Well-Being in Hispanic and Non-Hispanic White Survivors of Breast Cancer

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Purpose/Objectives: To test a well-being model on Hispanic and non-Hispanic white survivors of breast cancer by comparing responses about variables hypothesized to predict well-being.

Main Research Variables: Healthcare orientation, uncertainty, social support, resourcefulness, self-esteem, and well-being.

Design: Descriptive and comparative.

Sample: 50 Hispanic and 50 non-Hispanic white women who completed treatment for breast cancer and were disease-free.

Setting: Regional cancer center in southwestern United States.

Methods: Subjects completed the Psychosocial Adjustment to Illness Scale–Health Care Orientation Subscale, Mishel Uncertainty Illness Scale, Personal Resource Questionnaire, Self-Control Schedule, Self-Esteem Inventory, and Index of Well-Being.

Findings: Both groups of women reported high well-being. Sample characteristics were not related significantly to well-being in either group. No statistically significant differences were found between Hispanic and non-Hispanic white women on any variables.

Conclusions: Comparison of well-being models revealed similarities between the two groups, including variables entering each regression equation, and explained variance. Further research is needed to explore whether commonalities in women's responses to breast cancer exist independent of ethnicity.

Implications for Nursing: Nurses should continue encouraging both Hispanic and non-Hispanic white women to share concerns and seek information from healthcare providers while strengthening feelings of self-worth because these factors directly affect well-being.

Key Points . . .

- ➤ Limited knowledge is available regarding the influence of ethnicity on survivors' well-being.
- ➤ Similarities in well-being exist among Hispanic and non-Hispanic white survivors of breast cancer.
- ➤ Older Hispanic women report greater well-being.
- ➤ Healthcare orientation, uncertainty, social support, and self-esteem merit inclusion in future studies of survivors' well-being.

Well-being among women who have survived breast cancer is gaining increased attention as the number of these women continues to grow. The five-year survival rate for all stages of breast cancer is 86%, a significant increase from 75% in 1976 (Jemal, Thomas, Murray, & Thun, 2002). Well-being, which is defined as the subjective perception of quality of life, is believed to be influenced profoundly by the thoughts and feelings individuals persistently maintain related to the experience of surviving cancer (Schmale et al., 1983). In most published studies examining well-being, the overwhelming majority of survivors of breast cancer were self-identified as Caucasian, Anglo, or white. Thus, researchers have yet to adequately address the influence of ethnic background on survivors' well-being and, more specifically, how ethnicity may affect the variables that research suggests are important to well-being in white women who have survived breast cancer. King et al. (1997), in their comprehensive review of current knowledge about quality of life and the cancer experience, explicitly addressed the dearth of knowledge related to the impact of ethnicity on quality-of-life outcomes. The lack of theoretical frameworks that have been evaluated for applicability with different ethnic groups also is a concern.

The purpose of this study was to further test a conceptual model of well-being among survivors of breast cancer by comparing the responses of Hispanic and non-Hispanic white women about variables known to significantly influence well-being. A comparison of empirical models derived from the data in these two groups of women was expected to provide a clearer understanding of how ethnicity influences well-being in women who have survived breast cancer.

This study had three goals. The first was to examine the relationship between demographic and cancer-related variables and well-being in Hispanic and non-Hispanic white survivors

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of breast cancer. The second goal was to separately examine the results of empirical model testing of the two groups. The third goal was to examine the two empirical models for similarities and differences.

Background

The model for this study originated in prior research in which initial estimates of model validity were obtained in a sample of female, predominantly white (93%) survivors of breast cancer in the northwestern United States (Dirksen, 2000) and in a sample of white (100%) male and female survivors of melanoma in the southwestern United States (Dirksen, 1989). The model variables that were supported as predictors of well-being among those women included healthcare orientation, uncertainty, social support, resourcefulness, and self-esteem. The conceptual model depicted in Figure 1 shows the relationships among these variables. The unidirectional arrows drawn between the variables indicate causal relationships. The signs on the arrows denote the relationships as positive or negative.

