

COPING AMONG AFRICAN-AMERICAN, HISPANIC, AND NON-HISPANIC WHITE WOMEN RECENTLY TREATED FOR EARLY STAGE BREAST CANCER

JENIFER L. CULVER, PATRICIA L. ARENA, SARAH R. WIMBERLY,
MICHAEL H. ANTONI and CHARLES S. CARVER*

Department of Psychology, University of Miami, Coral Gables, FL 33124-2070

(Received 16 September 2002; In final form 19 November 2003)

Relatively little is known about how members of minority groups cope with experiences such as diagnosis and treatment of breast cancer – in particular, whether coping patterns among minorities differ from that of the majority. This study adds to the existing knowledge base using a cross-sectional sample of middle-class African-American ($n = 26$), Hispanic ($n = 59$), and non-Hispanic White women ($n = 151$) who had been treated for early stage breast cancer in the past year. We tested for differences in coping responses *per se* and also for the possibility that coping would relate to distress differently in different groups. There were only two differences in coping (controlling for medical variables, education, and distress): compared to non-Hispanic White women, the other two groups both reported using humor-based coping less, and religion-based coping more. There was one difference in how coping related to distress: venting related more strongly to elevated distress among Hispanic than among non-Hispanics. Discussion centers on a growing consensus on ethnic differences in religious and humor-based coping, and on the relative absence of other coping differences among these populations.

Breast cancer is a serious disease that affects a relatively large number of women (an estimated 192,200 women in the United States are diagnosed annually, American Cancer Society, 2001). The diagnosis and treatment of breast cancer seriously disrupts women's lives. However, the impact of the disease on psychological functioning has lessened over past decades, particularly when the disease is identified early (Gordon *et al.*, 1980; Lansky *et al.*, 1985; Bloom *et al.*, 1987; Penman *et al.*, 1987; for reviews see Irvine *et al.*, 1991; Glanz and Lerman, 1992; Moyer and Salovey, 1996). The experience of early stage breast cancer is now widely viewed as a crisis, which is weathered by most patients during the initial year post-surgery.

The manner in which women cope is believed to be an important influence on adjustment to the cancer diagnosis and treatment. Several forms of coping are usually distinguished (cf. Lazarus and Folkman, 1984). Some are efforts to change the stressor, others are efforts to reduce the emotions the stressor creates, and others reflect

*Corresponding author. Tel.: (305) 284-2817. Fax: (305) 284-3402. E-mail: CCarver@miami.edu

avoidance of efforts to deal with the stressor (Carver *et al.*, 1989). Avoidant responses typically relate to poor adjustment, whereas engaged coping relates to better adjustment (Billings and Moos, 1981; Felton and Revenson, 1984; Aldwin and Revenson, 1987; Friedman *et al.*, 1988, 1990; Dunkel-Schetter *et al.*, 1992; Carver *et al.*, 1993; Stanton and Snider, 1993; Moyer and Salovey, 1996; Wade *et al.*, 2001; Holland and Holahan, 2003). Evidence has also been obtained of a maladaptive spiral of reciprocal influences between avoidant coping and distress among women with breast cancer (Carver *et al.*, 1993; Culver *et al.*, 2002).

COPING AMONG MINORITIES

Although the coping literature as a whole is vast, it is based largely on samples of non-Hispanic White participants of middle or upper-middle socio-economic status (SES). Very little is known about ways in which members of ethnic minorities cope with adversity.¹ This is true both for coping with stress “in general” and for coping with breast cancer in particular, which is the focus in this article.

Of course, what group constitutes a minority will depend on the context. Two prominent minority groups in the United States are African-Americans and Hispanics. Much of the research examining ethnic differences in coping in the United States focuses on African-Americans. The most robust findings are that African-Americans are more likely to engage in religious coping when facing a stressor than are non-Hispanic White Americans. Indeed, religious coping has been identified as a primary coping strategy of African-Americans in several contexts. These include parents’ responses to their children’s traumatic brain injuries, women coping with rheumatoid arthritis, and persons coping with dementia caregiving (Connell and Gibson, 1997; Jordan *et al.*, 1998; Yeates *et al.*, 2002). A link has also been found between this use of religious coping and lower ambulatory blood pressure among African-Americans (Steffen *et al.*, 2001). Evidence of a similar use of religious coping among Hispanics is also available, though it appears more limited (e.g., Copeland and Hess, 1995).

