



See page 214 for details about a podcast related to this article or visit www.ons.org/Publications/ONF/Features/Podcast to listen.

This material is protected by U.S. copyright law. Unauthorized reproduction is prohibited. To purchase quantity reprints, please e-mail reprints@ons.org or to request permission to reproduce multiple copies, please e-mail pubpermissions@ons.org.

Exploring a Diffusion of Benefit: Does a Woman With Breast Cancer Derive Benefit From an Intervention Delivered to Her Partner?

Barbara B. Cochrane, PhD, RN, FAAN, Frances Marcus Lewis, PhD, RN, FAAN,
and Kristin A. Griffith, MS

The American Cancer Society estimated that in 2010 more than 260,000 new cases of invasive and in-situ breast cancer would be diagnosed in the United States (Jemal, Siegel, Xu, & Ward, 2010). For the woman with breast cancer, the diagnosis and treatment experience often is associated with profound fatigue, physical discomfort, psychosocial distress, changes in body image and sense of self, as well as altered routines at work and within the family (Badger, Braden, & Mishel, 2001; Bloom et al., 1987; Landmark, Strandmark, & Wahl, 2001; Longman, Braden, & Mishel, 1996; Loveys & Klaich, 1991; Nosarti, Roberts, Crayford, McKenzie, & David, 2002). For the partner, the breast cancer experience can be equally overwhelming when witnessing a loved one's increased vulnerability, struggling to support her emotional and physical needs, addressing ongoing family and work demands, and coping with personal emotional changes and worries about the future (Lewis, Cochrane, Zahlis, & Shands, 2005; Lewis, Fletcher, Cochrane, & Fann, 2008; Northouse, 1992; Samms, 1999; Zahlis & Shands, 1991). The psychosocial impact of breast cancer is compounded by associations between psychosocial morbidity and coping in the partner and distress in the diagnosed woman (Baider & Kaplan De-Nour, 1999; Ben-Zur, Gilbar, & Lev, 2001; Brusilovskiy, Mitstifer, & Salzer, 2009; Giese-Davis, Hermanson, Koopman, Weibel, & Spiegel, 2000; Hinnen, Hagedoorn, Ranchor, & Sanderman, 2008; Manne, Ostroff, Winkel, Grana, & Fox, 2005; Northouse, Templin, & Mood, 2001) and between the quality of the marital relationship and the couple's psychosocial responses (Bloom et al., 1987; Fergus & Gray, 2009; Rodrigue & Park, 1996; Weihs, Enright, Howe, & Simmens, 1999).

Purpose/Objectives: To provide preliminary data on a diffusion of psychosocial benefit to women diagnosed with breast cancer when only their partners receive a psychoeducational intervention focused on the breast cancer experience.

Design: Single-group, pretest/post-test pilot study; participants served as their own controls.

Setting: Communities in the Pacific Northwest region of the United States.

Sample: 9 women with a first diagnosis of breast cancer within the previous six months whose partners received the Helping Her Heal intervention.

Methods: Data were collected from women pre- and postintervention via standardized questionnaires with established reliability and validity. Confidential exit interviews were conducted after postintervention data were returned.

Main Research Variables: State anxiety (State-Trait Anxiety Inventory Form Y [STAI-Y]), depression (Center for Epidemiologic Studies–Depression scale [CES-D]), and marital quality (Dyadic Adjustment Scale [DAS]; Mutuality and Interpersonal Sensitivity scale).

Findings: Wilcoxon signed-rank tests showed significant improvements on the CES-D ($p = 0.01$), STAI-Y ($p = 0.01$), and DAS affectional expression subscale ($p = 0.03$) in women from pre- to postintervention. Review of exit interview transcripts indicated that women generally were positive about the impact of the program and viewed their partners' gains in communication skills as the greatest benefit of participating.

Conclusions: This study offers preliminary support for a diffusion of psychosocial benefit to women with breast cancer when a psychoeducational intervention is delivered to their partners.

Implications for Nursing: Diffusion of benefit should be examined in a large, randomized, clinical trial to provide evidence for focusing some clinical efforts on partners alone, rather than adding to diagnosed women's burden of multiple clinical encounters.

More than 30 randomized clinical trials and two meta-analyses of psychosocial interventions in women with breast cancer have shown some efficacy in reducing psychosocial distress for women diagnosed at any stage during the acute or later phases of the experience (Hewitt, Herdman, & Holland, 2004; Naaman & Pappas, 2004). However, women's use of psychosocial services in the clinical setting is lower than incidence rates of morbidity would predict, and recruitment and retention in psychosocial research trials, particularly in the early diagnosis and treatment phases, can be challenging (Hewitt et al., 2004; Motzer, Moseley, & Lewis, 1997). Researchers and clinicians have not adequately addressed the potential pile-up of demands and the burden placed on women by multiple therapeutic encounters and the need to readjust family, social, and work routines. In fact, at a time when women are undergoing surgical, medical, and radiologic treatments, psychosocial interventions to address the impact of breast cancer on the family often are directed primarily toward the patient or include her in a couple's intervention (Baucom et al., 2009; Cochrane & Lewis, 2005; Rowland et al., 2009).