Healthcare orientation is the confidence and trust women have in their healthcare providers and healthcare systems. An earlier study (Dirksen, 1989) revealed that survivors of melanoma frequently expressed thoughts about their health care and physicians and how these feelings affected their sense of self-control. When women do not have trust in their healthcare providers, they may be more distressed by their illness than other women are. Such a situation may result in an attempt to use self-controlling skills of resourcefulness in helping to manage the stressful event.

Uncertainty is the amount of ambiguity, complexity, lack of information, and unpredictability that individuals perceive during illness (Mishel, 1981). Chronic uncertainty may exist among survivors of breast cancer because of the fear of recurrence and decreased contact with healthcare systems after treatment ends (Mast, 1998). Survivors of breast cancer often describe their cancer experience as a future of uncertainty, with fears of recurrence and long-term treatment side effects (Pelusi, 1997). High levels of uncertainty may adversely affect women's abilities to and beliefs that they can control the outcome of the illness.

Social support is the adequacy and availability of resources provided to woman by others. Findings from a study of cancer survivorship in African American women revealed that social support enhances a sense of mastery over cancer and is a major determinant of life satisfaction (Guillory, 1992). Results from a study that examined social support and self-esteem in survivors of melanoma suggested that social support strongly influenced people's appraisals of self-worth (Dirksen, 1990). The authors theorized that support from significant others strengthens people's self-evaluations through feelings of being appreciated and loved.

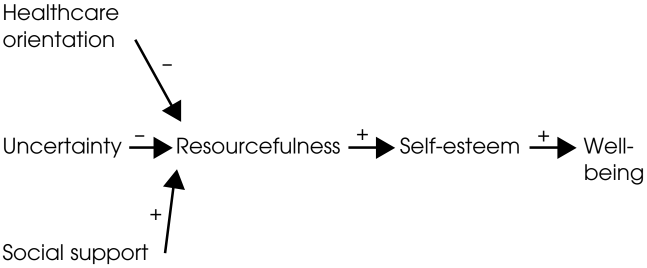

Figure 1. Conceptual Model: Well-Being Among Survivors of Breast Cancer

Resourcefulness is people's use of self-control cognitive skills in regulating their responses to stressful life events (Rosenbaum, 1990). Resourcefulness assists individuals in coping with undesirable reactions to negative and stressful events that may have an impact on their well-being (Rosenbaum, 1983). Highly resourceful people score high on measures reflecting self-confidence (Lewinsohn & Alexander, 1990). During treatment for breast cancer, women with higher levels of resourcefulness reported greater self-care, confidence in their cancer knowledge, and perceived well-being (Braden, Mishel, & Longman, 1998).

Self-esteem is the perceived appraisal of self-worth. Women who survived breast cancer reported an increased awareness of self, including explorations of their past, present, and future lives (Pelusi, 1997). Increased self-control also has been related strongly to greater feelings of self-esteem in patients with late-stage cancers (Lewis, 1982). Additionally, self-esteem is a significant predictor of well-being in survivors of melanoma (Dirksen, 1989).

Well-being is the subjective perception of current life satisfaction. The perception of well-being is subjective because the meaning of surviving cancer resides within each individual. Steginga, Occhipinti, Wilson, and Dunn (1998) examined the experiences of Australian women with breast cancer after surgery. They found that women had specific concerns regarding doctors and information, uncertainties about past and current treatments, disruptions in social and family relationships, a loss of control, and changes in self-image. The investigators suggested that these concerns underlie women's senses of well-being.