Religious coping is not the only response that appears to be more common among these two minority groups. For example, in one study African-Americans reported more mental disengagement and denial, and less acceptance, than did White parents when coping with their children’s traumatic brain injuries (Yeates *et al.*, 2002). Similar differences in coping strategies were reported in a review of ethnic differences in response to dementia caregiving and in a study of women coping with rheumatoid arthritis (Jordan *et al.*, 1998; Janevic and Connell, 2001). A study of candidates for kidney transplantation found that both African-American and Hispanic participants reported more use of maladaptive coping styles and less adaptive coping styles than non-Hispanic Whites (Greco *et al.*, 1996). In that study, however, coping was measured in terms of dispositional tendencies rather than coping responses to this particular stressor.

¹The terms “culture,” “ethnicity,” and “race” are often used interchangeably, though they hold distinct connotations. In this article we use the term “ethnicity” to refer to a shared common nationality or ancestry, which suggests socially shared beliefs and practices that can be expected to influence individuals’ values and, consequently, their life choices (Landrine and Klonoff, 1992; Betancourt and López, 1993; Phinney, 1996).

At least two studies have examined coping with breast cancer among these two minority groups, yielding findings that appear consistent with results just outlined. Bourjolly (1998) found that Black women with breast cancer rely on religiosity as a coping resource to a greater extent than did White women. Culver *et al.* (2002) extended that finding in several ways. They found that Hispanic as well as African-American women used more religious coping than non-Hispanic Whites. They also found that both of these minority groups used humor as a coping response less than non-Hispanic Whites. Hispanics also reported high self-distraction and venting (compared to non-Hispanic Whites), and African-Americans reported low levels of venting.

The Culver *et al.* study provided useful information, but it has an important limitation. Specifically, given the sites of recruitment of the sample, the minority women in that study were relatively low in socio-economic status (SES), whereas the non-Hispanic White women were relatively higher in SES. Because of the rather large difference in SES, it is impossible to be certain whether differences obtained among the groups stemmed from ethnicity or from social class.

The present study provides further information on similarities and differences in coping with early stage breast cancer, from a cross-sectional sample of African-American, Hispanic, and non-Hispanic White women. This sample was recruited from sources that reflect a more homogeneously middle class population than was true of the earlier Culver *et al.* sample. We examined the reported use of a set of coping responses by these women, and relations between those coping responses and concurrent distress. We recognize that the cross-sectional design does not permit inferences about the direction of causal influence between distress and coping. Our intent in that regard was simply to characterize the extent to which the ethnic groups resembled each other in the co-occurrence of distress and various aspects of coping.

METHOD

Participants

Participants were 236 breast cancer patients who participated in a broader cross-sectional study of issues in adapting to breast cancer.² Women were recruited through several Miami-area practices (all were private patients). Letters were sent to all early stage breast cancer patients whom these physicians had treated within the past year. Women interested in participating contacted the research team for further information. The final participation rate of women contacted by letter was approximately 80% and did not differ discernibly by ethnicity. Exclusion criteria (which were rarely invoked) included previous cancer, prior psychiatric history, and major concurrent disease.

Participants had had Stage 0 ($n = 11$), Stage I ($n = 137$), or Stage II ($n = 88$) breast cancer.³ Nodal involvement ranged from 0 to 21 ($M = 0.83$, $SD = 2.61$). The majority

²This is a slightly enlarged version of the sample examined by Spencer *et al.* (1999) and essentially the same sample as examined by Petronis *et al.* (2003). Although these studies reported ethnic differences regarding distress (as discussed later), they did not examine coping responses.

