

Facilitation of Self-Transcendence in a Breast Cancer Support Group: II

Doris Dickerson Coward, RN, PhD

Purpose/Objectives: To pilot a second support group intervention study promoting self-transcendence perspectives and activities and to document changes over time in well-being in support group participants compared with nonparticipants.

Design: Quasiexperimental, partial randomization, preference trial design.

Setting: An urban breast cancer resource center established by survivors.

Sample: 41 women with newly diagnosed breast cancer were recruited, and 39 completed the study. 22 women participated in three intervention support groups; 17 were in a comparison group.

Methods: The intervention was an eight-week, closed support group based on self-transcendence theory. Data were collected three times during 14 months.

Main Research Variables: Support group intervention, self-transcendence, and emotional and physical well-being.

Findings: The intervention group had lower scores than the comparison group on self-transcendence and well-being variables at baseline (time [T] 1). Scores were higher for both groups postintervention (T2), with no differences between groups. One year postintervention (T3), intervention group scores again were lower than comparison group scores. Intervention group T3 scores were unchanged from T2.

Conclusions: Most potential participants were unwilling to risk being randomized into a nonpreferred group. Activities based on self-transcendence theory were associated with expanded perspectives and activities and an improved sense of well-being in support group participants at the end of the intervention, but not one year later. Findings from the pilot studies informed a study currently in progress.

Implications for Nursing: Nurses should maintain awareness of local resources for support and make that information available to women when they are newly diagnosed with breast cancer, during their treatment, and later.

Key Points . . .

- Self-transcendence perspectives and behaviors are associated with a sense of well-being and mental health in studies of physically healthy people and people with life-threatening illnesses.
- Women with newly diagnosed breast cancer who maintain or develop self-transcendence perspectives and behaviors related to their diagnosis and treatment may report better physical and emotional well-being.
- Self-transcendence perspectives and behaviors may be facilitated in women newly diagnosed with breast cancer through peer support group activities that are based on self-transcendence theory.
- Findings from this pilot study indicate that women benefit from breast cancer peer support resources during their time of initial diagnosis and treatment and that they should be assessed for continuing need for similar resources post-treatment.

Theoretical Framework

The investigator's program of research is based on a self-transcendence theoretical framework described in the report of the first study (Coward, 1998). Self-transcendence refers to the capacity of people to reach out beyond personal concerns to take on broader life perspectives and activities. Reed (1991a, 1996) viewed self-transcendence as a developmental capacity realized and elaborated from experiences that confront people with mortality and immortality through the process of aging or through encounters with illness and loss. Pivotal life events, such as a cancer diagnosis, challenge people's previously held beliefs about themselves and their place in the world. Such events are potential turning points because choices made within the context of such events may have far-reaching consequences in terms of changed priorities and finding new purposes for life (Coward, 1997).

Doris Dickerson Coward, RN, PhD, is an associate professor in the School of Nursing at the University of Texas at Austin. This research was funded by the ONS Foundation and the University of Texas at Austin. (Submitted March 2002. Accepted for publication July 15, 2002.)

Digital Object Identifier: 10.1188/03.ONF.291-300

This article describes a second pilot study of a support group for women newly diagnosed with breast cancer. The first study, a pre-experimental design, explored feasibility and patterns of effectiveness of a support group designed to facilitate self-transcendence perspectives and activities (Coward, 1998). Those findings were used to strengthen recruitment and retention procedures, enhance the intervention, and explore additional ways to assess intervention effectiveness. The primary purposes of the second study were to implement the intervention with a larger sample of women and to compare women participating in the intervention with women not participating. Findings from both pilot studies provided direction for a study currently in progress of 200 women newly diagnosed with breast cancer.

For most people, a cancer diagnosis initiates a period of spiritual disequilibrium. When a newly diagnosed person reaches out for information and support in an attempt to restore a sense of equilibrium, connections made through reaching out may lead to new opportunities and resources that promote expansion of previous self-conceptual boundaries and result in new behaviors. This expanded view of self and engagement in new activities (characteristics of self-transcendence) help the person restore a sense of purpose and meaning for his or her life.

The traditional purpose of cancer support groups is to convey basic information about cancer and cancer treatment, provide emotional support, and improve coping mechanisms (Cella & Yellen, 1993). Although some participants in traditional cancer support groups experience expanded self-conceptual boundaries and learn to engage in new behaviors, the investigator hypothesized that if self-transcendence views and behaviors were consciously encouraged within group sessions, an increased sense of self-transcendence would result in an improved sense of physical and emotional well-being in participants.

Literature Review

Recent reviews of studies of psychosocial interventions with people with cancer synthesized an accumulation of evidence that a variety of interventions result in benefits such as emotional and functional adjustment and improvement in treatment- or disease-related symptoms (Fawzy, Fawzy, Arndt, & Pasnau, 1995; Meyer & Mark, 1995; Trijsburg, van Knippenberg, & Rijpsma, 1992). Beneficial interventions included informational programs, behavioral training, and individual and group psychotherapy. Meyer and Mark suggested that the cumulative evidence was strong enough to end the questioning of whether cancer psychosocial interventions were effective and begin exploring the mechanisms behind the beneficial outcomes.

Findings from three experimental design cancer support group studies provide clues to the mechanisms behind beneficial intervention outcomes (Fawzy et al., 1990; Spiegel, Bloom, & Yalom, 1981; Telch & Telch, 1986). Telch and Telch reported that people in a control support group that did not include coping skills training ($n = 13$) did not adjust as well to their illness as people in a support group that included coping skills training ($n = 14$). Control support group sessions covered basic information about cancer and cancer care. Experimental group sessions covered basic information but also included problem solving, strategies for enhancing communication, and pleasant activity planning. Spiegel et al. (1981) reported improved mood and increased coping in 50 women with advanced breast cancer, compared with 36 controls not participating in the one-year therapy support group. Intervention focus was on support (i.e., sharing of fears and concerns and improving relationships with friends, family, and physicians). Fawzy et al. (1990) reported that 34 patients with malignant melanoma participating in a six-week structured support group, compared with 34 control subjects, were less distressed and used more coping strategies for as long as six months after the group sessions. The intervention consisted of education, stress management, problem solving, and psychological support.