Given the demands of breast cancer treatment, the relationship between the partner's and diagnosed woman's psychosocial responses, and the importance of the dyadic relationship in the couples' adjustment, the potential for partner-only interventions to have a diffusion of benefit to the patient is clinically and scientifically intriguing. Such a diffusion of benefit has been a hallmark of parenting interventions, in which parents are provided support along with guidance to improve their children's psychosocial or other health issues. Unfortunately, few investigators have designed studies that could demonstrate such benefits in patients with cancer (i.e., an intervention with partners alone, but outcome data measured in partners and patients). Most published reports of partner interventions have either targeted couples and measured outcomes in the partner and the diagnosed woman or they have targeted partners and measured only partner outcomes (Cochrane & Lewis, 2005). Of more than 30 intervention studies that have involved partners or spouses of patients with cancer of any type, only two (three reports) were designed such that data regarding a diffusion effect to the diagnosed woman were available (Blanchard, Toseland, & McCallion, 1996; Bultz, Speca, Brasher, Geggie, & Page, 2000; Toseland, Blanchard, & McCallion, 1995). Findings from these partner intervention studies suggested a diffusion of psychosocial benefit for the diagnosed patient, but not until three (Bultz et al., 2000) or six months (Blanchard et al., 1996) postintervention.

The purpose of this study was to provide preliminary data on the diffusion of psychosocial benefit (anxiety, depressed mood, and marital quality) for women di-

agnosed with breast cancer when only their partners received a psychoeducational intervention focused on the breast cancer experience. A secondary purpose was to provide feasibility data (recruitment, retention, and qualitative feedback from the woman) regarding the collection of pre- and postintervention data from diagnosed women who do not receive the study intervention. Examining a potential diffusion of benefit for women from an intervention for partners can provide important insights for future partner and caregiver research.

Methods

Design, Sample, and Setting

This pilot study involved a single-group pretest/post-test design. Partners received the intervention and women served as their own controls. The current study was conducted during the late recruitment phase of a larger pilot study of the Helping Her Heal psychoeducational intervention for partners of women with breast cancer (Lewis, Cochrane, et al., 2008). The current study involved the same intervention but was funded to support the collection of data from the diagnosed women.

Participants in the study were women with a first diagnosis of local or regional breast cancer (stages 0–III) within the previous six months, living in the greater Pacific Northwest region of the United States, and cohabiting in a committed relationship of at least six months with a partner who was willing to participate in the main study and receive the intervention. For the larger Helping Her Heal study, diagnosed women were recruited primarily via passive recruitment letters sent out by intermediary staff at local clinics and hospitals serving newly diagnosed patients with breast cancer. Intermediaries identified a potentially eligible woman and then sent her the letter containing information on the Helping Her Heal program and asking her to call within two weeks if she or her partner did not want to be contacted further about the study. Otherwise, the couple was referred to study recruitment staff. In addition to this recruitment approach, a few intermediaries introduced the study to potential participants during clinic appointments, and some diagnosed women or their partners contacted the recruitment line directly after seeing study information posted in clinics or on Web sites.

Enrollment calls were made to potential participants to provide more detailed information on the study, review eligibility criteria, and determine interest. If the partner was interested in the intervention and the diagnosed woman was willing to participate in the substudy, she was mailed a packet of materials, including consent forms, before the partner's baseline visit or first intervention session. The larger pilot study and the substudy were approved by the institutional review

board of the Human Subjects Division at the University of Washington, and all participants provided signed, informed consent.

The Helping Her Heal Intervention

A description of the Helping Her Heal program has been published (Lewis, Cochrane, et al., 2008). The program involved a cognitive behavioral intervention derived from Bandura's (2007) social cognitive theory and a relational model of adjustment to breast cancer (Lewis, 2004). The intervention consisted of five sessions, delivered approximately every other week by a specially trained nurse counselor in a private clinic room. The Helping Her Heal program was focused on enhancing partner adjustment to the breast cancer experience and skill entraining to enhance the diagnosed woman's perceived support. Specific sessions focused on stress-reduction strategies as important first steps to being able to support her, enhancing listening skills and resisting a tendency to fix or reassure prematurely, adding more advanced elicitation skills to help her elaborate further on her response to the cancer and ways the partner could support her, nonverbal strategies to enhance their interpersonal connection, and efficacy enhancement to add to the partner's confidence in continuing to manage the impact of the cancer. Intervention sessions were not conducted with the diagnosed woman; however, the partner was expected to complete some at-home assignments with her.

