cancer have been reported, one can conjecture that cultural and racial influences may play a role in this process. Some literature exists to support the existence of ethnic differences in perception of illness. African Americans may differ from Caucasians in their definitions of health and illness and in their beliefs about the causes of illness (Clarke-Tasker, 1993).

Because cognitive appraisal is how an individual categorizes an encounter and perceives the threat involved, it is important to explore the way a person attributes meaning to illness. The underlying logic about disease can differ among cultural groups and among health care professionals. For example, Hughes, Lerman, and Lustbader (1996) examined ethnic differences in perceptions of the risk of breast cancer and of screening practices and determined that African-American women had significantly different perceptions about risks for breast cancer from those of White women. These differences were attributed to the influence of cultural factors particular to people of African descent, such as the importance of interpersonal relationships, spirituality, and time orientation.

In a study of Latina women, Anglo women, and physicians, Chavez et al. (1995) found a different underlying logic, or attribution, for beliefs about breast and cervical cancer. Kagawa-Singer (1993) discussed how the definition of health between Anglo-American and Japanese-American patients with cancer differed from the dominant definition used by the American health care system. O'Connor (1995) emphasized that cultural issues in health care include the values of both the health care provider and the patient. Perceptions about disease can vary because of culturally and socially constituted concepts regarding such factors as the following: what constitutes a problem, how is illness defined, how is the etiology of illness accounted for, what is the meaning of body parts and organ systems, what are the expectations regarding the sick role, and what treatments are necessary to treat an illness effectively.

In summary, the literature suggests that cognitive appraisal is a critical factor in coping as well as in health-related practices. Although existing research reflects an interest in the influence of appraisal on the adjustment of women with breast cancer, a lack of attention has been paid to the appraisal of African-American women.

Considering that African-American women are diagnosed at more advanced stages of disease, have poorer social functioning, and have higher mortality rates with regard to the disease, it also is crucial to determine whether significant differences exist between African-American and White women concerning their appraisal of breast cancer. This information could lead to a greater understanding of health beliefs and perceptions of risks among African-American women. Because research is limited in this area, it is not clear how race contributes to psychosocial adaptation to breast cancer.

The research reported here was part of a larger study that examined the effect of race on appraisal, coping, coping resources, and social functioning among African-American and White women diagnosed with breast cancer (Bourjolly, 1996). The specific aims of the larger study were (1) to determine if racial differences in appraisal, coping, coping resources, and social functioning exist when controlling for socioeconomic, treatment, and health-related variables and (2) to measure the relative importance of race and socioeconomic, treatment, and health-related variables on appraisal, coping, coping resources, and social functioning for those variables in which there were differences related to race. These aims were generated by gaps in the literature on how African-American and White women with breast cancer compared on several variables related to coping and functioning. The results pertaining to cognitive appraisal alone are reported in this article. Our goal was not to test a specific hypothesis but to gather preliminary data in areas in which African-American and White women differ in their coping and functioning with breast cancer.

METHOD

A comparative descriptive design was used for this study to examine similarities and differences between African-American and White women with breast cancer (Burns & Grove, 1987).

Sampling Technique

Convenience sampling was used to recruit women from the outpatient radiation oncology department of a large university hospital, where the first author is employed as an oncology social worker. Thus, she was given access to medical records, appointment schedules, and the department's breast cancer database in order to identify women who had been treated for breast cancer. Possible study participants had to be able to communicate in English and to have identified themselves as being African American or White. Only women who were treated with breast conservation therapy, which included a lumpectomy (not mastectomy) and radiation therapy were eligible for the study. These criteria were used to minimize the number of confounding variables by limiting the study to women with early stage breast cancer who had received a particular type of treatment. The women could have had adjuvant chemotherapy or hormonal therapy. Women who were currently receiving radiation therapy as well as those who had completed treatment were included in the study. Participation was voluntary; the women were informed that their treatment would not be affected by participating or refusing to participate. There was no monetary compensation for participation. Informed consent was obtained in accordance with the institution's Committee on Studies Involving Human Beings.