Hawks, Hull, Thalman, and Richins (1995) discussed the work of Spiegel et al. (1981) and Fawzy et al. (1990) in regard to meaning and purpose in life, self-awareness, and connectedness with self, others, and a higher being. They concluded that

group support (encompassing topics such as coping with dying, life projects, realigning social networks and family support, symptom control, and doctor-patient relationships) had a spiritual effect that, in turn, affected emotional and physical well-being. An associate of Spiegel et al. (1981), in a recent book on group therapy for medically ill patients, discussed illness as an opportunity for personal growth and described supportive interventions using spiritual and existential techniques (Spira, 1997). Telch and Telch's (1986) successful intervention also centered on the personal growth activities of problem solving, communication enhancement, and pleasant activity planning. These observations support the notion that self-transcendence views and behaviors can be promoted within a cancer support group setting and that such views and behaviors may help to restore spiritual equilibrium in people whose sense of life purpose and meaning has been disrupted by a cancer diagnosis.

Numerous nonexperimental studies have reported an association between self-transcendence views and behaviors and indicators of well-being and mental health in patients with cancer, people with HIV or AIDS, healthy adults, and the elderly (Coward, 1990a, 1990b, 1991, 1995, 1996; Coward & Lewis, 1993; Leidy, 1994; Mellors, 1999; Mellors, Riley, & Erlen, 1997; Reed, 1986, 1989, 1991a). Findings from descriptive and correlational studies were supported in pre-experimental support group intervention studies (Coward, 1998; Young & Reed, 1995).

Not all cancer support group studies demonstrated intervention effectiveness in reducing distress. Samarel, Fawcett, and Tulman (1997) reported on the effect of adding a significant other coach within a traditional cancer support group for women newly diagnosed with early-stage breast cancer. One hundred eighty-one women participated ($n = 58$, support group with coaching; $n = 64$, support group without coaching; $n = 59$, no support group). The eight support group sessions covered cancer care, stress management, effective communication, and problem solving for effective living. In contrast to the findings of the other studies, Samarel et al. found no differences in emotional distress among the three groups at baseline or 8 or 16 weeks later.

In summary, numerous studies have supported the benefits of psychosocial interventions for people with cancer. The mechanisms behind those benefits are not well-understood. The diagnosis and treatment of cancer initiates a period of spiritual disequilibrium, resulting in the need to reach out beyond usual resources for information and support. Group support that includes topics such as feelings management, communication, and finding new purposes and meaning from living with cancer may facilitate an expanded view of oneself, engagement in new behaviors, and an improved sense of well-being.

Methods

Design and Objectives

The study was a quasiexperimental pre/postintervention design with an additional measurement one year after the intervention. The intervention was specifically designed to facilitate self-transcendence perspectives and behaviors that would enhance emotional and physical well-being. This second test of the intervention was expected to provide important information, enabling further refinement of the intervention and procedures relevant to participant recruitment and retention, data analyses, and other aspects of the research plan. Specific aims were to

- Compare responses over time to items on structured self-report measures assessing self-transcendence and well-being in women with newly diagnosed breast cancer participating or not participating in a support group where self-transcendence perspectives and activities were consciously facilitated.
- Describe the lived experiences of self-transcendence that provided purpose, meaning, and a sense of connectedness within the context of being diagnosed with breast cancer or recurrence.
- Examine the congruence between experiences of self-transcendence described by women and their responses to items on the measures assessing self-transcendence and well-being.

This article presents the findings from the first aim. The findings from the second aim were reported previously (Coward, 2001a, 2001b). Analyses related to the third aim are not yet completed.

Setting and Recruitment Procedures

The intervention setting was a survivor-established breast cancer resource center (BCRC). The first two support groups held at the center in early 1996 were the pre-experimental groups reported by Coward in 1998. The support group sessions in this article were conducted in late 1996 and 1997.

The study assessed the use of a partially randomized preference trial design (Coward, 2002). The design was proposed by Brewin and Bradley (1989), who argued that simple randomized designs might not be suitable to evaluate participative interventions because participant motivation can lead to underestimating the effectiveness of the intervention. They proposed that accommodating people with strong preferences for participation or nonparticipation in the intervention and randomizing the other subjects would enable evaluation of the intervention plus the additional influence of motivational factors.

The investigator obtained permission from the institutional human subjects' protection review board before beginning subject recruitment. Options for intervention support group participation or nonparticipation were explained to the 48 women referred to the investigator from local oncology practices and the BCRC. Of the 41 women who agreed to participate, 6 were willing to be randomized. Two women who initially wanted to be in the support group dropped out of the study after attending one or two sessions. The final sample was 39 women, 22 receiving the intervention and 17 not receiving the intervention.

The Intervention

The eight-session intervention support group met weekly for 90 minutes at the BCRC. The intervention details are fully described in the report of the first pilot study (Coward, 1998). The same three facilitators (i.e., an oncology clinical nurse specialist, a breast cancer survivor, and a psychotherapist) led all three intervention support groups. Table 1 presents the theoretical rationale for the activities implemented during the sessions. Activities at each session were chosen from discussion with participants early in that session or in a previous session. All activities described in Table 1 were implemented at least once during the eight sessions. Women were encouraged to share individual experiences and associated emotions (negative and positive) related to their cancer and to use their experiences and emotions to help address their own and others' concerns.

Data-Collection Procedures

All study participants completed a packet of paper-and-pencil instruments at three time points. Ten participants (five each from the experimental and comparison groups) also provided narrative data about specific experiences that helped them to feel better within the context of having breast cancer. Data were collected at the time of enrollment into the study (time [T] 1), within a month after the end of the support group sessions (T2) for women in the experimental group (two to three months after baseline data collection for the comparison group), and again 12 months after T2 data collection (T3).

Instruments

Self-Transcendence was assessed with two scales. The **Self-Transcendence Scale (STS)** (Reed, 1989) consists of 15 items of activities and perspectives indicative of expanded self-boundaries. This graphic rating scale contains response categories ranging from 1 (not at all) to 7 (very much). Item scores are totaled to obtain a potential range of scores from 15–105, with higher scores reflecting more expansion of self-boundaries. Coward (1990b) documented evidence for the validity of the STS in women with breast cancer. The **Purpose-in-Life Test (PIL)** (Crumbaugh & Maholick, 1964) measures the extent to which people have found meaningful goals around which to organize their lives. Scores range from 1–7 in this 20-item Likert-type scale. Item scores are totaled to obtain a potential range of 20–140, with higher scores reflecting more purpose and meaningful goals. Evidence for construct validity of the scale was documented using the known groups technique (Crumbaugh, 1968; Crumbaugh & Maholick, 1981). The scale has been used in studies with people with cancer (Coward, 1998; Lewis, 1982; Taylor, 1993).