Methods

Sample and Procedure

A descriptive, comparative design was used to examine the study aims. The convenience sample for this study consisted of 50 Hispanic women and 50 non-Hispanic white women who survived breast cancer. Power analysis indicated that a sample size of at least 50 women would be needed for an R^2 = 0.10 with an a = 0.05, b = 0.20, and power = 0.80 (Cohen, 1990). A survivor of breast cancer was defined as a woman who had completed primary treatment for breast cancer and was disease-free. In addition, the women had to be at least 18 years of age and able to read, speak, and understand English. After the researchers received approval from their institutional review board, they recruited women from the University of New Mexico Cancer Research and Treatment Center in Albuquerque. Potential subjects initially were identified by the cancer center. After receiving an introductory letter from the investigator, women were contacted by phone to assess interest in study participation. Fifty-six non-Hispanic white women were identified, of whom 50 (93%) agreed to participate. Reasons for refusal in that group included being too busy and not wanting to talk about it. Recruitment of Hispanic women into the study by a Hispanic research assistant was challenging. The rate of refusal was high and required numerous recruitment strategies (Naranjo & Dirksen, 1998). Of 80

Hispanic women identified, 30 (38%) refused to participate, citing reasons such as fear of losing healthcare benefits, family influence, and fear of recurrence of emotional stress.

Once the researchers obtained informed consent, they collected data in the women's homes or other locations convenient to the subjects. Questionnaires were given in random order and took about one hour to complete.

Instruments

A questionnaire obtained demographic and cancer-related information, including age, ethnicity, marital status, education, family income level, employment status, number of months since diagnosis, number of months since completing primary treatment (i.e., surgery, radiation, or chemotherapy), and type(s) of treatment.

Among Hispanic women, the four-item **Short Acculturation Scale** (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987) measured level of acculturation. Items on the scale relate to language usage, one of the most easily measured and reliable methods for assessing behavioral adaptation to a new culture. Scale items were scored from 1 (only Spanish) to 5 (only English), with a score of 3 indicating that the subject used both languages equally. Total scores can range from 4–20 (high acculturation). The scale has been used with all Hispanic subgroups and is a valid indicator of acculturation (Marin et al.).

The eight-item **Health Care Orientation (HCO) Subscale of the Psychosocial Adjustment to Illness Scale** (Morrow, Chiarello, & Derogatis, 1978) measured healthcare orientation. Items assess attitudes toward healthcare providers and treatments and are measured on a four-point, Likert-type scale. HCO is scored in the direction of negative attitude, with higher scores indicating greater dissatisfaction with healthcare providers and treatments. Total scores can range from 0–24. Multiple studies have reported alpha estimates of reliability of $\geq$ 0.70 (Morrow et al.). Construct validity has been supported by predictive modeling in a sample of women with gynecologic cancer (Mishel & Braden, 1988). In the present study, the coefficient alpha was 0.72 for the total scale.

The 32-item **Mishel Uncertainty in Illness Scale (MUIS)** measured uncertainty perceived in illness (Mishel, 1981). The scale has four subscales, including ambiguity, unpredictability, complexity, and inconsistency of information. Each item is scored on a five-point, Likert-type scale (i.e., 1 = strongly disagree; 5 = strongly agree). MUIS is scored in a positive direction, with higher scores indicating a higher degree of uncertainty. Total scores can range from 32–160. MUIS has demonstrated internal consistency with alpha at $\geq$ 0.92 and construct validity supported through factor analysis (Mishel). MUIS has been used in studies of survivors of breast cancer (Mast, 1998). The coefficient alpha in the present study was 0.92 for the total scale.

The 25-item **Personal Resource Questionnaire (PRQ) Part II** (Weinert, 1987) measured social support, the amount of perceived support provided by family and friends. The scale has five subscales that represent intimacy, social integration, worth, nurturance, and assistance. Items are answered in a seven-point Likert scale (i.e., 1 = strongly disagree; 7 = strongly agree), with higher scores indicating higher levels of perceived support. Total scores can range from 25–175. Several studies (Weinert & Tilden, 1990) report alpha coefficients of 0.87–0.90 for the total scale, with validity supported by the convergence and divergence of PRQ with a valid measure of social support, cost, and Reciprocity Index. PRQ previously has been used to study women with breast cancer (Coward, 1998). In the present study, the coefficient alpha was 0.73 for the total scale.

