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An Exploratory Study of Social Support, Distress, and Life Disruption Among Low-Income Hispanic Women Under Treatment for Early Stage Breast Cancer

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Relationships between distress and perceived availability of social support were examined in 51 Hispanic women being treated for early stage breast cancer. Distress and different types of support (emotional, instrumental) and sources (spouse, women family members, other family members, friends) of support were measured at presurgery, postsurgery, and at 3-, 6-, and 12-month follow-ups. Emotional support from friends and instrumental support from spouse at presurgery predicted lower distress postsurgery. No other prospective benefits of perceived support emerged. Distress at several time points predicted erosion of subsequent support, particularly instrumental support from women in the family. In contrast to the adverse effects of distress (and independent of them), illness-related disruption of recreational and social activities at 6 months elicited greater support at 12 months.

Key words: social support, cancer, breast cancer, women's health, quality of life

The diagnosis and treatment of breast cancer disrupt virtually every aspect of a woman's emotional well-being, family life, and career. Among the resources that help limit this disruption is the perception of social support (Cohen & Syme, 1985;Thoits, 1986). Many studies of breast cancer patients have found that perceived availability of support relates to less distress (Bloom, 1982; Wortman, 1984; for reviews, see Helgeson & Cohen, 1996; Nelles, McCaffrey, Blanchard, & Ruckdeschel, 1991). Support most commonly given to breast cancer patients is emotional (communications of compassion, caring, and concern); instrumental support is less common (Dunkel-Schetter, 1984; Pistrang & Barker, 1995; Smith, Redman, Burns, & Sager, 1985; Wortman, 1984). A recent review concluded that emotional support helps adjustment to breast cancer but instrumental support does not (Helgeson & Cohen, 1996). However, the latter conclusion seems premature, given the few studies involved. Instrumental support has been found to be unrelated to concurrent depressive symptoms (Primomo, Yates, & Woods, 1990) and related to higher depressive symptoms (Penninx et al., 1998). On the other hand, patients sometimes report instrumental support to be very helpful (Dakof & Taylor, 1990).

A separate issue is whether some sources of support are more beneficial than others. There is not much information on this question, either. Smith et al. (1985) measured availability of support from spouses, family, friends, and children and found only spousal support to be related to less loneliness. Primomo et al. (1990) found that emotional support from family and partner was related to less depression, but use of friends as illness confidants related to more depression.

A serious problem is that most studies of social support in breast cancer patients are cross-sectional. We are aware of only three prospective tests of social support in breast cancer patients. Two of them found postsurgical support to be related to less distress later (Hoskins et al., 1996; Northouse, 1988), but neither adjusted for initial distress, leaving it unclear whether support predicted changed distress. The third study (Bolger, Foster, Vinokur, & Ng, 1996) found no effect of support from significant others 4 months posttreatment on distress 6 months later. However, in this study support level was reported by the significant other, not the patient (which is very unusual); the relationship between patient and partner perceptions is unknown. Further, the first assessment did not occur until 4 months after treatment. By starting that late, Bolger et al. may have missed the time when support is most beneficial.

Another important issue is that support and distress can have reciprocal influences. The Bolger et al. (1996) study is apparently unique in the psycho-oncology literature in considering this possibility. They found that distress at 4 months predicted less sup-

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1 Others have used prospective designs but not reported prospective analyses. Pennman et al. (1987) collected both cross-sectional and longitudinal data but conducted no prospective tests of social support effects. Neuring and Winefield (1988) collected data on support and well-being in a prospective design but conducted no prospective tests.
port 6 months later, suggesting that distress may erode the person’s support network. This possibility deserves further attention. In the study reported here we examined how perceived support related to distress and life disruption. We examined spouse, female family members, other family members, and friends as sources and assessed both emotional and instrumental support. We examined the role of timing, by studying the women from the time of diagnosis for the next year. Finally, we tested the reciprocal relationship—the impact of distress on later perceptions of support. The participants in this study were Hispanic women of low socioeconomic status (SES) who were newly diagnosed with early stage breast cancer.

Method

Data are from a project examining the experiences of breast cancer patients from underserved populations. Our source was the Breast Health Center at the public hospital in Dade County, Florida. Participants were recruited at the time of their conference on treatment options. Women with previous cancer, other serious concurrent medical condition, or positive psychiatric history were screened out. All others were told of the study’s nature (five interviews, plus access to medical records) by a liaison of the Breast Health Center, who obtained informed consent. All were told participation was voluntary. Most chose to participate, with a recruitment rate of 85% of those approached.