Measures

Standardized self-report questionnaires with well-established reliability and validity were used to collect data on study variables from the women. In addition, as part of the main study, the partner completed a demographic questionnaire that included items about the breast cancer diagnosis and treatment.

Anxiety was measured using the **state anxiety subscale of the Spielberger State-Trait Anxiety Inventory Form Y (STAI-Y)**, which evaluates current feelings of apprehension, tension, nervousness, and worry (Spielberger, 1983). Respondents indicate the extent to which each of 20 statements is generally true for them, from 1 (almost never) to 4 (almost always), with a cutoff score of 40 or higher used to indicate clinical anxiety (Frasure-Smith, Lespérance, & Talajic, 1995). The STAI-Y has well-established reliability and validity, with an internal consistency (Cronbach alpha) for state anxiety of 0.94 in a sample of 120 women with breast cancer (Rothrock, Matthews, Sellergren, Fleming, & List, 2004).

Depressed mood was measured using the **Center for Epidemiologic Studies–Depression scale (CES-D)**, a 20-item questionnaire that measures symptoms associated with depression (Radloff, 1977). Respondents indicate how often they have had each feeling in the

past week on a scale of 0 (rarely or none of the time, less than one day) to 3 (most or all of the time, five to seven days) with a score of 16 or higher suggestive of clinically significant depression (Radloff, 1977). Reliability and validity of the CES-D has been established in clinical and community-based samples, with an internal consistency of 0.92 in a sample of 40 women diagnosed with breast cancer within the previous 2.5 years (Lewis, Hammond, & Woods, 1993).

Marital quality was measured using the **Dyadic Adjustment Scale (DAS)**, a 32-item, factor-derived general measure of marital quality with four subscales (dyadic consensus, dyadic satisfaction, dyadic cohesion, and affectional expression) (Spanier, 1976). Total scale scores range from 0–150, with higher scores indicating greater marital quality. Reliability and validity of the DAS has been established in multiple studies, with an internal consistency of 0.91 for the total scale in women with breast cancer (Lewis et al., 1993).

A cancer-specific measure of marital quality scale also was used. The **Mutuality and Interpersonal Sensitivity scale (MIS)** is a 32-item questionnaire that asks the respondent the extent to which each item is true for them as a couple on a scale of 1 (never true) to 4 (always true) (Lewis et al., 1993). The MIS measures two theoretical domains of marital quality—mutuality and interpersonal sensitivity—with higher scores indicating greater mutuality and sensitivity. The MIS has good content validity, and the internal consistency of the total MIS was found to be 0.93 in a sample of 179 women diagnosed with breast cancer (Lewis, 1996).

Data Collection

Baseline data from each woman were collected via a packet of self-administered questionnaires mailed ahead of the first intervention session with the partner. Each woman's packet included a postage-paid envelope to seal completed forms (to keep them confidential) and mail to the study offices before the partner's first visit or to give to her partner to bring to the first session. At the end of the last intervention session, the partner was given a packet of self-administered questionnaires to bring home to the woman who completed the questionnaires (approximately 10 weeks after baseline), sealed them in a postage-paid envelope, and mailed them back to the study office.

At the end of the study, after the women's postintervention data were returned, confidential exit interviews were conducted with the women by trained research assistants who were not involved in the intervention sessions. These semistructured exit interviews included open-ended questions that asked each woman about the impact of the program on her, her partner, and their relationship. The interviews were tape recorded and transcribed verbatim, and all transcriptions were checked against the original recordings before analysis.

Data Analysis

Descriptive, comparative, and exploratory analyses of psychosocial outcomes were conducted. A description of the recruitment yields and study attrition addressed feasibility issues. Baseline characteristics of the sample provided information on the generalizability of the findings. Descriptive analysis (e.g., measures of central tendency) of pre- and postintervention study measures for the women and their partners provided information on scale score variability, sensitivity of instruments, participants who scored beyond clinical cut points (e.g., depression), and possible outliers for this substudy. Partner outcomes data for the main pilot study (N = 20) have been reported elsewhere (Lewis, Cochrane, et al., 2008). Based on the small sample size and exploratory nature of the proposed study, nonparametric Wilcoxon-signed rank tests of differences in pre- and postintervention scale mean scores were used to describe the effects of the intervention on the woman's outcomes (i.e., anxiety, depressed mood, and marital quality) as well as her partner's. Finally, exit interviews were reviewed to further elaborate on findings and provide feasibility information from the woman's perspective.