The 36-item **Self-Control Schedule (SCS)** quantifies individuals' resourcefulness or ability to initiate self-control skills and behaviors in adverse situations (Rosenbaum, 1983). SCS measures three areas associated with self-control, including the use of cognition and self-instruction, problem-focused coping, and a general belief in one's ability to self-regulate events. This scale is in a visual analog format. Subjects who score above the median are referred to as high-resourceful people, and those who score below the median are referred to as low-resourceful people. Total scores can range from 0–3,600. Cronbach's alpha consistently has been reported at $\geq$ 0.80, with construct validity estimated by the consistent discrimination of SCS scores in predicting performance outcomes linked to high and low resourcefulness (Rosenbaum, 1990). SCS has been used to study women with breast cancer (Braden et al., 1998). In the present study, the coefficient alpha was 0.85 for the total scale.

The 25-item adult form of the **Self-Esteem Index (SEI)** measured self-esteem. This scale measures the evaluation that individuals make regarding self (Coopersmith, 1967). SEI is conceptualized according to four sources of self-esteem, including general, social, work, and family. This scale has a visual analog format, with higher scores suggesting higher levels of self-esteem. Total scores can range from 0–2,500. SEI has been used in more than 100 studies, with an internal consistency alpha at 0.72 or more and test-retest reliability computed at $\geq$ 0.82. Scale validity was estimated by concurrent, convergent, and construct validity (Gilberts, 1981) and in a prior study with survivors of melanoma (Dirksen, 1989). In the present study, the coefficient alpha was 0.72 for the total scale.

The nine-item **Index of Well-Being (IWB)**, which measures perceived degree of current satisfaction with life (Campbell, Converse, & Rogers, 1976), measured well-being. IWB is a semantic differential scale, with higher scores indicating greater overall satisfaction with life as currently experienced. IWB is computed as the sum of two scores: the average score on items one through eight, which measures general affect, and the score on item nine, which measures overall life satisfaction. Total scores can range from 2.1–14.7. In a sample of 2,160 individuals, standardized alpha and omega internal consistencies were 0.89, with concurrent and construct validity also supported (Campbell et al.). This scale has been used with people diagnosed with melanoma (Dirksen, 1990). In the present study, the coefficient alpha was 0.77 for the total scale.

Data Analysis

Descriptive statistics were used to examine demographic and cancer-related characteristics and total scale scores. To determine whether differences existed between the two samples, t tests were used for interval or ratio data and chi-square tests for nominal data. Correlation coefficients were used to examine the relationships between the demographic and cancer-related characteristics and well-being. Stepwise multiple regression was used to empirically test the hypothesized relationships among model variables. The model was tested for Hispanic and then for non-Hispanic white women in three equations reflecting Figure 1. A criterion level of $a \leq 0.05$ was used for retaining a variable in the regression equation. Confidence intervals (CI) of 95% were calculated for each significant b and compared between the two groups of women.

Results

Subject Characteristics

Table 1 lists demographic and cancer-related characteristics of the subjects. The Hispanic women ranged in age from 30–83 years ($\bar{X}$ = 55 years, SD = 11.5). Most Hispanic women were married (64%) and retired (34%) or employed full-time (40%). Education levels ranged from 5–20 years ($\bar{X}$ = 12.6, SD = 2.9). Family income levels ranged from less than $10,000 to more than $70,000 per year; the median was $10,000–$19,999. The median number of months since diagnosis was 47 months, ranging from 5–191, and the median number of months since completion of primary treatment was 36 months, ranging from 2–189. Regarding the type of primary treatment received at the time of diagnosis, 38% (n = 19) had surgery alone, and 60% (n = 30) had surgery combined with chemotherapy or radiation therapy. Total scale scores for level of acculturation ranged from 4–20 ($\bar{X}$ = 14.1, SD = 0.81).