The women were of low SES. Annual family income was less than $8,000 for 70% of the women (assessment was categorical; this was the lowest category); 90% reported annual income less than $16,000. The women reported low to moderate levels of education ($M = 8.80$ years, $SD = 4.42$). Seventy-two percent were not covered by insurance, 14% were covered by Medicaid, 8% were covered by Medicare; 22% were employed, 16% retired, and 61% neither employed nor retired. Average age was 56 years ($SD = 9.42$, range = 35–78). Most were Cuban ($n = 27$), smaller numbers were Nicaraguan ($n = 4$), Puerto Rican ($n = 6$), Dominican ($n = 1$), and 13 self-reported “other Hispanic” 47% were married, 11% separated, 18% divorced, 18% widowed, 6% single.

Of the 51 women on whom this article is based, 35% (18) were diagnosed with Stage I cancer, 55% (28) with Stage II cancer, and 10% (5) with Stage 0 (in situ carcinoma). 2 Most had no positive lymph nodes (82%), with positive nodes ranging from 0 to 17. Fifty-five percent (29) of the sample received mastectomy and 45% (23) received lumpectomy. Most had some type of adjuvant therapy: 43%, radiation; 39%, chemotherapy; and 35%, tamoxifen. Prognosis, survival rates, and psychological issues of women with early stage cancer (through Stage II) are quite different from those of later stage cancer. Because our interest was in adaptation to the cancer diagnosis and its treatment, rather than imminent-end-of-life issues, we restricted ourselves to early stage patients.

Procedure

The initial interview, at the time of recruitment, included demographics, social support, and emotional distress. The scales were administered verbally, usually in Spanish (see Percezk, Carver, Price, & Pozo-Kaderman, 2000, regarding translation procedures). A post surgery interview came 7–10 days after surgery, measuring perceptions of support and distress. Follow-up interviews at 3, 6, and 12 months after surgery had these measures plus a measure of illness-related life disruption. At each follow-up, the woman reported on adjuvant therapy during the preceding period. Each woman received $25 after each interview. As noted earlier, this was a low-SES sample, and response burden was a serious consideration. For these reasons, abbreviated measures were used in most cases.

**Perceived support.** We assessed instrumental and emotional support the woman perceived as available from several sources: her partner (spouse or equivalent), female family members (identified as mothers, sisters, or daughters), other family members, and friends. This division was based partly on knowledge of the reliance for support that Hispanic women place on other women in the family. Participants not married nor in an equivalent relationship did not make spouse ratings; those with no female family members did not make those ratings. Four items were rated for each source: two for instrumental support, two for emotional support. Responses were on a 5-point scale from 1 (not at all) to 5 (a lot). The items are as follows:

- How much do you feel you can count on . . . to . . .
  - help with any financial problems caused by your illness.
  - help carry out daily chores while you recuperate.
  - let you talk to them about your illness (for example, how it makes you feel, how it will affect you in the future).
  - back you up—give you emotional support (affection) while you recover.

For each source, the instrumental items proved to be moderately correlated and the emotional items were highly correlated; thus, item pairs were averaged. Correlations between instrumental and emotional support ranged from 0.2 to 0.4, being strongest for spouses (mean $r = .36$), then women in the family (mean $r = .40$), then other family members (mean $r = .29$), and weakest for friends (mean $r = .13$).

**Disruption.** Distress was measured with brief scales consisting of a series of descriptive adjectives taken from Carver et al. 1993. These scales have been found to correlate quite strongly with corresponding scales from the Profile of Mood States (McNair, Lorr, & Droppelmann, 1981). As did Carver et al., we used a distress composite: the average of the Anxiety, Depression, and Anger subscales. The distress composite at the five time points had alpha reliabilities between .66 and .85.**

**Acclimatization.** A 12-item scale of acclimatization by Marín, Sabogal, Van Os Mártin, Otero-Sabogal, & Perez-Stable (1987), asking about language use, media, and social relations, was included. Items are rated on a scale from 1 (only Spanish/only Hispanics) to 5 (only English/only Americans). This scale was highly reliable ($r = .97$). Our sample spoke Spanish most of the time, utilized mostly Spanish media, and had mostly Hispanic friends (possible range: 12–60, $M = 17.53$, $SD = 11.06$). Besides being used to characterize the sample, this scale was tested as a predictor variable.

**Missing Data**

There was a certain amount of missing data—at the interview level (women sometimes were unavailable), at the source-of-support level (some had no spouse, some had no family), and at the item level (e.g., occasional items were omitted). Our approach to missing data was as follows: We began by examining the first three interviews (through 3 months), which

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2 As described briefly, procedures involved five interviews over a 1-year period. The 51 women described were those who missed no more than one of the first three interviews. An additional 11 women missed more interviews and were not included in analyses described here. Those excluded did not differ from those included on any demographic, predictor, or outcome variables.
we treat here as short-term measures. For women who missed either the second or third interview (or who omitted an item response from a complete interview), values were imputed—averaging the group mean with a value extrapolated from the person's data at the other time points (cf. Kirk, 1982). If more than one short-term interview was missing, the participant was omitted (see Footnote 2). Regarding source of support, if a woman failed at one assessment to rate support from friends (for example) but did rate other sources, the missing ratings were imputed as above. If ratings for that source were omitted from more than one assessment, she was omitted from analyses for that source.