Emotional well-being was defined as an aspect of quality of life in which a person perceives a current level of happiness (affective well-being) and cognitive satisfaction with life (cognitive well-being). Affective well-being was assessed by two scales, the **Affect Balance Scale (ABS)** (Bradburn, 1969) and the short form of the **Profile of Mood States (POMS)** (McNair, Lorr, & Droppleman, 1992). The ABS is a five-item scale of positive affect and a five-item scale of negative affect, and the total score is the difference between the two subscales. The response categories for the items range from 0 (not at all) to 3 (often). Studies have supported the validity of the scale, particularly for evaluating mood over time (Diener & Emmons, 1985; Warr, Barter, & Brownbridge, 1983; Zevon & Tellegen, 1982). The scale has been used in previous studies with women with breast cancer (Coward, 1990a, 1998; Gotay, 1985; Northouse, 1989). The POMS short form is a checklist of 30 adjectives such as fatigued, efficient, vigorous, and lively. The response categories are in Likert format, ranging from 1 (not at all) to 5 (extremely). The total scale score is the sum of the tension, depression, anger, fatigue, and confusion subscales with the vigor subscale subtracted from that sum. Higher total scores indicate more mood disturbance. The scale developers presented evidence for content and construct validity (McNair et al.). The POMS has been used in numerous studies with women with breast cancer (Coward, 1998; Lauver & Tak, 1995; Miaskowski & Dibble, 1995; Pistrang & Barker, 1995; Samarel et al., 1997.)

Table 1. Activities Implemented in the Intervention Support Group Sessions

Activity	Rationale	Sources
Orientation to setting resources (print and media materials and computer databases)	Information access leads to knowledge of options for treatment and treatment management, facilitates decision making, and frees energy for development of transcendence. During the process of using the breast cancer resource center, women also gain manual skills, develop skill in communicating their needs, and have opportunity for increased contact with other women with breast cancer who are at the center.	
Relaxation training	The practice of relaxation techniques at the beginning of a session helps women relax and center their thoughts for group discussion. Relaxation techniques learned at the session also may be useful for dealing with stress, pain, and insomnia (common concerns while undergoing treatment for cancer).	Fawzy & Fawzy, 1994; Samarel & Fawcett, 1992
Assertive communication skills	Assertive communication is an honest and direct way to express thoughts and feelings. Assertive communication can be learned. People with cancer may face many new situations and people with whom they must discuss thoughts and feelings that are difficult to express. Being able to express yourself leads to more successful communication and has the potential for promoting a greater sense of connectedness with others.	Braden et al., 1990; Spiegel & Spira, 1991; Telch & Telch, 1986
Values clarification	Exploring beliefs can lead to positive changes in thoughts and feelings. Developing a healthy personal meaning may involve working through negative feelings about cancer and lead to an expanded view of illness.	Anderson, Nowacek, & Richards, 1988; Spiegel & Spira, 1991
Problem solving	Identification of common problems and brainstorming solutions lead to sharing of emotions and insights. Sharing of emotions and insights leads to an expanded view of self and greater sense of connectedness.	Braden et al., 1990; Telch & Telch, 1986
Brief educational component	Topics (chosen by group during the previous session) such as coping with specific side effects, nutritional therapy, and stem cell transplants increase knowledge and provide a focus for group discussion. Such information facilitates decision making and frees energy for sharing and making connections with others.	Braden et al., 1990; Spiegel & Spira, 1991
Constructive thinking and self-instructional training	Understanding the reciprocal nature of thoughts, feelings, and behavior leads to awareness that changing destructive thought patterns can profoundly affect feelings and behavior. A person can achieve cognitive control through learning to avoid negative thinking and learning to use constructive self-talk.	Braden et al., 1990; Fawzy & Fawzy, 1994; Telch & Telch, 1986
Feelings management	Identifying and clarifying feelings may be the first step toward constructive thinking and behavior change.	Braden et al., 1990; Spiegel & Spira, 1991; Telch & Telch, 1986
Pleasant activity planning	Enjoyable activities can be shared with others and are a means to stimulate pleasant thoughts and feelings.	Grassman, 1993; Telch & Telch, 1986.

Cognitive well-being, the second component of emotional well-being, was assessed by the **Cognitive Well-Being Scale (CWB)** (Coward, 1990a), based on work by Campbell, Converse, and Rodgers (1976). The score on the CWB is calculated as the mean of the total score of two similarly worded phrases placed in different sections of the questionnaire. Subjects rate their satisfaction with life in general on a graphic rating scale ranging from 1 (completely dissatisfied) to 7 (completely satisfied). The potential range of scores is 1–7, with a higher score reflecting more satisfaction with life. The CWB has been used with women with breast cancer (Coward, 1990a, 1998).

Physical well-being refers to functional ability and degree of distress from cancer and treatment-related symptoms. Functional ability is the degree to which a person is able to maintain role function and self-help activities, as measured by the revised **Karnofsky Performance Scale (KPS)** (Grieco & Long, 1984). The KPS has been used since 1948 as a measure of functional status and quality of life in patients with cancer (Karnofsky, Abelmann, Craver, & Burchenal, 1948). The scale has shown acceptable test/retest and inter-rater reliability (Adams, Britt, Godding, Khansur, & Bulcours, 1995). More specific anchors for each level of functioning on the revised version make it more accurate and discriminating among subjects than the original KPS. The range of scores used in this study was 21 (unable to care for self) to 100 (normal func-

tional ability). Participants rated themselves on the instrument. **Symptom distress** is the degree of physical suffering experienced from cancer or cancer treatment measured by the **Symptom Distress Scale (SDS)** (McCorkle & Young, 1978). The SDS is a 10-item self-report scale rating nausea, mood, appetite, pain, mobility, fatigue, bowel pattern, concentration, appearance, and insomnia with response categories ranging from 1 (no change or difficulty) to 7 (symptom could not have been worse). The scale is scored by totaling the score on each item for a potential range of 10–70, with higher scores indicating more distress. The content validity of this scale for people with cancer has been supported in numerous studies (McCorkle, 1987). It has been used with women with breast cancer (Coward, 1990a, 1991, 1998; Samarel et al., 1997).