The non-Hispanic white women ranged in age from 33–82 years old ($\bar{X}$ = 57.7, SD = 10.7). Most of those women were married (58%) and retired (38%) or employed full-time (30%). Education levels ranged from 8–23 years ($\bar{X}$ = 15.0, SD = 2.9). Family income levels ranged from less than $10,000 to more than $70,000 per year; the median was $30,000–$39,999. The median number of months since diagnosis was 42 months, ranging from 9–369, and the median number of months since completion of primary treatment was 33.5 months, ranging from 1–233. Regarding the type of primary treatment received at time of diagnosis, 28% (n = 14) had surgery alone, and 58% (n = 29) had surgery combined with chemotherapy or radiation therapy.

Education and income levels were significantly different between the two groups of women ($p < 0.00$). Further analysis of demographic and cancer-related variables revealed that only age (r = 0.02) in Hispanic women had a statistically significant relationship with well-being. This correlation suggests that as Hispanic women get older, their well-being increases.

Table 1. Characteristics by Ethnic Group

Characteristic	Hispanic (n = 50)	Non-Hispanic White (n = 50)
Age ($\bar{X}$ years)	55.0	57.7
Education ($\bar{X}$ years)	12.6	15.0*
Income (median dollars)	$10,000–$19,999	$30,000–39,999*
Time since diagnosis (median months)	47.0	42.0
Time since treatment completed (median months)	36.0	33.5

* $p < 0.00$

Model Variables

Table 2 presents the mean scores of the Hispanic and non-Hispanic white women for each model variable. No statistically significant differences were found between the Hispanic and non-Hispanic white women on any model variables. For both groups, the mean total scale scores revealed that uncertainty was moderate; healthcare orientation, resourcefulness, and self-esteem were moderately high; and social support and well-being were high.

Empirical Model Testing by Group

Hispanic women: The first stepwise regression equation examined the predictive strength of healthcare orientation, uncertainty, and social support on resourcefulness (see Table 3). Only social support entered the regression equation, explaining 12% of the variance in resourcefulness.

A second stepwise regression estimated the strength of healthcare orientation, uncertainty, social support, and resourcefulness in predicting self-esteem. All variables entered the regression equation, with uncertainty entering first as the strongest predictor of self-esteem. The four variables explained 52% of the variance in self-esteem.

The third stepwise regression estimated the strength of healthcare orientation, uncertainty, social support, resourcefulness, and self-esteem in predicting well-being. Healthcare orientation and self-esteem accounted for 44% of the variance in well-being, with self-esteem entering the equation first.

Non-Hispanic white women: To determine the predictive strength of healthcare orientation, uncertainty, and social support on resourcefulness, these three variables were entered into the first stepwise regression equation (see Table 4). No variable entered the regression equation for resourcefulness. The second stepwise regression examined the strength of healthcare orientation, uncertainty, social support, and resourcefulness in predicting self-esteem. Uncertainty, social support, and resourcefulness contributed significantly to the regression, with uncertainty the strongest predictor of self-esteem. These three variables explained 54% of the variance in self-esteem. The third stepwise regression determined the strength of healthcare orientation, uncertainty, social support, resourcefulness, and self-esteem in predicting well-being. Healthcare orientation, social support, and self-esteem

Table 2. Test Results by Ethnic Group

	Hispanic (n = 50)		Non-Hispanic White (n = 50)		
Instrument	$\bar{X}$	SD	$\bar{X}$	SD	p
Healthcare Orientation	4.9	3.6	5.0	3.9	0.83
Mishel Uncertainty in Illness Scale	74.2	20.9	67.6	22.7	0.13
Personal Resource Questionnaire	144.5	19.9	148.9	17.0	0.24
Self-Control Schedule	2319.2	323.2	2297.7	314.2	0.77
Self-Esteem Index	1623.2	323.2	1636.0	313.2	0.84
Index of Well-Being	12.1	2.5	11.9	2.2	0.69

Table 3. Explained Variance, Significant Betas, and Confidence Intervals in Model Testing of Well-Being for Hispanic Women