³An earlier reviewer questioned the wisdom of retaining Stage 0 patients, on the grounds that their psychological reactions are less severe than those of other patients. This was not the case in this data set, however, and for this reason we included these women in the analyses reported here.

of the women ($n = 140$) underwent lumpectomies, whereas 96 had mastectomies; 141 subsequently had radiation therapy, 87 had chemotherapy, and 87 received Tamoxifen.

Ethnicity was as follows: Non-Hispanic White ($n = 151$), Black ($n = 26$), and Hispanic ($n = 59$). Twenty-four (41%) of the 59 Hispanic women completed the interviews or questionnaires in Spanish (preliminary analysis found no difference in results attributable to this variable). The majority of the women ($N = 165$) were married or otherwise partnered, 25 were separated or divorced, 27 were widowed, and 14 had never been married. The women ranged in age from 27 to 87 years ($M = 53.80$, $SD = 12.30$). They had completed an average of 14.24 years of education ($SD = 2.89$); 122 were currently employed either full-time or part-time, and 114 were retired or not currently working outside the home.

Data collection involved completion of a single self-report questionnaire or a phone interview. The project from which the data were drawn involved testing for differences in some measures across time since surgery, for reasons unrelated to this report. Thus, assessments were at either 3 months ($n = 69$), 6 months ($n = 73$), or 12 months ($n = 94$) post-surgery. Time since surgery was tested as a contributor to the effects reported here, but it played no role in these findings. For this reason, it is not mentioned further.

Psychosocial Measures

Coping

Coping was assessed using the Brief COPE (Carver, 1997). The scales of the Brief COPE include acceptance, active coping, planning, behavioral disengagement, denial, substance use, humor, positive reframing, religious coping, self-distraction, use of emotional support from friends, use of emotional support from partner, and venting. Each scale has two items. (There is evidence that abbreviated scales perform as well as, or better than, longer scales [Burisch, 1987], but the abbreviated nature of this measure should be kept in mind in interpreting results.) Participants were told to rate how often they used the response in trying to deal with the stresses related to their diagnosis and surgery. The answer choices ranged from 1 ("I haven't been doing this at all") to 4 ("I've been doing this a lot"). Scales were scored by averaging the relevant item responses. Evidence of the construct equivalence of the Brief COPE in English and Spanish has been reported by Perczek *et al.* (2000).

Distress

Several indicators of emotional well being were collected. First, mood disturbance was assessed with a series of descriptive adjectives used in earlier breast cancer work (Carver *et al.*, 1993). Respondents indicated the degree to which they had experienced each feeling "during the past week including today." Response options ranged from *not at all* (1) to *extremely* (5). Items assessed depression (helpless, unhappy, worthless, and hopeless, $\alpha = 0.80$), anxiety (tense, nervous, and anxious, $\alpha = 0.87$), and anger (angry, resentful, and grouchy, $\alpha = 0.78$). In a sample of 235 students these brief item sets correlated 0.87, 0.93, and 0.87, respectively, with comparable scales from the Profile of Mood States (McNair *et al.*, 1981). As the scales were strongly inter-related (average r in this sample = 0.65), a mood index was created by averaging responses

to these items. Again, evidence of the construct equivalence of the measures in English and Spanish has been reported by Perczek *et al.* (2000).

Also administered was the Center for Epidemiological Studies Depression scale (CES-D; Radloff, 1977). The CES-D measures a range of cognitive, affective, motivational, and somatic symptoms (for validity see Myers and Weissman, 1980; Schulberg *et al.*, 1985). Instructions to respondents are to indicate the extent to which they had a variety of experiences (framed as "I" sentences), in this case within the past week. Options for responding range from 0 ("Rarely or none of the time") to 3 ("Most or all of the time"), and responses are summed (see Perczek *et al.*, 2000, for evidence of construct equivalence across languages).