Responses in the longer term (6- and 12-month ratings) were examined only if the woman was included in short-term analyses and only if the total number of interviews missed (from five) did not exceed one. Again, occasional missing values were imputed. Because of the diversity of support sources available, the analyses reported here vary substantially in sample size.

Results

We began by testing the following as predictors of distress, disruption, or support: age, acculturation, number of years in the United States, income, education, stage of breast cancer, number of positive nodes, surgical procedure, and adjuvant treatments. Age, years in the United States, income, education, and stage did not relate to any dependent variable. Acculturation related only to Sickness Impact Profile disruption at the 6-month follow-up. Having radiation was related to less distress and disruption at all time points. Mastectomy patients had more distress and disruption at all points than lumpectomy patients. The number of positive nodes was related to distress and disruption at the 12-month follow-up.

Surgical procedure, positive nodes, and radiation are related (negative nodes usually lead to lumpectomy with radiation). Multiple regression using these three variables to predict distress and disruption assessed whether one variable could control for the association of all three and thus minimize loss of degrees of freedom. Only radiation accounted for unique variance in distress at pre- and post-surgery and disruption at 3-month follow-up. Positive nodes was the strongest predictor of distress at each follow-up and disruption at 12 months. At 6 months the best predictor of distress was procedure. We controlled for the variable just named for each of these outcomes.

Stability and Change in Distress, Disruption, and Support

Next we examined patterns of well-being and support over time (see Table 1). Presurgical distress ($M = 1.81, SD = .6$) was higher than postsurgical distress ($M = 1.56, SD = .59$), t(50) = 2.72, p < .01, but distress did not change further (follow-up Ms = 1.63, 1.62, and 1.60, at 3, 6, and 12 months, respectively). Married and nonmarried samples did not differ at any time. Distraction, assessed only in the longer term (3-12 months), did not change over assessments. Distraction and distress were fairly strongly related ($r = .62, .52$, and .84 for 3, 6, and 12 months, respectively). Despite this, we continued to examine them separately.

Instrumental support from spouses increased from pre- to post-surgery, $t(21) = 2.09, p < .05$, and then did not change. Both emotional and instrumental support from women in the family increased from pre- to post-surgery, $t(43) = 2.29, p = .03$ and $t(43) = 2.90, p = .006$, respectively, and did not change further. The same was true of emotional support from other family,

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<th>Source</th>
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Note: Range of possible values is 1-5.

In some regressions (for example, this one), the variables overlapped in prediction so much that none remained uniquely significant. In such cases, the variable named here was the strongest predictor of the group, albeit not significant. In no case did a variable other than the ones named here approach significance as a predictor.
Support Predicting Distress Prospectively

Next we examined relationships between support and distress (incorporating controls noted earlier). Concurrent correlations were generally weak for all sources of support (of both types) except spouses (see Table 2). Spousal emotional support correlated with distress an average of −.50 (across five assessments); spousal instrumental support correlated an average of −.46 with distress.

Of greater interest is whether perceived support at one point predicts distress at the next point. Correlations between each support category and distress at the next point were computed, controlling distress at the previous point (and other controls as noted above). Emotional support from friends presurgery related to less distress postsurgery, r(44) = −.30, p = .04. Instrumental support from spouses presurgery related to less distress postsurgery among married women, r(19) = −.43, p = .05. No other prospective benefit of perceived support approached significance.

Distress Predicting Support Prospectively

Next we tested the possibility that elevated distress might lead to loss of support, by computing relationships between distress at one time and support at the next time, controlling for that type and source of previous support. Elevated distress presurgery predicted less instrumental support from women family members postsurgery, r(40) = −.35, p = .03. Elevated distress postsurgery predicted less instrumental support from friends at 3 months, r(46) = −.27, p = .06. More distress at 6 months predicted less emotional and instrumental support from women family members at 12 months, r(36) = −.30, p = .07, and r(36) = −.42, p = .009, respectively.

Support and Illness-Related Disruption

With respect to illness-related disruption of social and recreational activities at follow-ups, concurrent relationships with support were almost all nonsignificant. Prospective tests of disruption at 3 months (from support postsurgery controlling for radiation) and disruption at 6 and 12 months (from support at 3 and 6 months controlling for surgery, acculturation, and prior disruption) found no prospective effect. One reciprocal effect emerged: Greater disruption at 6 months predicted greater emotional support from women family members at 12 months, r(37) = .32, p = .05. Recall that distress at 6 months predicted lower emotional and instrumental support from the women family members at 12 months. A multiple regression analysis confirmed that these two associations are independent, with both remaining significant. Specifically, emotional distress led women to perceive a later reduction in relative support, but illness-related disruption led them to perceive a later increase in support. This was true despite the fact that 6-month distress and 6-month disruption were positively related to each other.