Findings

Recruitment, Attrition, and Sample

The study sample consisted of nine women diagnosed with breast cancer whose partners received the Helping Her Heal intervention. From the time the substudy began, a total of 44 couples were referred to study recruitment staff either by intermediaries (all but five intermediary referrals were by passive recruitment letters) or self-referral (n = 2). Of these 44 couples, 12 (27%) agreed to participate when called about enrollment. Reasons for not enrolling included that women or the partners felt they did not want or did not need an intervention for partners (n = 24), they were too busy (n = 4), or miscellaneous reasons (e.g., relocated, too ill, declined to give a reason) (n = 4). Of the 12 couples who enrolled, one dropped out before the first intervention session ("too busy"), one dropped out after the first partner intervention session ("not a good fit"), and one woman never returned her postintervention packet despite follow-up efforts (total attrition rate of 33%).

Partners reported that the average age of women participating in the study was 52.7 (see Table 1). The partners' ages averaged 56.2. On average, these couples had long marriages. All of the couples were Caucasian and most were highly educated. Although all of the partners were employed full-time, the women's job status ranged from not working to working full-time. All couples had a total household income of \$80,000 per year or higher.

Table 1. Demographic and Clinical Characteristics

Characteristic	\bar{X}	Range
Woman's age (years)	52.7	32–69
Partner's age (years)	56.2	37–68
Total years in the relationship	26.7	5–44
Months since breast cancer diagnosis	4.5	1.6–7.7

Characteristic	n
Woman's education	
High school graduate or some college	3
College degree	6
Partner's education	
High school graduate or some college	3
College degree	6
Type of surgery	
Lumpectomy	5
Mastectomy	3
Other	1
Treatment	
Chemotherapy before surgery	2
Chemotherapy	5
Other	1
No treatment reported	1

N = 9 couples

The time since diagnosis of breast cancer averaged 4.5 months. Five of the nine women were reported by their partners as having had breast-conserving surgeries and three had mastectomies. All but one woman was reported to have had some neoadjuvant or adjuvant therapy for breast cancer. Two women were reported to have participated in counseling groups or sessions relating to breast cancer.

Psychosocial Outcomes

Descriptive analyses: Study measures showed a range of scores for the women and their partners (see Table 2). However, from study entry to postintervention, all but one of the women showed improvement in state anxiety (STAI-Y) and depressed mood (CES-D). The direction of the changes from pre- to postintervention in the STAI-Y and CES-D scores for the nine partners participating in the substudy were more variable (some scores did not change at all), with only one partner showing improvements in state anxiety and depressed mood.

The women's average state anxiety score improved from 44.1 preintervention (above the clinical cutoff of 40) to 31 postintervention. Six of the women scored at or above the clinical cutoff level for the preintervention STAI-Y, with scores of 40, 44, 46, 51, 59, and 65. Of those six women, four had STAI-Y scores below the cutoff at postintervention, and two remained at or above 40 on their STAI-Y (only one of the scores increased from pre- to postintervention). The postintervention scores of those women were 42, 28, 38, 34, 20, and 40, respectively.

The women's average CES-D score improved from 18.3 (above the clinical cutoff level of 16) to 10.4. Four

Table 2. Psychosocial Outcomes in Women Diagnosed With Breast Cancer and Their Partners

Measure	Women (N = 9)			Partners (N = 9)		
	\bar{X}	SD	Range	\bar{X}	SD	Range
State Anxiety^a						
Total score						
Preintervention	44.1	12.9	24–65	35.8	12	21–55
Postintervention	31***	8.1	20–42	33.8	12.1	22–60
Depressed Mood^b						
Total score						
Preintervention	18.3	8.7	11–35	10.6	7.4	0–19
Postintervention	10.4***	4.5	5–17	6.9	4.9	0–15
Marital Quality, General^c						
Total score						
Preintervention	115.1	10	101–133	110.4	16.8	71–128
Postintervention	116.9*	7.7	108–129	112.8	10.5	90–128
Consensus subscale						
Preintervention	50	4.9	43–59	46.6	9.1	24–55
Postintervention	50.4	4.2	46–57	47.9	5.6	36–54
Satisfaction subscale						
Preintervention	40.2	2.8	37–44	38.8	5.5	28–45
Postintervention	40.8	3.2	36–47	39.4	3.8	33–46
Cohesion subscale						
Preintervention	16.8	4	11–23	16.8	2.2	13–20
Postintervention	15.9	4.3	9–23	16.6	2.1	14–21
Affectional expression subscale						
Preintervention	8.1	2.4	4–11	8.3	2.6	2–10
Postintervention	9.9**	3.2	6–16	8.9	1.8	5–10
Marital Quality, Cancer-Specific^d						
Total score						
Preintervention	106.7	14.6	85–130	103.8	15.1	84–136
Postintervention	110.7	12	92–132	106.7	10.1	93–121
Mutuality subscale						
Preintervention	62.3	6.4	52–75	58.2	8.5	47–73
Postintervention	63.9	4	59–71	60.2	5.2	53–66
Sensitivity subscale						
Preintervention	44.3	10	33–59	45.6	8.3	37–63
Postintervention	46.8	9.4	29–61	46.4	6.8	40–58

* $p = 0.09$; ** $p = 0.03$; *** $p = 0.01$

^aAs measured by the State-Trait Anxiety Inventory Form Y; ^bAs measured by the Center for Epidemiologic Studies–Depression scale;

^cAs measured by the Dyadic Adjustment Scale; ^dAs measured by the Mutuality and Interpersonal Sensitivity scale

women with preintervention STAI-Y scores above the clinical cutoff also were above the clinical cutoff in their preintervention CES-D, scoring 16, 23, 29, and 35. At postintervention, their CES-D scores were 17, 15, 14, and 7, respectively (i.e., only one woman's postintervention CES-D score was above the clinical cutoff).