A third indicator of emotional adjustment was the extent to which the woman reported feeling a positive quality of life in her day-to-day experiences. Eleven items were selected from Andrews and Withey (1976), which address a reasonable range of the life activities. Respondents considered each item's content and indicated how they felt about that domain of life, on a scale ranging from "terrible" (1) to "delighted" (7). Though there is evidence of the construct equivalence of these items in English and Spanish, those data have not been published.

The three measures just described were strongly correlated (r s ranged from 0.62 to 0.75, alpha after reversing the coding for quality of life = 0.87). For this reason, an index of distress was created, by standardizing responses to each measure and averaging the z -scores. This index was used in subsequent analyses involving distress.

RESULTS

Preliminary Analyses

Our primary interest was in differences among ethnic groups. Thus, preliminary analyses focused on identifying differences among the groups that should be controlled. We examined in this regard the available demographic variables (age, marital status, education, employment status, family history of breast cancer) and treatment characteristics (stage of cancer, number of positive nodes, adjuvant therapies, type of surgery), along with procedural variations (assessment by interview *versus* questionnaire, language of assessment). These analyses revealed the following differences. First, although all groups averaged above a high school education, non-Hispanic Whites had more education ($M = 14.87$, $SD = 3.39$) than did Hispanics ($M = 13.14$, $SD = 3.32$) or Blacks ($M = 13.08$, $SD = 3.42$), $F(2, 233) = 10.84$, $p < 0.0001$. No other demographic variable differed among groups.

A second difference was that Black women in the sample were more likely to have had chemotherapy (61.5%) than Hispanics (32.2%) or non-Hispanic Whites (34.4%), $F(2, 233) = 3.13$, $p < 0.05$. Finally, non-Hispanic White women were more likely to have had radiation therapy (65.6%) than Blacks (50%) or Hispanics (49.1%), $F(2, 233) = 4.99$, $p < 0.01$. The reason for these differences in treatment is not clear. They did not, however, reflect a group difference in any diagnostic variable such as stage or nodes.

Preliminary analyses also compared the groups on their levels of distress, because distress *per se* influences coping reports. Previous analyses of a sample that largely overlaps the present sample found ethnic differences in distress (Spencer *et al.*, 1999;

TABLE I Means of coping strategies that differed among non-Hispanic Whites, Hispanics and Blacks.

	<i>Non-Hispanic Whites</i> (<i>n</i> = 152)	<i>Hispanics</i> (<i>n</i> = 62)	<i>Blacks</i> (<i>n</i> = 26)
Use of humor	2.03 ^a	1.66 ^b	1.65 ^b
Religious coping	2.50 ^a	3.07 ^b	3.30 ^b

Note: Within each row, means sharing a common superscript do not differ significantly. Means are adjusted for education, chemotherapy status, radiation status, and concurrent distress.

Petronis *et al.*, 2003); we reconfirmed that Hispanic women reported more distress than Black women or non-Hispanic White women (who did not differ from each other by Duncan multiple range test), $F(2, 233) = 9.71$, $p < 0.001$.

To minimize the effects of the four variables just described on comparisons among the groups, these variables were included as controls in all comparisons of coping responses reported in the next section.

Ethnicity and Coping

Our main focus of interest was the possibility of differences in coping responses across ethnic groups. Group differences were assessed by analysis of covariance (controlling the variables just described). Significant effects were followed by separately computed contrasts between pairs of groups.

Two significant ethnicity effects emerged from these analyses (Table I). There was an effect on the use of humor (assessed by the items "I've been making jokes about it" and "I've been making fun of the situation"), $F(2, 228) = 3.70$, $p < 0.03$. Non-Hispanic White women reported more use of humor than did either Black women, $F(1, 170) = 3.94$, $p < 0.05$, or Hispanic women, $F(1, 203) = 5.13$, $p < 0.03$. There was also a significant effect on the use of religious coping, $F(2, 228) = 8.49$, $p < 0.001$ (assessed by the items "I've been trying to find comfort in my religion or spiritual beliefs" and "I've been praying or meditating"). Non-Hispanic White women reported less religious coping than did either Black women, $F(1, 170) = 9.25$, $p < 0.01$, or Hispanic women, $F(1, 203) = 9.97$, $p < 0.01$.