A social support measure was included in the questionnaire packet to assess whether support available from other sources was related to motivation and attendance at a cancer support group. The **Personal Resources Questionnaire 85–Part 2 (PRQ)** measured the degree of perceived support from others, the opportunity to give and receive assistance from others, and the opportunity to discuss feelings (Brandt & Weinert, 1981). The scale consists of 25 items on a Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The potential range of scores is 25–175, with higher scores reflective of more support resources. Construct validity and lack of social desirability response bias were supported by Weinert (1987). The scale

was used previously in two studies of women with breast cancer (Coward, 1990a, 1998). Table 2 presents reliability coefficients for all of the study instruments obtained at the three data-collection time points in this study.

The demographic form used in the first pilot study was modified to better assess participants' current treatment status, stage of disease, and developmental stage at diagnosis. An additional item assessed factors preventing women from using the resources at the BCRC, including participation in a BCRC support group. For women in the intervention group, minutes of attendance at support group sessions were recorded.

Results

Sample

Table 3 presents the background characteristics of the experimental and comparison groups. No statistically significant differences were found between groups in most demographic and disease variables. Women in the experimental group were younger, ranging from 35–64 years of age, compared to 35–77 years in the comparison group. More women in the experimental group lived with a spouse and children, had breast reconstructive surgery, and were receiving hormone therapy. Participants were not restricted in accessing other community cancer support groups because denying that opportunity for a full year to women newly diagnosed with breast cancer would have been unethical. Equal numbers of women (seven in each group) reported participation in another cancer support group. Greater effort in recruiting minority participants for this second pilot study resulted in four minority participants compared to none in the first study.

Measures

Questionnaire data were entered in SPSS® (SPSS Inc., Chicago, IL) and analyzed using descriptive statistics and t test,

Table 2. Study Instruments and Reliabilities

Instrument	Author	Reliability Alpha		
		Time 1	Time 2	Time 3
Self-Transcendence Scale	Reed, 1991a	0.87	0.83	0.84
Purpose-in-Life Test	Crumbaugh & Maholick, 1964	0.90	0.87	0.88
Affect Balance Scale	Bradburn, 1969	0.83	0.60	0.71
Profile of Mood States	McNair et al., 1992	0.95	0.94	0.93
Cognitive Well-Being Scale	Coward, 1990b	0.49 ^a	0.76 ^a	0.68 ^a
Symptom Distress Scale	McCorkle & Young, 1978	0.90	0.83	0.93
Karnofsky Performance Status	Karnofsky et al., 1948	—	—	—
Personal Resources Questionnaire	Brandt & Weinert, 1981	0.88	0.92	0.93

^a Pearson's correlation

Table 3. Study Participant Characteristics by Group

Variable	Experimental Group (n = 22)		Comparison Group (n = 17)	
	\bar{X}	SD	\bar{X}	SD
Age (years) ^{a*}	46.1	7.1	51.8	11.4
Education (years)	17.5	3.4	16.1	3.4
Months since diagnosis	2.9	1.9	3.7	3.0
	n	%	n	%
Religion				
Protestant	13	59	14	82
Catholic	3	14	1	6
Jewish	1	5	0	0
None	5	23	2	12
Race				
Caucasian	20	91	15	88
African American	0	0	1	6
Hispanic	1	5	1	6
Asian	1	5	0	0
Treatment				
Mastectomy and reconstruction ^{b*}	12	55	3	18
Mastectomy	16	73	10	59
Lumpectomy	6	27	6	35
Radiation therapy	6	27	6	35
Chemotherapy	16	73	11	65
Hormone therapy ^{b*}	8	36	1	6
Financial status				
Quite secure	3	14	1	6
Comfortable	9	41	8	47
Okay	7	32	7	41
Marginal	1	5	0	0
Poor	2	9	1	6
Physical health status				
Very good	4	18	5	29
Good	11	50	7	41
Some disability, but doing okay	7	32	5	29
Living arrangement				
Alone	5	23	6	35
Spouse or partner	3	14	5	29
Spouse and children ^{b*}	13	59	3	18
Other	1	5	3	18

^at test

^bchi-square

*p < .05

chi-square, repeated measures analysis of variance (ANOVA), analysis of covariance (ANCOVA), and regression analyses. Table 4 presents the means and standard deviations of the experimental and comparison groups and results of t tests on the self-transcendence, emotional well-being, physical well-being, and social support mean scores for the three data-collection time points. At baseline (T1), the comparison group obtained more positive scores on all study measures, with statistically significant differences between groups on one self-transcendence measure (STS) and one affective well-being measure (ABS). Experimental group scores improved at the end of the support group intervention, whereas the comparison group remained the same. Thus at T2, no statistical difference was found between groups on any study measure. At T3, the comparison group obtained statistically significantly more