Discussion

In a sample of low-SES Hispanic women, we prospectively examined distress, life disruption, and perceptions of emotional and instrumental support from several different sources during the year after treatment for early stage breast cancer. This study advances the literature in several ways. First, prospective studies of social-support effects among cancer patients are quite rare. It is also rare to distinguish emotional from instrumental support and to look at multiple sources of support. Finally, only one study (Bolger et al., 1996) has examined reciprocal prospective relationships.

Our study does have important limitations. The multi-assessment design made a certain amount of missing data almost inevitable. The sample was small, limiting power, and the analyses were distinctly exploratory. Finally, the sample was exclusively low-SES Hispanics. Although data on understudied populations are needed, the fact that the sample was exclusively so urges caution in generalizing. We have no reason to expect that the findings will not generalize, but work that crosses multiple ethnicities remains to be done. Despite these limitations and cautions, however, an interesting and intelligible set of findings emerged.

Consistent with previous studies of early stage patients (e.g., Carver et al., 1993; Hoskins, 1997), distress fell from pre- to postsurgery, then stabilized. shifts in support also occurred, but only in the short term (through 3 months): Instrumental support from spouses and both emotional and instrumental support from

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<th>Type and source</th>
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Note. Longer term N is a subset of shorter term N. Pre = presurgery; Post = postsurgery.
* p < .05.  ** p < .05.
women family members and other family members all rose from pre- to postsurgery. At 3 months, perceptions of friends' instrumental support declined, but their emotional support rose. Emotional support was higher than instrumental support from all sources at all times, except from spouses, for whom this was true only presurgery. Nonmarried women did not perceive compensatory support (i.e., for absence of a spouse) from others in the short term, but they did in the longer term.

Support Predicting Distress, Distress Predicting Support

Perceptions of spousal support were related consistently to lower concurrent distress, replicating many breast cancer study findings (Helgeson & Cohen, 1996; Nelles et al., 1991). Of greater interest is prospective prediction (keeping in mind that this establishes temporal precedence, not causality). Predicting future distress from support revealed two positive effects. Instrumental support from spouse and emotional support from friends before surgery predicted less distress after surgery (controlling for presurgical distress). These findings confirm an emotional benefit from social support among breast cancer patients. Note that one of these effects is for instrumental support, contradicting Helgeson and Cohen's conclusion that instrumental support does not matter. The benefits occurred quite early in the cancer experience, but only then. This helps explain the absence of benefit reported by Bolger et al. (1996); that is, they assessed participants for the first time 4 months after surgery. By that time, our data also showed no benefit from support.

Although family has been emphasized as a key source of support among Hispanics (Abraido-Lanza, Guier, & Reveson, 1996; Bernal & Gutierrez, 1988; Rueschegberg & Buriel, 1995), our data do not fit this picture. We obtained no evidence of benefit from support from family members other than the spouse. The reasons for this are not clear.

Bolger et al. (1996) found that distress can erode support, and we did as well. Indeed, we found that erosion began early—we had expected it only after months. Presurgical distress predicted less instrumental support from women in the family after surgery. Postsurgical distress predicted less instrumental support from friends at 3 months. Distress at 6 months predicted less emotional and instrumental support from women in the family at 12 months. Erosion did not occur in every source of support—notably, it did not occur for spousal support. It also was more likely for instrumental than emotional support. However, distress at one time never mobilized more support at the next time. Whenever distress predicted change in subsequent support, it was always to less support.

Disruption and Support

A final extension this study makes is the inclusion of another outcome variable: illness-related disruption of recreational and social activities. Support did not predict less disruption, but disruption at 6 months led to a mobilization of support from women in the family at 12 months. This effect was opposite to that exerted by 6-month distress on the same perceptions of 12-month support. These two prospective effects were independent and both significant, despite the fact that distress and disruption at 6 months were positively related. Clearly, women in the family were not treating illness-related life disruption as just one more manifestation of distress. It was being treated as quite different from distress.

This pattern is consistent with one reported by Bolger et al. (1996), although it appears to contradict a finding by Manne, Alfiieri, Taylor, and Dougherty (1999). Bolger et al. found distress eroded spousal support, but the woman's physical impairment led to more support. They suggested that physical impairment has a direct support-mobilizing quality, whereas distress is aversive. Our measure was not one of physical impairment per se, yet the nature of our finding is similar. The woman whose illness (in some fashion) prevented her from doing things she wanted to do received sympathy and help. To the extent she exhibited distress, however, the opposite occurred. The implications of this divergence should be pursued in future research.

References


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