The partners' average state anxiety score improved slightly, from 35.8 to 33.8 from study entry to postintervention. Two men who scored above the clinical cutoff range on the STAI-Y at study entry were still in the clinical range postintervention.

The partners' average CES-D score improved from 10.6 to 6.9. More specifically, four men scored in the clinical range on the CES-D at study entry, with scores

of 16, 18, 18, and 19. Postintervention, all four men improved on the CES-D and moved from a clinical to a nonclinical range of 6, 3, 12, and 15, respectively.

For one couple, the woman and her partner exceeded the clinical cutoff on both the CES-D scale and the STAI-Y scale at study entry. They both improved on the measures, although the partner stayed above the STAI-Y clinical cutoff at postintervention.

With regard to marital quality, the average total DAS score for the women improved only slightly from 115.1 at study entry to 116.9 postintervention. However, only one woman's DAS score failed to improve postintervention. All of the women showed improvements in the affectional expression subscale of the DAS, but this

was not the case for the other DAS subscales, which showed improvements for most women but also slight worsening in a few. The average total DAS score for the partners improved from 110.4 to 112.8. All but three partners' DAS scores improved postintervention.

MIS scale scores for the women generally showed improvement, but some scores did worsen slightly from pre- to postintervention. The women's average total MIS score improved from a preintervention score of 106.7 to a postintervention score of 110.7. Average MIS subscale scores for the women showed improvements pre- to postintervention. Some partners' MIS scores declined from study entry to postintervention, but their overall average MIS total and subscale scores improved.

Tests of differences: Wilcoxon-signed rank tests of the women's outcomes data showed statistically significant improvements from pre- to postintervention measures for women's data on the CES-D ($p = 0.01$), STAI-Y ($p = 0.01$), and DAS affectional expression subscale ($p = 0.03$). However, no significant improvements were seen in a similar analysis of the partners' data.

Exit Interviews

A review of the exit interview transcripts indicated that women participating in this pilot study were generally positive about the impact the program had on them,

I knew that he supported me, and that I wasn't alone in this, and that's the greatest gift I could have. What more could a woman want?

their partner,

I must say I don't think he was really anxious about doing [the program], but he did it to please me, and in the end he said it was one of the best classes he's ever had in his life.

and their relationship as a couple.

I think [the program] made [our relationship] stronger, because anytime you communicate better, you feel closer. I always felt like he cared and he loved me—that was never an issue—but it feels really nice to have somebody ask you.

When asked what they thought was the greatest benefit gained from participating, most women identified, in particular, the communication skills their partners gained as a result of the program.

For me, [the greatest benefit] was having him actually listen to me talk about my concerns about the cancer . . . and he learned that it wasn't something he could solve, that maybe it was just helpful for him to listen.

There are things that maybe I wanted to tell him but wasn't sure how he would react, so by him opening up the conversation and the subject, [it] made me more relaxed and want to talk about it with him, because he really wanted to know.

Other women noted that they were particularly touched just because their partner was willing to participate in the intervention for her.

He was like, "All right, one down!" and I'm like, "Okay, thank you for doing this for me." And trying to reinforce that if nothing else . . . I really appreciate that he cared enough to spend the time to do this . . . if we got nothing else out of it, that was meaningful to me.

When asked what they needed that the program did not include, several women admitted that the program was not exactly what they thought it would be at the outset, particularly in terms of providing information on breast cancer.

I think he thought he was going to be in a group, and I think I thought we were going to both be together, so just the mechanics of that part we were surprised about. . . . And then I thought he was going to learn more about the cancer—the health aspect, the medical part, what I was going through. But it wasn't so much that as communication.

There are questions that come up that neither of us can answer. . . . It might have been helpful to have discussed some of the things with someone else who is knowledgeable about it so that it gets some questions answered.

Discussion

This study of changes in the psychosocial responses of women with breast cancer, following a psychoeducational intervention delivered to their partners, offers preliminary support for a diffusion of benefit to the diagnosed women. Statistically significant improvements in depressed mood, state anxiety, and marital quality (affectional expression) were shown in this small substudy of a larger pilot test of the Helping Her Heal intervention. The exit interview data from the diagnosed women elaborate on the benefits they experienced in terms of communication and support from their partners.