Table 4. Experimental Group and Comparison Group Means and T Test Results

Scale and Group	Time 1				Time 2				Time 3			
	\bar{X}	SD	t	p	\bar{X}	SD	t	p	\bar{X}	SD	t	p
Self-Transcendence Scale												
Experimental group	73.9	12.3	-2.270	0.03	80.6	9.3	-0.58	0.57	80.9	11.0	-2.13	0.04
Comparison group	83.1	12.8			82.5	11.7			87.6	8.1		
Purpose-In-Life Test												
Experimental group	107.4	14.9	-1.620	0.11	110.0	12.2	-1.09	0.28	109.7	13.1	-2.13	0.04
Comparison group	115.2	15.4			114.5	12.9			118.1	11.0		
Affect Balance Scale												
Experimental group	18.2	5.7	-2.240	0.03	20.5	4.9	-0.30	0.77	20.5	4.6	-2.32	0.03
Comparison group	21.8	3.8			21.0	4.5			23.5	3.3		
Profile of Mood States												
Experimental group	43.4	23.5	1.630	0.11	33.6	19.4	0.49	0.63	35.2	21.4	2.32	0.03
Comparison group	31.3	22.2			30.4	21.6			20.9	15.6		
Cognitive Well-Being												
Experimental group	4.5	1.0	-1.350	0.19	4.9	1.1	-0.82	0.42	4.9	1.0	-3.17	0.00
Comparison group	4.9	1.0			5.2	1.3			5.8	0.7		
Symptom Distress Scale												
Experimental group	32.3	10.7	0.285	0.78	29.9	8.6	0.60	0.55	26.5	12.4	-0.03	0.97
Comparison group	31.1	15.6			27.9	12.0			25.6	15.7		
Karnofsky Performance Status												
Experimental group	77.5	12.6	-0.260	0.80	81.9	13.3	0.20	0.84	86.0	16.1	0.13	0.90
Comparison group	78.5	12.1			81.0	14.7			85.4	13.8		
Personal Resources Questionnaire												
Experimental group	147.0	21.5	-0.820	0.42	147.5	25.6	-0.75	0.46	140.9	26.2	-1.33	0.19
Comparison group	152.3	17.6			152.9	17.6			151.0	19.0		

positive scores on all of the self-transcendence and emotional well-being measures. Physical well-being measure scores did not differ significantly between the two groups at any time point. Both groups of women improved over time in their functional ability and reported less distress from symptoms related to cancer and cancer treatment.

Repeated measures ANOVA assessed group changes over time in mean scores on the study measures. No evidence was found of main effect for group or group by time for any variable. Significant positive change over time occurred for both the experimental and comparison groups on the STS ($F = 4.36$, $p = 0.02$), POMS ($F = 3.16$, $p = 0.05$), CWB ($F = 6.04$, $p = 0.004$), SDS ($F = 3.14$, $p = 0.05$), and KPS ($F = 7.18$, $p = 0.001$).

Because of the large difference in mean scores among groups at baseline, T1 scores were used as covariates in additional repeated measures ANCOVA. Preliminary analyses indicated that the equal slopes assumption for ANCOVA was justified. A main effect for group was found on one variable only: T3 scores on the CWB ($F = 7.96$, $p = 0.008$), with the comparison group reporting more satisfaction with life across all three time periods.

The T2 experimental group scores on self-transcendence variables and emotional well-being variables were regressed on T1 scores plus the minutes of attendance variable. Although minutes of attendance ranged from 180–750, minutes of attendance at group sessions had no linear effect on any T2 measure total score. When regressing T3 scores on the T1 score for each measure plus minutes of attendance, only the PIL was affected by minutes of attendance. However, minutes of attendance accounted for only 0.13 of an R^2 of 0.48 (adjusted $R^2 = 0.43$). Additionally,

minutes of attendance at the support group sessions were not associated with scores on the PRQ at any data-collection time point.

Using entire sample data, few correlations were statistically significant among background variables and study measures. Older age was weakly related to higher scores on the T1 self-transcendence measures (age and STS, $r = 0.37$; age and PIL, $r = 0.35$). Weak correlations were found between less secure financial status at T1 and most study measures ($r = 0.32$ – 0.41). Analyses also were conducted on the entire sample to determine patterns of relationships among the self-transcendence and well-being variables. Bivariate correlations at all three time points indicated, as were expected, strong relationships between the two self-transcendence measures (STS and PIL, $r = 0.78$ – 0.85), between the two physical well-being measures (SDS and KPS, $r = 0.54$ – 0.63), and among the three emotional well-being measures (ABS, CWB, and POMS, $r = 0.56$ – 0.79). Moderate to strong relationships ($r = 0.48$ – 0.82) were found between each self-transcendence measure and each emotional well-being measure. The few weak to moderate significant correlations among self-transcendence measures and physical well-being measures ($r = 0.32$ – 0.48) indicated that self-transcendence views and activities were not strongly associated with women's functional status or degree of symptom distress.

Discussion

Although the sample for this pilot study was small, the study findings supported previous correlational research and provided direction for the investigator's current research.

Recruitment and Retention

Twenty-three of the 41 women who agreed to participate in the study did so because they wished to participate in a support group at the BCRC; 12 women did not want a support group at that time, and 6 were willing to be randomized. Because so few women were willing to be randomized into groups, this study could not compare the influence of motivational factors on the outcome measure scores. The experience of selecting and implementing the partially randomized preference trial design is discussed in a separate article (Coward, 2002).

Although two women in the intervention group dropped out early in the study, all other participants completed the study. Retention of participants was enhanced by continued personal contact with the investigator or volunteer staff at the BCRC. The few study participants not otherwise in contact with the investigator or the BCRC staff received a "just checking on you" phone call from the investigator between the T2 and T3 data-collection points.

An unanticipated problem in this study was the amount of time and effort needed for recruitment of participants. Although the study timeline designated two support groups over four months, three groups over a seven-month period were required. As a result, a wider advertising campaign and longer length of time for recruiting study participants and conducting support groups was planned for the next support group intervention project.

Facilitation of Self-Transcendence Perspectives

Activities implemented within the support group sessions were designed to help participants expand their perceptual boundaries inwardly through introspection, outwardly through concern and care for others, and temporally by using past experiences and hopes for the future to enhance their present situations. The investigator believed that women newly diagnosed with breast cancer participating in the intervention would improve more on measures of self-transcendence and well-being than women not participating. The findings of this study somewhat support that hypothesis. All women in the pilot study improved on self-transcendence scores over the 14 months of the study. At baseline, women in the comparison group had higher scores on measures of self-transcendence than the experimental group. Because women in the experimental group improved on those measures to where no difference existed between groups at the end of the intervention, the intervention was successful. However, women in the experimental group did not continue to improve after the gains they made during support group sessions. One year later, the comparison group had the more positive scores in self-transcendence.

Most women in the experimental group self-selected that group. The investigator could randomize only six potential participants; most women expressed a strong preference for participation or nonparticipation in a support group. The study findings may indicate that women choose to participate in breast cancer support groups because they feel the need for a place to discuss the effects of breast cancer on their lives. During the experimental group sessions in this pilot study, many women revealed that their family members and friends did not let them talk about their fears of recurrence and dying or listen to their worries about what would happen if they were not able to do the things that were important to them. Improvement in their scores immediately postintervention may reflect the sense of community and shared problem solving fostered in their

support group. The finding that the comparison group did better than the intervention group one year postintervention may indicate that the women preferring the support group needed an intervention lasting more than eight weeks to maintain the gains they made in self-transcendence views and behaviors.