Over 11 months in 1995-1996, 102 women were recruited for the study: 41 African Americans and 61 Whites. Although we attempted to recruit equal numbers of African-American and White women for the study, this goal was difficult to achieve in the stated time period. However, the number of African-American women recruited, 40%, was higher than the proportion of African-American women normally seen in the radiation oncology department, which was 21%. The sample size of the two groups was adequate to detect medium effect sizes (Cohen, 1988).

Measures

Individual interviews with each woman included questions developed by the first author regarding demographic characteristics (age, marital status, number and ages of children living at home, annual income, and employment status). Their medical information was obtained from medical charts (stage of breast cancer, type and date of treatment, and family history). Standardized instruments were used to collect data on the women's appraisal of their cancer (Folkman & Lazarus, 1980;

Folkman et al., 1986a), coping strategies (Folkman & Lazarus, 1986a; Folkman et al., 1986b), religiousness (Strayhorn, Weidman, & Larson, 1990), social support (Tracy & Whittaker, 1990), health locus of control (Wallston, Stein, & Smith, 1994; Wallston, Wallston, & DeVellis, 1978), and social functioning (Tulman & Fawcett, 1990). All measures used Likert scales, and the entire interview took approximately one hour to complete.

Primary Appraisal Scale. The Primary Appraisal Scale measures what was at stake in a stressful encounter (Folkman & Lazarus, 1980). It consists of 13 items that describe various stakes. The items were selected on the basis of a review of respondents' answers to open-ended questions in a study by Folkman and Lazarus (1980) and their review of the literature. Participants indicate on a five-point Likert scale (1, Does not apply; 5, Applies a great deal) the extent to which each stake was involved in the stressful encounter they are reporting. A principal factor analysis with oblique rotation identified two subscales in the primary appraisal items (Folkman et al., 1986a). The first factor, involving threats to self-esteem, consists of the following items: the possibility of "losing the affection of someone important to you," "losing your self-respect," "appearing to be an uncaring person," "appearing unethical," "losing the approval or respect of someone important to you," and "appearing incompetent." The Cronbach's alpha averaged over five administrations was .78 (Folkman et al., 1986a).

The second primary appraisal factor involving concern for a loved one's well-being, consisted of three items: "harm to a loved one's health, safety, or physical well-being," "a loved one having difficulty getting along in the world," and "harm to a loved one's emotional well-being" (alpha = .76). The remaining items—"not achieving an important goal at your job or in your work," "harm to your own health, safety, or physical well-being," "a strain on our financial resources," and "losing respect for someone else"—were used as individual items in the analysis (Folkman et al., 1986a).

Secondary Appraisal Scale. Secondary appraisal was assessed with four items that describe coping options (Folkman et al., 1986a). Respondents indicate the extent to which the situation they describe was one "that you could change or do something about," "that you had to accept," "in which you needed to know more before you could act," and "in which you had to hold yourself back from doing what you wanted to do." Responses are recorded in a Likert-scale format from 0 (Not at all), 1 (A little), 2 (Somewhat), 3 (Quite a bit), to 4 (Very much).

Analysis

Basic descriptive statistics were performed using cross-tabulation. Means were adjusted using multiple regression methods to determine if race or age had an effect on primary and secondary appraisal (Triola, 1989). Stata 7.0 (Stata Corp., 2002) was used for statistical analysis.

RESULTS

Participants' Characteristics

The 61 White women ranged in age from 27 to 91 years ($M = 60.6$ years, $SD = 13.4$ years). The 41 African-American women ranged in age from 38 to 87 years ($M = 63.5$ years, $SD = 12.9$ years). The difference in age between the two groups was not significant. Selected demographic and medical characteristics of the sample are summarized in Table 1.