Stepwise: Dependent Independent	R^2	b	p	95% Confidence Intervals
Stage 1: Resourcefulness				
Social support	0.12	0.35	0.01	(0.08, 0.62)
Stage 2: Self-esteem				
Uncertainty	0.30	–0.34	0.00	(–0.57, –0.11)
Resourcefulness	0.42	0.26	0.00	(0.03, 0.49)
Healthcare orientation	0.47	–0.24	0.03	(–0.46, –0.02)
Social support	0.52	0.23	0.04	(0.01, 0.46)
Stage 3: Well-being				
Self-esteem	0.36	0.47	0.00	(0.22, 0.71)
Healthcare orientation	0.44	–0.30	0.02	(–0.55, –0.06)

N = 50

Table 4. Explained Variance, Significant Betas, and Confidence Intervals in Model Testing of Well-Being for Non-Hispanic White Women

Stepwise: Dependent Independent	R^2	b	p	95% Confidence Intervals
Stage 1: Resourcefulness				
No variables entered equation	–	–	–	–
Stage 2: Self-esteem				
Uncertainty	0.34	0.43	0.00	(–0.65, –0.22)
Social support	0.47	0.33	0.00	(0.10, 0.55)
Resourcefulness	0.54	0.27	0.01	(0.06, 0.48)
Stage 3: Well-being				
Self-esteem	0.42	0.41	0.00	(0.17, 0.66)
Social support	0.51	0.29	0.02	(0.04, 0.54)
Healthcare orientation	0.55	-0.22	0.05	(–0.44, 0.01)

N = 50

accounted for 55% of the variance in well-being, with self-esteem entering the equation first (see Table 4).

Similarities and Differences of the Two Empirical Models

For the first regression, only social support in the model for Hispanic women was a significant predictor of resourcefulness. For both groups, uncertainty and healthcare orientation were not significant predictors of resourcefulness.

For the second regression, uncertainty, social support, and resourcefulness were significant predictors of self-esteem in both models. Healthcare orientation was an additional predictor in the Hispanic model. The 95% CIs for the beta weights showed that all betas for Hispanic women were contained in the CI for non-Hispanic white women (see Tables 3 and 4).

For the third regression, self-esteem and healthcare orientation were significant predictors of well-being in both models. Social support was an additional predictor in the non-Hispanic white model. In both models, resourcefulness and uncertainty were not significant predictors of well-being. The beta coefficients were not significantly different between the two models as shown by the 95% CI (see Tables 3 and 4).

Discussion

The demographic and cancer-related characteristics of the Hispanic and non-Hispanic white women were not significantly different with the exception of education and income, but education and income were not significantly related to well-being in either group. Older Hispanic women in this study had higher well-being, a result not found in the non-Hispanic white women. This finding conflicts with reports in the literature regarding influence of age on well-being in women with breast cancer (Northouse et al., 1999; Rustoen, Moum, Wiklund, & Hanestad, 1999; Vinokur, Threatt, Vinokur-Kaplan, & Satariano, 1990).

Findings for Hispanic women only suggest that social support is a significant positive predictor of resourcefulness. This finding is consistent with the theory that emphasizes the importance of social resources in strengthening people's abilities to initiate coping skills in adverse situations (Rachman, 1990).

Uncertainty, resourcefulness, and social support were significant predictors of self-esteem in both groups. Research has suggested that uncertainty in survivors of breast cancer directly contributes to greater emotional distress and that positive appraisals of self-worth are associated with less distress (Mast, 1998). Support from significant others has been shown to influence feelings of self-esteem in stressful situations, such as recovery from serious illness (DiMatteo & Hays, 1981). Resourcefulness and a sense of control over environment were found to affect judgments of self-worth in patients with late-stage cancer and survivors of melanoma (Dirksen, 1989; Lewis, 1982). These results indicate that maintaining a sense of self depends on the support women receive from family members and friends and their skills in initiating self-control behaviors.

Healthcare orientation was a significant negative predictor of self-esteem only in the Hispanic group. Dissatisfaction with physicians and treatments resulted in lower self-esteem, which supports the assumption that self-esteem is diminished by events in which people are unable to feel accepted, significant, and capable of exerting control (Coopersmith, 1967).