Relations of Coping to Distress

A secondary interest was the possibility that relations between coping and distress differed across groups. We tested for this using hierarchical regression analyses, with distress as the criterion variable. We began each analysis by entering education, chemotherapy, and radiation status as control variables, followed by dummy variables for ethnicity (one coding non-Hispanic Whites as -1 , Hispanics as 0 , and African-Americans as 1 ; a second coding non-Hispanic Whites as -1 , African-Americans as 0 , and Hispanics as 1). Next we entered one of the coping responses, and finally the interactions between that coping response and the dummy variables (centering the coping responses before computing the interaction terms, cf. Aiken and West, 1991). When significant interactions were obtained, they were followed by simple effect tests to explore their meaning.

This procedure was followed separately for each COPE scale. In reporting the results of these analyses, we disregard effects of the dummy variables (which indicate ethnic

differences in distress that have already been noted) and the effects of the control variables. We focus here on main effects of the COPE scales and interactions of the COPE scales with the dummy variables.

Significant main-effect associations emerged between several coping responses and distress. Distress related inversely to acceptance, $\beta = -0.29$, $p < 0.001$, to religious coping, $\beta = -0.25$, $p < 0.02$, and (marginally) to positive reframing, $\beta = -0.15$, $p < 0.07$. Distress related positively to denial, $\beta = 0.33$, $p < 0.001$, behavioral disengagement, $\beta = 0.31$, $p < 0.001$, self-distraction, $\beta = 0.22$, $p < 0.008$, venting, $\beta = 0.39$, $p < 0.0001$, and planning, $\beta = 0.16$, $p < 0.05$.

Only one significant interaction emerged from these analyses. The main effect for venting was qualified by an interaction between venting and the dummy variable that contrasted Hispanics with non-Hispanic Whites, $\beta = 0.25$, $p < 0.007$. Follow-ups revealed that venting related moderately to distress among non-Hispanic White women, $\beta = 0.27$, $p < 0.002$, but the relationship was quite substantial among Hispanic women, $\beta = 0.58$, $p < 0.0001$.

DISCUSSION

This cross-sectional study examined coping among women who had been treated for early stage breast cancer 3 to 12 months earlier. The sample was a good deal larger than that of Culver *et al.* (2002), including reasonable numbers of African-American and Hispanic women, as well as non-Hispanic White women. Although there was a statistically significant difference among groups in education, the groups were relatively homogeneous in that respect, averaging some college education. As education stands as a proxy for SES in this sample, the relative absence of difference provides some degree of confidence that the differences obtained are due to ethnicity rather than SES (which was not true of the Culver *et al.* (2002), sample in which ethnicity and SES were confounded). We note, however, that by focusing on relatively middle-class participants, we thereby reduce our ability to generalize these results to other SES levels.

Two differences emerged between groups in their levels of coping responses. Specifically, non-Hispanic White women reported more use of humor and less religious coping than did Blacks or Hispanics. Only one significant interaction emerged for an ethnic difference in how coping related to distress: Specifically, venting related to elevated distress across the sample, but the relationship was even stronger among Hispanic women than non-Hispanic White women. It is likely that expressing feelings has different consequences, depending on the degree of support given by the person to whom the feelings are expressed (cf. Westmaas and Silver, 2001). One might speculate that Hispanic women in this sample perceived less support than other women. Alternatively, it might be that the Hispanic women who were most distressed felt more able to vent their feelings than did other women. As the relation is cross-sectional, there is no way to determine which of those speculations is more likely. We cannot draw any inference here about directionality of influence between distress and coping. Given that 26 interaction terms were tested (13 coping scales by 2 dummy variables), the occurrence of one significant interaction does not suggest a good deal of difference in the nature of the relationships between distress and coping across ethnicity.