There were significant demographic differences between the two groups. White women had a much higher family income than the Afri-

TABLE 1. Selected Demographic and Medical Characteristics of the Participants, by Race ($N = 102$)

Characteristic	White ($n = 61$)		African American ($n = 41$)	
	Number	Percentage	Number	Percentage
<u>Demographic</u>				
Married	44	72	16	39
Attended at least some college	47	77	15	37
Family income more than \$20,000	57	93	20	49
Children younger than 5 years	0	0	4	10
Urban resident	19	31	33	80
<u>Medical</u>				
T1 stage of disease	43	71	26	63
N0 stage of disease	59	97	38	93
<u>Treatment</u>				
Lumpectomy and radiotherapy	61	100	41	100
Chemotherapy	15	25	6	15
Hormonal therapy	16	26	6	15
Family history of breast cancer	23	37	13	32

can-American women did ($M = \$57,000$, $SD = \$29,334.81$, and $M = \$28,000$, $SD = \$25,453.50$, respectively; $p < .001$). Whereas approximately half the African-American women earned less than \$20,000, few White women did. More than three-fourths of the White women had at least some college; only 37% of the African-American women had attended college. More than three-fourths of the White women were married, whereas approximately 60% of the African-American women were not. A few African-American women had children younger than 5 years of age; none of the White women had young children. Most of the African Americans lived in urban areas, whereas the majority of the Whites lived in suburban areas.

The two groups were comparable regarding the stage and treatment of their cancer. The clinical T stage of cancer in the majority of women in both groups was T1, indicating that they had early stage breast cancer and that their tumors were 2 centimeters or less in greatest dimension. The clinical N stage among most women in both groups was N0, indicating no regional lymph node metastasis.

All the women had been treated with a lumpectomy and radiotherapy, and most women in both groups did not receive chemotherapy or hormonal therapy. The majority in both groups did not have a family history of breast cancer. The difference in the length of time between radiotherapy and participation in the study between the White and African-American women was significant: 69.7 months (5.8 years) and 46.4 months (3.8 years), respectively; $p = .035$.

Similarities in Cognitive Appraisal

The results indicated no significant differences in cognitive appraisal between the African-American and White women (see Table 2). The primary appraisal item that applied to both groups was that breast cancer was a harm to their own health, safety, or physical well-being. This item was followed by concern for a loved one's well-being, a strain on financial resources, not achieving an important goal at your job or in your work, losing respect for someone else, and threats to self-esteem.

Interestingly, even after adjusting the means, age was the only significant relationship with primary appraisal. Specifically, the primary appraisal item "harm to their own health, safety, or physical well-being" was higher for younger women than for older women (see Table 3). Similarly, "strain on financial resources" remained highly significant

TABLE 2. Raw and Adjusted Means for Differences in Primary and Secondary Appraisal, by Race^a

Item	Raw Means		Adjusted Means	
	African American (<i>n</i> = 41)	White (<i>n</i> = 61)	African American (<i>n</i> = 41)	White (<i>n</i> = 61)
<u>Primary appraisal</u>				
Harm to own health, safety, or physical well-being.	3.24	3.75	3.88	4.23
Concern for loved one's well-being.	1.89	2.45	2.06	2.33
A strain on financial resources.	1.87	1.82	1.82	1.84
Not achieving an important goal at job or in work.	1.39	1.72	1.54	1.62
Losing respect for someone else.	1.15	1.38	1.17	1.36
Threats to self-esteem.	1.13	1.20	1.12	1.20
<u>Secondary appraisal</u>				
Had to accept the cancer.	2.98	3.33	2.93	3.36
Needed to know more.	2.44	2.95	2.56	2.87
[Before] could change or do something about it.	1.95	2.11	1.94	2.12
Hold self back from doing what you want to do.	.85	.59	.91	.55

^aMeans also were adjusted by location of residency (i.e., city or suburban) to control for the effect of the disproportionate number of African-American women who lived in the city. No interactions were found between city and race.

for younger women after adjusting the means. Women 65 or older also were less likely to appraise their breast cancer as a threat to their self-esteem and less likely to be concerned about their loved one's well-being. We found no significant associations between primary appraisal and other demographic variables.

The secondary appraisal used by both groups of women was that breast cancer was an experience they had to accept. This item was followed by "You needed to know more before you could act," "[before] you could change or do something about it," and "breast cancer is an experience in which you have to hold yourself back from doing what you want to do." Only the secondary appraisal of an experience in which "you needed to know more before you could act" was still significant for age after adjusting the means. No other sociodemographic or health related variables were significantly associated with secondary appraisal.