For both groups, healthcare orientation was a significant negative predictor of well-being and self-esteem was a significant positive predictor of well-being. Reports have suggested that distressing reflections of earlier breast cancer treatment may adversely affect well-being in survivors (Dow, Ferrell, Leigh, Ly, & Gulasekaram, 1996). The strong impact of self-esteem on well-being was supported by findings that indicated the importance of positive self-reevaluations in women adjusting to breast cancer (Bloom, 1982).

Overall, only three variable relationships were dissimilar between the two models. Social support was not a significant predictor of resourcefulness in non-Hispanic white women as compared to Hispanic women. The authors are unsure why the study did not find such a relationship because prior studies of white survivors of breast cancer strongly supported the linkage (Dirksen, 2000). Further research is needed to examine this proposed linkage and, second, to redefine the model related to the antecedents of resourcefulness.

Healthcare orientation was not a significant predictor of self-esteem in non-Hispanic white women as compared to Hispanic women. The Hispanic women may have had less satisfaction than the non-Hispanic white women because treatment was administered in a medical center with mostly white staff. Dissatisfaction with treatment might negatively influence women's sense of inward unity, an essential component of self-esteem (Allport, 1955).

Social support was a significant positive predictor of well-being in non-Hispanic white women, indicating that helpful support from others strongly affects well-being. Among women with breast cancer, a supportive family environment positively affected adjustment (Hough, Lewis, & Woods, 1991). This relationship was not significant in Hispanic women. As stated previously, many Hispanic women refused to participate in the study, with some reporting that their husbands would not allow participation. In addition, two Hispanic women reported that to participate, they had to "work around" their husbands' negative feelings. Research has shown that support from family members is important to well-being; perhaps some Hispanic women's perceived inability to openly discuss thoughts related to breast cancer with their spouses influenced well-being.

A comparison of well-being models revealed many similarities between the two groups, such as the variables entering each regression equation and subsequent R^2 values. Healthcare orientation, uncertainty, social support, resourcefulness, and self-esteem were significant predictors of well-being in both models, with both groups of women reporting high levels of well-being.

Implications for Research

Limitations of this study should be considered, including sample selection bias. Instruments were not translated into Spanish, which may have restricted participation of some Hispanic women. Acculturation data showed that most Hispanic women used both Spanish and English equally, suggesting strong identification with both cultural groups. In the future, instruments in Spanish would allow inclusion of women with a wider range of acculturation. Commonalities in the responses of women about breast cancer survivorship may be universal and independent of ethnicity. This premise might be explored more fully in Hispanic women in a future study with greater sample diversity related to acculturation level.

A longitudinal design would help assess whether ethnicity affects survivorship well-being over time; the cross-sectional design of this study did not permit comparisons regarding changes in well-being during cancer survivorship. Because Hispanic and non-Hispanic white women may differ significantly in well-being during different phases of survivorship, measuring well-being at several times could result in strikingly different well-being models.

The quantitative approach may have limited this study's ability to detect actual differences in well-being that existed between these two groups of women. A qualitative comparison with in-depth interviews related to the model variables, such as social support, may reveal that similar scores on psychometrically sound instruments have very different meanings. The richness and depth of a qualitative well-being assessment undoubtedly would provide a greater understanding of the influence of ethnicity on well-being and subsequently offer information not revealed by this study.

If similarities in well-being do exist between Hispanic and non-Hispanic white survivors of breast cancer, future research likely will illuminate them.

Implications for Practice

This study's findings illustrate the strength of healthcare orientation, uncertainty, social support, resourcefulness, and self-esteem in predicting well-being in both Hispanic and non-Hispanic white survivors of breast cancer. This information should contribute to the somewhat limited understanding of the similarities and differences that may exist among survivors of different ethnic backgrounds. Future model testing will provide additional insight and useful information in designing interventions that will guide nursing practice in helping these women to optimize their well-being. Enhancing the well-being of all survivors of breast cancer is an important focus of nursing practice.

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