Diffusion of benefit was noted immediately postintervention in the current study, in contrast to the only other reports that suggested a delayed diffusion of benefit from partner interventions, but no improvements immediately postintervention. Bultz et al. (2000) noted a trend ($p < 0.1$) toward improved mood disturbance, confident support, and marital satisfaction in patients with breast cancer three months postintervention, but Blanchard et

al. (1996) found statistically significant improvements in depressed mood in patients with cancer six months postintervention. Of interest, Bultz et al. (2000) found significant improvements in the partners' depressed mood at three months postintervention. No other improvements were reported in partner psychosocial outcomes in either of these studies. Similarly, the current study did not show statistically significant improvements in partner outcomes; however, the larger pilot test of this intervention (N = 20) did demonstrate significant improvements immediately postintervention in partner depressed mood, anxiety, skills, self-confidence, self-care, and the affectional expression component of marital quality (Lewis, Cochrane, et al., 2008).

Common elements of the partner interventions in these study reports are difficult to discern. Bultz et al. (2000) provided six weekly group sessions that focused on education about the medical and psychosocial aspects of the illness, discussion about the impact of cancer on the diagnosed woman, and sharing and confronting feelings and concerns. Blanchard et al. (1996) provided six weekly individual problem-solving sessions during which partners identified and worked through their three most distressing issues (based on a Pressing Problem Index completed at the first session). Neither of these interventions included a scripted focus on skill-building and supporting the diagnosed patient, as with the Helping Her Heal intervention. That focus may promote a more immediate diffusion-of-benefit effect. It would be important in future tests of the Helping Her Heal intervention to include a long-term follow-up evaluation to determine whether the more immediate effects are sustained long-term for the woman and her partner.

The feasibility analysis in this study showed modest recruitment yields from the passive recruitment letter approach and a noteworthy attrition rate from the time that potential participants indicated an interest in the study to completion of the intervention and data collection. Based on the reasons provided when potential participants declined enrollment (the majority indicated that they did not want or need the intervention), couples who thought they would not derive benefit from the intervention may have declined participation. However, the couples who were most distressed and burdened by the impact of the breast cancer may have been reluctant to invest additional time and energy in a research study. Although very few couples specifically indicated that they were too busy, the time commitment involved may have been a more pragmatic reason for not participating in the

study. These and other possible recruitment and retention issues are being addressed by more direct, multifocal recruitment approaches and ongoing retention support that have been incorporated in a new randomized clinical trial of the Helping Her Heal program.

Of course, a major limitation of the pilot study is its small homogeneous sample, which affects the statistical power to detect significant changes in outcomes and the generalizability of study findings. Participants all were Caucasian, and most were highly educated and in long-term relationships with their partners. However, these promising results suggest that future research, such as a new randomized clinical trial, should be undertaken in larger, more diverse study samples to test the diffusion of benefit from partner or caregiver interventions to diagnosed patients. More definitive findings from the randomized clinical trial, as well as research in couples experiencing other types of cancer, could provide an important evidence base for focusing some clinical efforts on partners alone, rather than adding to diagnosed patients' burden of multiple clinical encounters.

The pilot study offers promising findings that a diffusion of psychosocial benefit to women with breast cancer may occur when a psychoeducational intervention is delivered to her partner. If larger clinical trials of this intervention also show a diffusion of benefit, oncology nurses in the clinical or community setting would be particularly well positioned to refer partners to or provide them with skill-building and support through the Helping Her Heal program.

The authors gratefully acknowledge Ellen H. Zahlis, MN, Mary Ellen Shands, MN, RN, and Salene M. Wu, MA, for their contributions to this research.

Barbara B. Cochrane, PhD, RN, FAAN, is an associate professor in the School of Nursing at the University of Washington in Seattle and joint associate member in the Public Health Sciences Division at Fred Hutchinson Cancer Research Center in Seattle; Frances Marcus Lewis, PhD, RN, FAAN, is a professor in the School of Nursing at the University of Washington in Seattle and affiliate investigator in the Public Health Sciences Division at Fred Hutchinson Cancer Research Center; and Kristin A. Griffith, MS, is a biostatistician in the School of Nursing at the University of Washington in Seattle. This research was supported by the Suzanne E. VanHooser Nursing Research Fund Award from the University of Washington School of Nursing, the University of Washington School of Medicine Tennis Fund, and the ONS Foundation, through an unrestricted grant from Aventis Oncology. Cochrane can be reached at barbc@u.washington.edu, with copy to editor at ONFEditor@ons.org. (Submitted June 2009. Accepted for publication April 21, 2010).