Interestingly, the amount of time individual women spent in attendance at group sessions did not affect their scores on self-transcendence or any other study measure. Perhaps quality of time had more influence than quantity in terms of effect on the study variables. Group members missing a session usually were checked on via e-mail or telephone by other support group participants. Contact among members outside of group sessions was encouraged as a means to strengthen bonds that would facilitate problem sharing and expansion of self-conceptual boundaries. Unfortunately, data on frequency and quality of outside contacts among all study participants were not collected.

Although women in the experimental group had improved scores on emotional well-being measures after the intervention, the comparison group had significantly higher scores on all three emotional well-being measures at the end of the study. As suggested earlier, women in the intervention group might have benefited more from an ongoing peer support intervention than from one that lasted only eight weeks.

No differences were found between the experimental and comparison groups on the two physical well-being measures at any data-collection point. That both groups improved over time in functional ability and reported less distress from cancer and cancer treatment indicated that the intervention did not affect functioning or feeling better. Two other recent nursing intervention studies with women with breast cancer reported similar findings related to functional ability and symptom experience (Badger, Braden, & Mishel, 2001; Samarel et al., 1997). Such findings suggest that perception of physical well-being is influenced by something other than nursing interventions to assist women in managing the effects of breast cancer and treatment. The adverse effects of a cancer diagnosis and treatment on physical well-being may be resolved more as a function of time beyond treatment than from a nursing intervention.

Support for Self-Transcendence Theory

The moderate to strong correlations found between emotional well-being measures and self-transcendence measures in the total sample are similar to the association of self-transcendence with mental health variables found in previous studies (Coward, 1990a, 1990b, 1991, 1995, 1996, 1998; Coward & Lewis, 1993; Leidy, 1994; Mellors, 1999; Mellors et al., 1997; Reed, 1986, 1989, 1991a). These study findings add additional support for Reed's (1991b, 1996) emerging nursing theory of self-transcendence.

The association of older age with stronger self-transcendence views and behaviors in this study is congruent with Reed's notion that self-transcendence is a developmental phenomenon and with the findings of studies with healthy adults (Coward, 1996; Reed, 1991b). Older adults are expected to have had more opportunity to adopt perspectives and behaviors associated with reaching out to others and acceptance of increasing physical frailty. Conversely, a positive relationship between older age and higher scores on the STS was not found in women with advanced breast cancer (Coward, 1991) or in a population of people with HIV (Mellors, 1999). Perhaps changes in perspective and behavior can occur at any age in people for whom life itself is at issue.

Weak to moderate correlations among physical well-being measures and self-transcendence indicate that, although most relationships became stronger over time, little association existed between self-transcendence views and behaviors and role functioning or symptom distress in this sample of women who were newly diagnosed. Although other psychosocial cancer intervention research (Fawzy et al., 1993; Spiegel, Bloom, Kraemer, & Gottheil, 1989) has produced evidence that changes in personal perspectives can result in improved functional ability (as well as lengthened time to cancer recurrence and improved length of survival), no evidence for that association was found in this study.

Conclusions

The findings of the study provide preliminary support for promotion of self-transcendence views and behaviors within a breast cancer support group but indicate that the new perspectives and behaviors may not be maintained after the end of group sessions. The fact that scores on self-transcendence and emotional well-being measures were lower at baseline in the experimental group participants, most of whom had selected to be in the experimental group, supports the conclusion that such women knew they needed to reach out for information and support they were not receiving elsewhere. Because they did not maintain the gains they made during the limited number of group sessions, such women may need access to supportive interventions for a much longer period of time or to a different type of intervention such as individual counseling or medication.

An important aspect of the study was the increased recruitment of low-income participants associated with a relocation of the BCRC with outreach to a city hospital breast cancer clinic. This resulted in two benefits: The center was able to provide group support for more women, and the study findings became generalizable to a more diverse group of women.

Implications for the Intervention Study Currently Being Conducted

Only women who wish to participate in a support group are recruited for the author's National Institutes of Health-funded study currently being conducted. Women are randomized into the intervention support group or a standard care support group of their choice. This procedure limits generalizability to only women who are interested in being in a support group but does control for motivation to participate in a cancer support group.

A social support variable is not assessed in the new study. Perceived social support was similar for all pilot study participants at baseline, indicating that women's choices for or against participation in the study support group were unrelated to emotional, financial, and instrumental support available from family, friends, and professionals. An additional reason for deleting a social support measure was that perception of support was unchanged over time in women in both pilot studies. A second measure, ABS, was deleted because scores on that measure were redundant with POMS scores in both pilot studies.

Women in the pilot support groups reported that practice discussing difficult topics in group sessions helped them com-

municate better with their significant others in regard to breast cancer and treatment implications. The Dyadic Adjustment Scale (Spanier, 1976), previously used with breast cancer populations (Carter, Carter, & Siliunas, 1993; Lewis, Woods, Hough, & Bensley, 1989; Ptacek, Ptacek, & Dodge, 1994), has been added to tap potential change in communication with significant others as a result of the intervention.

Implications for Oncology Nurses

During the recruitment phase of the pilot studies, most potential participants expressed clear preferences regarding support group participation at that particular time during their breast cancer diagnostic or treatment phase. Some women wanted immediate support; others were too overwhelmed at first to make a commitment to support group participation. Oncology nurses may best assist women by making them aware of the various community support resources, not just at the time of diagnosis, but throughout the treatment period and beyond.

Women's individual needs for support may vary depending on current supportive resources, time available for activities other than treatment and work commitments, and even the severity of treatment side effects. Not all women wish or are able to avail themselves of a support group, even if an appropriate group is available. Nurses may be able to help women give and obtain support from other women with breast cancer by promoting conversation and interaction among women during their treatment sessions and follow-up appointments. Nurses in oncology settings also may be able to implement open breast cancer education groups and social support groups on an ongoing and regular basis, perhaps monthly. Such groups provide an opportunity to participate for women who cannot commit to a closed-enrollment, time-limited group. An ongoing group also would help women attending time-limited groups that are based in self-transcendence theory to maintain the gains they made in expanding their perceptual boundaries in earlier support group sessions.