These findings resemble in most respects those reported from a different sample by Culver *et al.* (2002), but not in all respects. Similarities are a replication of group

differences in religious coping and the use of humor. The earlier sample displayed nearly the same pattern as was found here, except that the present difference between African-Americans and non-Hispanic Whites in use of humor did not appear in the earlier sample (which had only 8 African-American participants).

The main difference in outcomes between studies concerns venting. The earlier study found a high level of venting among Hispanics and a very low level among African-Americans. Similar differences did not emerge in the present sample. The minority members of the earlier sample were distinctly lower in SES than those in the present sample. Perhaps the effect of venting in the earlier sample was a product of that lower SES. That is, perhaps there are cultural differences among ethnicities that emerge more clearly in the context of lower SES, or perhaps a cultural difference exists that is specific to persons lower in SES. That remains speculation, however.

The present findings also resemble those of Yeates *et al.* (2002) in some respects, but not all. The studies concur on a Black–White difference in the use of religious coping (see also Neighbors *et al.*, 1983), but Yeates *et al.* found no ethnic difference in the use of humor to cope. Perhaps this difference in outcomes reflects the fact that women in our sample were coping with a threat to themselves, whereas participants in the Yeates *et al.* sample were instead coping with a threat to their children. Yeates *et al.* also found group differences in acceptance, denial, and disengagement. Two of these variables (denial and acceptance) tended to differ in the same direction in our sample, though not approaching significance. Perhaps this reflects the lower power in our sample, which had less than two-thirds as many African-Americans as did Yeates *et al.*

CONCLUSIONS

The evidence from this study converges with evidence from other sources to indicate that religious coping is more common among African-Americans and Hispanics than among non-Hispanic Whites. The findings also indicate that non-Hispanic Whites have a greater tendency to use humor as a way of coping than do these minority groups. The final conclusion from this study is that venting is strongly linked to greater distress among Hispanic women, compared to other women. Women of these ethnic groups do appear to differ in some ways, then, in how they cope with breast cancer. In future studies of breast cancer patients, such differences in coping should be anticipated and taken into account.

On the other hand, the differences in coping among these ethnic groups of cancer patients should not be overstated. In some ways, what is most remarkable about the pattern obtained is how few in number the obtained differences were. Thus, although there appear to be certain specific predictable differences, it should not be assumed therefore that members of different ethnic groups will differ in all aspects of their coping responses. The samples are clearly more alike than they are different.

Acknowledgments

Data collection was supported by grant CA-64710 from the National Cancer Institute and training grant J4236-DAMD1794 from the Department of Defense. Preparation

of the article was also facilitated by grant CA78995 from the National Cancer Institute. We are grateful to the staff of the Sylvester Comprehensive Cancer Center, and to Dr. Robert P. Derhagopian and Dr. Silvio Garcia, who made data collection possible. We are also grateful to the participants who shared their experiences with us.