Digital Object Identifier: 10.1188/11.ONF.207-214

References

- Badger, T.A., Braden, C.J., & Mishel, M.H. (2001). Depression burden, self-help interventions, and side effect experience in women receiving treatment for breast cancer. *Oncology Nursing Forum*, 28, 567-574.
- Baider, L., & Kaplan De-Nour, A. (1999). Psychological distress of cancer couples: A leveling effect. *New Trends in Experimental and Clinical Psychiatry*, 15(4), 197-203.
- Bandura, A. (1997). *Self-efficacy, the exercise of control*. New York, NY: W.H. Freeman.

- Baucum, D.H., Porter, L.S., Kirby, J.S., Gremore, T.M., Wiesenthal, N., Aldridge, W., . . . Keefe, F.J. (2009). A couple-based intervention for female breast cancer. *Psycho-Oncology*, 18, 276–283.
- Ben-Zur, H., Gilbar, O., & Lev, S. (2001). Coping with breast cancer: Patient, spouse, and dyad models. *Psychosomatic Medicine*, 63(1), 32–39.
- Blanchard, C.G., Toseland, R.W., & McCallion, P. (1996). The effects of a problem-solving intervention with spouses of cancer patients. *Journal of Psychosocial Oncology*, 14(2), 1–21.
- Bloom, J.R., Cook, M., Fotopoulis, S., Flamer, D., Gates, C., Holland, J.C., . . . Ross, R.D. (1987). Psychological response to mastectomy: A prospective comparison study. *Cancer*, 59, 189–196.
- Brusilovskiy, E., Mitstifer, M., & Salzer, M.S. (2009). Perceived partner adaptation and psychosocial outcomes for newly diagnosed stage I and stage II breast cancer patients. *Journal of Psychosocial Oncology*, 27, 42–58. doi: 10.1080/07347330802614774
- Bultz, B.D., Specia, M., Brasher, P.M., Geggie, P.H., & Page, S.A. (2000). A randomized controlled trial of a brief psychoeducational support group for partners of early stage breast cancer patients. *Psycho-Oncology*, 9, 303–313. doi: 10.1002/1099-1611(200007/08)9:4<303::AID-PON462>3.0.CO;2-M
- Cochrane, B.B., & Lewis, F.M. (2005). Partner's adjustment to breast cancer: A critical analysis of intervention studies. *Health Psychology*, 24, 327–332. doi: 10.1037/0278-6133.24.3.327
- Fergus, K.D., & Gray, R.E. (2009). Relationship vulnerabilities during breast cancer: Patient and partner perspectives. *Psycho-Oncology*, 18, 1311–1322. doi: 10.1002/pon.1555
- Frasure-Smith, N., Lespérance, F., & Talajic, M. (1995). The impact of negative emotions on prognosis following myocardial infarction: Is it more than depression? *Health Psychology*, 14, 388–398.
- Giese-Davis, J., Hermanson, K., Koopman, C., Weibel, D., & Spiegel, D. (2000). Quality of couples' relationship and adjustment to metastatic breast cancer. *Journal of Family Psychology*, 14, 251–266.
- Hewitt, M., Herdman, R., & Holland, J. (Eds.). (2004). *Meeting psychosocial needs of women with breast cancer*. Washington, DC: National Academies Press.
- Hinnen, C., Hagedoorn, M., Ranchor, A.V., & Sanderman, R. (2008). Relationship satisfaction in women: A longitudinal case-control study about the role of breast cancer, personal assertiveness, and partners' relationship-focused coping. *British Journal of Health Psychology*, 13, 737–754. doi: 10.1348/135910707X252431
- Jemal, A., Siegel, R., Xu, J., & Ward, E. (2010). Cancer statistics, 2010. *CA: A Cancer Journal for Clinicians*, 60, 277–300.
- Landmark, B.T., Strandmark, M., & Wahl, A.K. (2001). Living with newly diagnosed breast cancer—The meaning of existential issues. A qualitative study of 10 women with newly diagnosed breast cancer, based on grounded theory. *Cancer Nursing*, 24, 220–226.
- Lewis, F.M. (1996). *Final report of the Family Home Visitation Program*. [National Institutes of Health, R01-CA-55347]. Bethesda, MD: National Cancer Institute.
- Lewis, F.M. (2004). Family-focused oncology nursing research. *Oncology Nursing Forum*, 31, 288–292. doi: 10.1188/04.ONF.288-292
- Lewis, F.M., Cochrane, B.B., Fletcher, K.A., Zahlis, E.H., Shands, M.E., Gralow, J.R., . . . Schmitz, K. (2008). Helping Her Heal: A pilot study of an educational counseling intervention for spouses of women with breast cancer. *Psycho-Oncology*, 17, 131–137. doi: 10.1002/pon.1203
- Lewis, F.M., Cochrane, B.B., Zahlis, E., & Shands, M.E. (2005). Domains of spousal breast cancer-related concerns: A meta-synthesis of qualitative research [Abstract]. *Oncology Nursing Forum*, 32, 192.