Ganz (1995) suggested that healthcare providers have an important facilitator role in advocating for various aspects of care and recovery after breast cancer. The complexity of breast cancer treatment, the many treatment decision points, and the emphasis on patient participation in decision making lead to a great need for information and support for most women. Oncology nurses can use their knowledge and past experience in the healthcare system to advocate for women with breast cancer and their families so that the best possible resources can be accessed and used. Breast cancer support groups are an excellent resource and provide opportunities for learning more about cancer and cancer treatment. Such groups also may facilitate the expansion of self-conceptual boundaries so that participants can take on broader life perspectives and activities than experienced before the cancer diagnosis. In the support group model used in the pilot studies and the study currently being conducted, an oncology nurse, a breast cancer survivor, and a psychotherapist played important advocate roles in assisting the recovery and health of women with breast cancer.

Author Contact: Doris Dickerson Coward, RN, PhD, can be reached at dcoward@mail.utexas.edu, with copy to editor at rose_mary@earthlink.net.

References

- Adams, S., Britt, D., Godding, P., Khansur, T., & Bulcourn, B. (1995). Relative contribution of the Karnofsky Performance Scale in a multi-measure assessment of quality of life in cancer patients. *Psycho-Oncology*, 4, 239–246.
- Anderson, R.M., Nowacek, G., & Richards, F. (1988). Influencing the personal meaning of diabetes: Research and practice. *Diabetes Educator*, 14, 297–302.
- 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.
- Bradburn, N.M. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Braden, C., Mishel, M., Longman, A., & Burns, L. (1990). A self-help intervention project (SHIP) in breast cancer treatment. *Innovations in Oncology Nursing*, 4(2), 1, 8, 19.
- Brandt, P.A., & Weinert, C. (1981). The PRQ—a social support measure. *Nursing Research*, 30, 277–280.
- Brewin, C.R., & Bradley, C. (1989). Patient preferences and randomised clinical trials. *BMJ*, 299, 313–315.
- Campbell, A., Converse, P., & Rodgers, W. (1976). *The quality of American life: Perceptions, evaluations, and satisfactions*. New York: Russell Sage Foundation.
- Carter, R., Carter, C., & Siliunas, M. (1993). Marital adaptation and interaction of couples after a mastectomy. *Journal of Psychosocial Oncology*, 11(2), 69–82.
- Cella, D.F., & Yellen, S.B. (1993). Cancer support groups: The state of the art. *Cancer Practice*, 1, 56–61.
- Coward, D.D. (1990a). Correlates of self-transcendence in women with advanced breast cancer. (Doctoral dissertation, University of Arizona 1990). *Dissertation Abstracts International*, 52(1), 158.
- Coward, D.D. (1990b). The lived experience of self-transcendence in women with advanced breast cancer. *Nursing Science Quarterly*, 3, 162–169.
- Coward, D.D. (1991). Self-transcendence and emotional well-being in women with advanced breast cancer. *Oncology Nursing Forum*, 18, 857–863.
- Coward, D.D. (1995). The lived experience of self-transcendence in women with AIDS. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 24, 314–318.
- Coward, D.D. (1996). Self-transcendence and correlates in a healthy population. *Nursing Research*, 45, 116–121.
- Coward, D.D. (1997). Constructing meaning from the experience of cancer. *Seminars in Oncology Nursing*, 13, 248–251.
- Coward, D.D. (1998). Facilitation of self-transcendence in a breast cancer support group. *Oncology Nursing Forum*, 25, 75–84.
- Coward, D.D. (2001a). *Management of spiritual disequilibrium in women with breast cancer*. Paper presentation at the American Cancer Society Fourth National Conference on Cancer Nursing Research in Ponte Vedra Beach, FL, February 2002.
- Coward, D.D. (2001b). *Management of spiritual disequilibrium in women with breast cancer*. Poster presentation at the Oncology Nursing Society 26th Annual Congress, San Diego, CA, May 2001.
- Coward, D.D. (2002). Partial randomization design in a support group intervention study. *Western Journal of Nursing Research*, 24, 406–421.
- Coward, D.D., & Lewis, F.M. (1993). The lived experience of self-transcendence in gay men with AIDS. *Oncology Nursing Forum*, 20, 1363–1368.
- Crumbaugh, J., & Maholick, L. (1981). *Manual of instructions for the Purpose in Life Test*. Abilene, TX: Viktor Frankl Institute of Logotherapy.
- Crumbaugh, J.C. (1968). Cross-validation of Purpose-in-Life Test based on Frankl's concepts. *Journal of Individual Psychology*, 24(1), 74–81.
- Crumbaugh, J.C., & Maholick, L.T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20, 200–207.
- Diener, E., & Emmons, R.A. (1985). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47(5), 1105–1117.
- Fawzy, F.I., Cousins, N., Fawzy, N.W., Kemeny, M.E., Elashoff, R., & Morton, D. (1990). A structured psychiatric intervention for cancer patients. I. Changes over time in methods of coping and affective disturbance. *Archives of General Psychiatry*, 47, 720–725.
- Fawzy, F.I., & Fawzy, N.W. (1994). A structured psychoeducational intervention for cancer patients. *General Hospital Psychiatry*, 16(3), 149–192.
- Fawzy, F.I., Fawzy, N.W., Arndt, L.A., & Pasnau, R.O. (1995). Critical review of psychosocial interventions in cancer care. *Archives of General Psychiatry*, 52, 100–113.
- Fawzy, F.I., Fawzy, N.W., Hyun, C.S., Elashoff, R., Guthrie, D., Fahey, J.L., et al. (1993). Malignant melanoma. Effects of an early structured psychiatric intervention, coping, and affective state on recurrence and survival 6 years later. *Archives of General Psychiatry*, 50, 681–689.
- Ganz, P.A. (1995). Advocating for the woman with breast cancer. *CA: A Cancer Journal for Clinicians*, 45, 114–126.
- Gotay, C.C. (1985). Why me? Attributions and adjustment by cancer patients and their mates at two stages in the disease process. *Social Science and Medicine*, 20, 825–831.
- Grassman, D. (1993). Development of inpatient oncology educational and support programs. *Oncology Nursing Forum*, 20, 669–676.
- Grieco, A., & Long, C.J. (1984). Investigation of the Karnofsky Performance Status as a measure of quality of life. *Health Psychology*, 3, 129–142.
- Hawks, S.R., Hull, M.L., Thalman, R.L., & Richins, P.M. (1995). Review of spiritual health: Definition, role, and intervention strategies in health promotion. *American Journal of Health Promotion*, 9, 371–378.
- Karnofsky, D., Abelmann, W., Craver, L., & Burchenal, J. (1948). The use of nitrogen mustards in the palliative treatment of carcinoma. *Cancer*, 1, 634–656.
- Lauver, D., & Tak, Y. (1995). Optimism and coping with a breast cancer symptom. *Nursing Research*, 44, 202–207.
- Leidy, N.K. (1994). Operationalizing Maslow's theory: Development and testing of the basic need satisfaction inventory. *Issues in Mental Health Nursing*, 15, 277–295.
- Lewis, F.M. (1982). Experienced personal control and quality of life in late-stage cancer patients. *Nursing Research*, 31, 113–119.
- Lewis, F.M., Woods, N.F., Hough, E.E., & Bensley, L.S. (1989). The family's functioning with chronic illness in the mother: The spouse's perspective. *Social Science and Medicine*, 29, 1261–1269.
- McCorkle, R. (1987). The measurement of symptom distress. *Seminars in Oncology Nursing*, 3, 248–256.
- McCorkle, R., & Young, K. (1978). Development of a symptom distress scale. *Cancer Nursing*, 1, 373–378.
- McNair, D., Lorr, M., & Droppleman, L. (1992). *Manual for the profile of mood states*. San Diego: Educational and Industrial Testing Service.
- Mellors, M.P. (1999). AIDS, self-transcendence, and quality of life. *Dissertation Abstracts International*, 60(4), 1533B.
- Mellors, M.P., Riley, T.A., & Erlen, J.A. (1997). HIV, self-transcendence, and quality of life. *Journal of the Association of Nurses in AIDS Care*, 8(2), 59–69.
- Meyer, T.J., & Mark, M.M. (1995). Effects of psychosocial interventions with adult cancer patients: A meta-analysis of randomized experiments. *Health Psychology*, 14, 101–108.
- Miaskowski, C., & Dibble, S.L. (1995). The problem of pain in outpatients with breast cancer. *Oncology Nursing Forum*, 22, 791–797.
- Northouse, L. (1989). A longitudinal study of the adjustment of patients and husbands to breast cancer. *Oncology Nursing Forum*, 16, 511–516.
- Pistrang, N., & Barker, C. (1995). The partner relationship in psychological response to breast cancer. *Social Science and Medicine*, 40, 789–797.
- Ptacek, J., Ptacek, J., & Dodge, K. (1994). Coping with breast cancer from the perspectives of husbands and wives. *Journal of Psychosocial Oncology*, 12(3), 47–72.
- Reed, P. (1996). Transcendence: Formulating nursing perspectives. *Nursing Science Quarterly*, 9, 2–4.
- Reed, P.G. (1986). Developmental resources and depression in the elderly. *Nursing Research*, 35, 368–374.
- Reed, P.G. (1989). Mental health of older adults. *Western Journal of Nursing Research*, 11, 143–163.
- Reed, P.G. (1991a). Self-transcendence and mental health in oldest-old adults.