References

- Aiken, L.S. and West, S.G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Sage, Newbury Park, CA.
- Aldwin, C.M. and Revenson, T.A. (1987). Does coping help? A reexamination of the relation between coping and mental health. *Journal of Personality and Social Psychology*, **53**, 337–348.
- American Cancer Society (2001). *Cancer Facts and Figures – 2001*. American Cancer Society, Atlanta, GA.
- Andrews, F.M. and Withey, S.B. (1976). *Social Indicators of Well Being: Americans' Perceptions of Life Quality*. Plenum, New York.
- Betancourt, H. and López, S.R. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist*, **48**, 629–637.
- Billings, A. and Moos, R.H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine*, **4**, 157–189.
- Bloom, J.R., Cook, M., Fotopoulos, S., Flamer, D., Gates, C., Brigham, P.B., Holland, J.C., Muenz, L.R., Murawski, B., Penman, D. and Ross, R.D. (1987). Psychological response to mastectomy: a prospective comparison study. *Cancer*, **59**, 189–196.
- Bourjolly, J.N. (1998). Differences in religiousness among black and white women with breast cancer. *Social Work in Health Care*, **28**, 21–39.
- Burisch, M. (1987). Test length and validity revisited. *European Journal of Personality*, **11**, 303–315.
- Carver, C.S. (1997). You want to measure coping but your protocol's too long: consider the Brief COPE. *International Journal of Behavioral Medicine*, **4**, 92–100.
- Carver, C.S., Scheier, M.F. and Weintraub, J.K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology*, **56**, 267–283.
- Carver, C.S., Pozo, C., Harris, S.D., Noriega, V., Scheier, M.F., Robinson, D.S., Ketcham, A.S., Moffat, F.L., Jr. and Clark, K.C. (1993). How coping mediates the effect of optimism on distress: a study of women with early stage breast cancer. *Journal of Personality and Social Psychology*, **65**, 375–390.
- Connell, C.M. and Gibson, G.D. (1997). Racial, ethnic, and cultural differences in dementia caregiving: review and analysis. *Gerontologist*, **37**, 355–364.
- Copeland, E.P. and Hess, R.S. (1995). Differences in young adolescents' coping strategies based on gender and ethnicity. *Journal of Early Adolescence*, **15**, 203–219.
- Culver, J.L., Arena, P.L., Antoni, M.H. and Carver, C.S. (2002). Coping and distress among women under treatment for early stage breast cancer: comparing African Americans, Hispanics, and non-Hispanic Whites. *Psycho-Oncology*, **11**, 495–504.
- Dunkel-Schetter, C., Feinstein, L.G., Taylor, S.E. and Falke, R.L. (1992). Patterns of coping with cancer. *Health Psychology*, **11**, 79–87.
- Felton, B.J. and Revenson, T.A. (1984). Coping with chronic illness: a study of illness controllability and the influence of coping strategies on psychological adjustment. *Journal of Consulting and Clinical Psychology*, **52**, 343–353.
- Friedman, L.C., Baer, P.E., Lewy, A. and Lane, M. (1988). Predictors of psychosocial adjustment to breast cancer. *Journal of Psychosocial Oncology*, **6**, 75–94.
- Friedman, L.C., Nelson, D.V., Baer, P.E. and Lane, M. (1990). Adjustment to breast cancer: a replication study. *Journal of Psychosocial Oncology*, **8**, 27–40.
- Glanz, K. and Lerman, C. (1992). Psychosocial impact of breast cancer: a critical review. *Annals of Behavioral Medicine*, **14**, 204–212.
- Gordon, W.A., Freidenbergs, I., Diller, L., Hibbard, M., Wolf, C., Levine, L., Lipkins, R., Ezrachi, O. and Lucido, D. (1980). Efficacy of psychosocial intervention with cancer patients. *Journal of Consulting and Clinical Psychology*, **48**, 743–759.
- Greco, P., Brickman, A.L. and Routh, D.K. (1996). Depression and coping in candidates for kidney transplantation: racial and ethnic differences. *Journal of Clinical Psychology in Medical Settings*, **3**, 337–353.
- Holland, K.D. and Holahan, C.K. (2003). The relation of social support and coping to positive adaptation to breast cancer. *Psychology and Health*, **18**, 15–29.
- Irvine, D., Brown, B., Crooks, D., Roberts, J. and Browne, G. (1991). Psychosocial adjustment in women with breast cancer. *Cancer*, **67**, 1097–1117.