- Lewis, F.M., Fletcher, K.A., Cochrane, B., & Fann, J.R. (2008). Predictors of depressed mood in spouses of women with breast cancer. *Journal of Clinical Oncology*, 26, 1289–1295. doi: 10.1200/JCO.2007.12.7159
- Lewis, F.M., Hammond, M.A., & Woods, N.F. (1993). The family's functioning with newly diagnosed breast cancer in the mother: The development of an explanatory model. *Journal of Behavioral Medicine*, 16, 351–370. doi: 10.1007/BF00844777
- Longman, A.J., Braden, C.J., & Mishel, M.H. (1996). Side effects burden in women with breast cancer. *Cancer Practice*, 4, 274–280.
- Loveys, B.J., & Klaich, K. (1991). Breast cancer: Demands of illness. *Oncology Nursing Forum*, 18, 75–80.
- Manne, S.L., Ostroff, J., Winkel, G., Grana, G., & Fox, K. (2005). Partner unsupportive responses, avoidant coping, and distress among women with early stage breast cancer: Patient and partner perspectives. *Health Psychology*, 24, 635–641. doi: 10.1037/0278-6133.24.6.635
- Motzer, S.A., Moseley, J.R., & Lewis, F.M. (1997). Recruitment and retention of families in clinical trials with longitudinal designs. *Western Journal of Nursing Research*, 19, 314–333.
- Naaman, S., & Pappas, J. (2004). The clinical efficacy of psychological interventions in breast cancer patients: A report of three meta-analyses. Retrieved from <http://www.imbi.uni-freiburg.de/OJS/ccca/index.php/ccca/article/view/2720>
- Northouse, L.L. (1992). Psychological impact of the diagnosis of breast cancer on the patient and her family. *Journal of the American Medical Women's Association*, 47, 161–164.
- Northouse, L.L., Templin, T., & Mood, D. (2001). Couples' adjustment to breast disease during the first year following diagnosis. *Journal of Behavioral Medicine*, 24, 115–136. doi: 10.1023/A:1010772913717
- Nosarti, C., Roberts, J.V., Crayford, T., McKenzie, K., & David, A.S. (2002). Early psychological adjustment in breast cancer patients: A prospective study. *Journal of Psychosomatic Research*, 53, 1123–1130.
- Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401. doi: 10.1177/014662167700100306
- Rodrigue, J.R., & Park, T.L. (1996). General and illness-specific adjustment to cancer: Relationship to marital status and marital quality. *Journal of Psychosomatic Research*, 40, 29–36.
- Rothrock, N.E., Matthews, A.K., Sellergren, S.A., Fleming, G., & List, M. (2004). State anxiety and cancer-specific anxiety in survivors of breast cancer. *Journal of Psychosocial Oncology*, 22, 93–109.
- Rowland, J.H., Meyerowitz, B.E., Crespi, C.M., Leedham, B., Desmond, K., Belin, T.R., & Ganz, P.A. (2009). Addressing intimacy and partner communication after breast cancer: A randomized controlled group intervention. *Breast Cancer Research and Treatment*, 118, 99–111.
- Samms, M.C. (1999). The husband's untold account of his wife's breast cancer: A chronologic analysis. *Oncology Nursing Forum*, 26, 1351–1358.
- Spanier, G.B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, 38(1), 15–28. doi: 10.2307/350547
- Spielberger, C.D. (1983). *Manual for the State-Trait Anxiety Inventory (Form Y)*. Palo Alto, CA: Consulting Psychologists Press.
- Toseland, R.W., Blanchard, C.G., & McCallion, P. (1995). A problem solving intervention for caregivers of cancer patients. *Social Science and Medicine*, 40, 517–528. doi: 10.1016/0277-9536(94)E0093-8
- Weih, K., Enright, T., Howe, G., & Simmens, S.J. (1999). Marital satisfaction and emotional adjustment after breast cancer. *Journal of Psychosocial Oncology*, 17, 33–49. doi: 10.1300/J077v17n01_03
- Zahlis, E.H., & Shands, M.E. (1991). Breast cancer: Demands of the illness on the patient's partner. *Journal of Psychosocial Oncology*, 9(1), 75–93. doi: 10.1300/J077v09n01_04

For Further Exploration



With a simple click of your computer mouse, listen as *Oncology Nursing Forum* Associate Editor Ellen Giarelli interviews Dr. Barbara Cochrane, PhD, RN, FAAN, about the role of partners and the promise of an indirect effect of a nursing intervention on the psychosocial well-being of women with breast cancer.

Cochrane is an associate professor in family and child nursing, the de Tornay Endowed Professor in Healthy Aging, the director of the de Tornay Center for Healthy Aging, and the co-director of the University of Washington Center for Interdisciplinary Geriatric Research, all at the University of Washington in Seattle.

To listen to the podcast, visit www.ons.org/Publications/ONF/Features/Podcast.