Nursing Research, 40, 5–11.

Reed, P.G. (1991b). Toward a nursing theory of self-transcendence: Deductive reformulation using developmental theories. *Advances in Nursing Science*, 13, 64–77.

Samarel, N., & Fawcett, J. (1992). Enhancing adaptation to breast cancer: The addition of coaching to support groups. *Oncology Nursing Forum*, 19, 591–596.

Samarel, N., Fawcett, J., & Tulman, L. (1997). Effect of support groups with coaching on adaptation to early stage breast cancer. *Research in Nursing and Health*, 20, 15–26.

Spanier, G. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, 38, 15–28.

Spiegel, D., Bloom, J.R., Kraemer, H.C., & Gottheil, E. (1989). Effect of psychosocial treatment on survival of metastatic breast cancer patients. *Lancet*, 2, 888–891.

Spiegel, D., Bloom, J.R., & Yalom, I. (1981). Group support for patients with metastatic cancer: A randomized outcome study. *Archives of General Psychiatry*, 38, 527–533.

Spiegel, D., & Spira, J. (1991). *Supportive-expressive group therapy: A treatment manual of psychosocial intervention for women with recurrent breast cancer*. Stanford, CA: Psychosocial Treatment Laboratory; Stanford University School of Medicine.

Spira, J. (Ed.) (1997). *Group therapy for medically ill patients*. New York: Guilford Press.

Taylor, E.J. (1993). Factors associated with meaning in life among people with recurrent cancer. *Oncology Nursing Forum*, 20, 1399–1405.

Telch, C.F., & Telch, M.J. (1986). Group coping skills and supportive group therapy for cancer patients: A comparison of strategies. *Journal of Consulting and Clinical Psychology*, 54(6), 802–808.

Trijsburg, R.W., van Knippenberg, F.C., & Rijpmma, S.E. (1992). Effects of psychological treatment on cancer patients: A critical review. *Psychosomatic Medicine*, 54, 489–517.

Warr, P., Barter, J., & Brownbridge, G. (1983). On the independence of positive and negative affect. *Journal of Personality and Social Psychology*, 44(3), 644–651.

Weinert, C. (1987). A social support measure: PRQ85. *Nursing Research*, 36, 273–277.

Young, C.A., & Reed, P.G. (1995). Elders' perceptions of the role of group psychotherapy in fostering self-transcendence. *Archives of Psychiatric Nursing*, 9, 338–347.

Zevon, M., & Tellegen, A. (1982). The structure of mood change: An idiographic/nomothetic analysis. *Journal of Personality and Social Psychology*, 43, 111–122.

For more information . . .

- National Breast Cancer Coalition
www.natlbcc.org
- National Breast Cancer Awareness Month
www.nbcam.org/index.cfm
- National Breast Cancer Centre
www.nbcc.org.au

Links can be found using ONS Online at www.ons.org.