- Janevic, M.R. and Connell, C.M. (2001). Racial, ethnic, and cultural differences in the dementia caregiving experience: recent findings. *Gerontologist*, **41**, 334–347.
- Jordan, M.S., Lumley, M.A. and Leisen, J.C. (1998). The relationships of cognitive coping and pain control beliefs to pain and adjustment among African American and Caucasian women with rheumatoid arthritis. *Arthritis Care & Research*, **11**, 80–88.
- Landrine, H. and Klonoff, E.A. (1992). Culture and health-related schemas: a review and proposal for interdisciplinary integration. *Health Psychology*, **11**, 267–276.
- Lansky, S.B., Herrmann, C.A., Ets-Hokin, E.G., DasGupta, T.K., Wilbanks, G.D. and Hendrickson, F.R. (1985). Absence of major depressive disorder in female cancer patients. *Journal of Clinical Oncology*, **3**, 1553–1559.
- Lazarus, R.S. and Folkman, S. (1984). *Stress, Appraisal, and Coping*. Springer, New York.
- McNair, D., Lorr, M. and Droppelman, L. (1981). *Manual for the Profile of Mood States*. Educational and Industrial Testing Service, San Diego.
- Moyer, A. and Salovey, P. (1996). Psychosocial sequelae of breast cancer and its treatment. *Annals of Behavioral Medicine*, **18**, 110–125.
- Myers, J.K. and Weissman, M.M. (1980). Use of a self-report symptom scale to detect depression in a community sample. *American Journal of Psychiatry*, **137**, 1081–1084.
- Neighbors, H.W., Jackson, J.S., Bowman, P.J. and Gurin, G. (1983). Stress, coping, and Black mental health: preliminary findings from a national study. *Prevention in Human Services*, **2**, 5–29.
- Penman, D.T., Bloom, J.R., Fotopoulos, S., Cook, M.R., Holland, J.C., Gates, C., Flamer, D., Murawski, B., Ross, R., Brandt, U., Muenz, L. R. and Pee, D. (1987). The impact of mastectomy on self-concept and social function: a combined cross-sectional and longitudinal study with comparison groups. *Women and Health*, **11**, 101–130.
- Perczek, R., Carver, C.S., Price, A.A. and Pozo-Kaderman, C. (2000). Coping, mood, and aspects of personality in Spanish translation and evidence of convergence with English versions. *Journal of Personality Assessment*, **74**, 63–87.
- Petronis, V.M., Carver, C.S., Antoni, M.H. and Weiss, S. (2003). Investment in body image and psychosocial well-being among women treated for early stage breast cancer: partial replication and extension. *Psychology and Health*, **18**, 1–13.
- Phinney, J.S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist*, **51**, 918–927.
- Radloff, L.S. (1977). The CES-D scale: a self-report depression scale for research in the general population. *Applied Psychological Measurement*, **1**, 385–401.
- Schulberg, H.C., Saul, M., McClelland, M., Ganguli, M., Christy, W. and Frank, R. (1985). Assessing depression in primary medical and psychiatric practices. *Archives of General Psychiatry*, **42**, 1164–1170.
- Spencer, S.M., Lehman, J.M., Wynings, C., Arena, P., Carver, C.S., Antoni, M.H., Derhagopian, R.P., Ironson, G. and Love, N. (1999). Concerns about breast cancer and relations to psychosocial well-being in a multiethnic sample of early stage patients. *Health Psychology*, **18**, 159–168.
- Stanton, A.L. and Snider, P.R. (1993). Coping with a breast cancer diagnosis: a prospective study. *Health Psychology*, **12**, 16–23.
- Steffen, P.R., Hinderliter, A.L., Blumenthal, J.A. and Sherwood, A. (2001). Religious coping, ethnicity, and ambulatory blood pressure. *Psychosomatic Medicine*, **63**, 523–530.
- Wade, S.L., Borawski, E.A., Taylor, H.G., Drotar, D., Yeates, K.O. and Stancin, T. (2001). The relationship of caregiver coping to family outcomes during the initial year following pediatric traumatic injury. *Journal of Consulting and Clinical Psychology*, **69**, 406–415.
- Westmaas, J.L. and Silver, R.C. (2001). The role of attachment in responses to victims of life crises. *Journal of Personality and Social Psychology*, **80**, 425–438.
- Yeates, K.O., Taylor, H.G., Woodrome, S.E., Wade, S.L., Stancin, T. and Drotar, D. (2002). Race as a moderator of parent and family outcomes following pediatric traumatic brain injury. *Journal of Pediatric Psychology*, **27**, 393–403.