TABLE 3. Raw and Adjusted Means for Differences in Primary and Secondary Appraisal, by Age^a

Item	Raw Means		Adjusted Means	
	African American (n = 41)	White (n = 61)	African American (n = 41)	White (n = 61)
<u>Primary appraisal</u>				
Harm to own health, safety, or physical well-being.	3.14	3.94	3.72	4.45**
Concern for loved one's well-being.	1.87	2.56	1.94	2.49**
A strain on financial resources.	1.46	2.21	1.41	2.26†
Not achieving an important goal at job or in work.	1.28	1.88	1.32	1.84*
Losing respect for someone else.	1.14	1.42	1.16	1.41
Threats to self-esteem.	1.08	1.26	1.08	1.26**
<u>Secondary appraisal</u>				
Had to accept the cancer.	3.20	3.17	3.22	3.15
Needed to know more.	2.38	3.10	2.43	3.05*
[Before] could change or do something about it.	2.10	1.60	2.11	1.99
Hold self back from doing what you want to do.	.66	.73	.65	.74

^aMeans also were adjusted by location of residency (i.e., city or suburban) to control for the effect of the disproportionate number of African-American women who lived in the city. No interactions were found between city and race.

* $p < .05$. ** $p < .01$. † $p < .001$.

DISCUSSION

Limited information is available on the psychosocial adjustment of African-American women with breast cancer. According to research supporting the existence of ethnic differences in perception of health and illness, one would suspect differences in how African-American and White women appraise breast cancer. However, the results of our study show that no significant differences existed between the two groups of women with regard to appraisal of their disease. Both groups tended to view breast cancer as causing harm to their own health, safety, or physical well-being and as an experience they had to accept.

One possible explanation for why African-American and White women did not differ in their appraisal is that cognitive representations of illness among different groups of people are more similar when experiencing the same disease than when they are healthy. In other words,

before women are diagnosed with breast cancer, cultural factors may have a greater influence on their perception of the disease's etiology and risk; however, once a woman is diagnosed with the disease, cultural and racial differences in her appraisal may be overshadowed by the commonalties experienced by all women with breast cancer. These perceptions may be true only for patients seen within the same biomedical system. The variation would be far more likely across biomedical, lay, and folk systems, such as those Kleinman (1980) observed.

This interpretation of the findings is supported by other studies. In his review of the literature on cognitive representations of health and illness, Lau (1997) found empirical evidence that within Eurocentric populations, adults share a culturally universal conception of what it means to be sick. Most of the studies he reviewed were conducted in populations where the germ model of disease is accepted. Lau's findings revealed a lay or "commonsense" representation of illness that has the following five attributions (p. 59):

- An *identity*: A label, and symptoms that are associated with the illness.
- A set of *consequences* (beyond the immediate somatic symptoms): For example, "How will my life be affected by this illness (e.g., socially, economically)? Will I die from this illness?"
- A *time line*: "How long will this illness (and thus any symptoms and larger consequences) last? Is this illness acute (and therefore relatively short-lived) or chronic (and therefore much more long-term)?"
- A *cause*: "Why did I get sick? Was the illness preventable? Was it my own (or someone else's) fault?"
- Finally, most representations of illness also have some notion of *cure or control*: "What can I do to avoid or minimize the consequences associated with this illness?"

These five attributes emerged from various studies using different methodologies with samples of healthy and sick adults, with patients who had coped for many years with a disease, and with patients recently diagnosed with a life-threatening disease (Lau, 1997).

Leventhal et al. (1986) showed that breast cancer also has these attributes. It has an identity of a dreaded disease marked by discernible changes in the breast, the most common symptom being a breast lump. Consequences are both negative (e.g., depression, mental anguish, inability to work or maintain social relationships) and positive (e.g., in-

creased willingness to live the way they wanted, to be more assertive, and to worry less). The time line of the disease is viewed as acute or chronic. Causal attributions of the disease are related to personal vulnerability (genetic susceptibility) or one's own health habits (stressful life and diet) (Leventhal et al., 1986). Furthermore, there is conventional knowledge concerning what one should do to cure or control the disease (e.g., surgery, chemotherapy, radiation). Therefore, appraisal of an event appears to be highly dependent on context.

If illness is more of a commonly shared concept than health is, maybe appraisal of breast cancer varies at points along a continuum of health and illness and thus affects the salience of the information about the disease. For example, appraisal of risk for breast cancer among healthy women may differ for women in different ethnic groups because (1) the risk is different (incidence and mortality rates are known to vary, there may be biological differences), (2) the salience of the information differs because of environmental cues (e.g., perceptions about one's likelihood of developing breast cancer may be affected by the predominance of White women portrayed in communications about the disease), (3) material/concrete concerns may differ because of economic disparities, and (4) perceptions of the health care system may take precedence at varying rates among different groups. For example, some institutions, through their marketing, explicitly target some segments of the community.

On the other hand, appraisal of the disease among women with breast cancer appears to be reinforced by the emotion inherent in the experience—an experience that can bring much fear and uncertainty regarding one's health even with a favorable prognosis. In the present study, the threat of personal harm was evident among women who were currently undergoing treatment as well as among those who had already finished treatment. Even if the cancer is detected in an early stage and treatment removed the tumor, the possibility of recurrence always exists.

In addition, although certain types of appraisal have been linked to coping strategies, the expression or outward manifestation of coping for women with breast cancer may still reflect cultural norms. For example, differences in religiousness exist between African-American and White women with breast cancer (Bourjolly, 1998). The incorporation of religion and spirituality has proved to be an important aspect in the development of supportive resources for African Americans (Boyd-Franklin, 1989; Farran et al., 1997). Existing measures do not tap the importance of spirituality or religiousness in the appraisal process. Therefore, fac-

tors that may mediate one's beliefs and attributes about disease and illness may not be captured in such instruments.

We have not assessed the extent to which religious beliefs or spirituality have mediated appraisal for the African-American or White women in this study. Evidence in the literature on caregiving (Farran et al., 1997) suggests that religiousness may act to affect caregivers' perception of burden while caring for demented elders. Farran et al. (1997) also identified a quality they called "resourcefulness" among African-American caregivers that helps to regulate cognitive and emotional responses to distress. This uninvestigated area is likely to yield an additional perspective on the appraisal process for African-American and White women.

Therefore, it appears that the appraisal of breast cancer causing personal harm and being an experience one must accept is similar for African-American and White women. This finding may be influenced by cognitive representations of breast cancer as well as by an assessment of the effectiveness of treatment. Thus, further comparative research is needed to explore the relationship between personal and societal representations of illness, their impact on the appraisal process, and whether variations exist among other ethnically and culturally diverse populations and other diseases. In addition, measures that are culturally sensitive to the experience of diverse populations may be more accurate in discerning dimensions of appraisal that are relevant for different populations.

The study provided useful information on the similarities among African-American and White women with breast cancer: however, caution should be used in interpreting the results for a number of reasons. First, the use of a convenience sample limits inferences of the results to the general population. Because this was a convenience sample, it was difficult to recruit patients who were the same distance from their diagnosis. Time from diagnosis for these women was examined and was found to be statistically nonsignificant. For practical reasons, we were only able to include women who had breast-conserving surgery. Whether this limitation had an impact on appraisal is unknown. All the women interviewed were treated at a comprehensive cancer center, and the women who found their way to that center may not be typical of other women with breast cancer. Also, the women who agreed to be interviewed may have differed in some important way from those who did not want to participate in the research.

Although no differences between the African-American and White women's appraisal of their breast cancer were identified in the present

study, there were significant differences based on a woman's age. Women aged 65 years or older were less likely to be concerned about harm to their own health, safety, or well-being and were less likely to appraise their breast cancer as a strain on their financial resources. Older women also were less likely to appraise their disease as a threat to their self-esteem and were less likely to be concerned about their loved one's well-being. These findings suggest that although the dimensions of appraisal we examined were universal for both African-American and White women, age may be an important factor that influences women's experience of the disease. Younger and older women have different needs, concerns, and quality-of-life issues in the context of psychosocial life stages. These differences need to be taken into consideration when planning and implementing care (Sammarco, 2001).

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