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A Secondary Analysis to Determine the Factors
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by

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A Secondary Analysis to Determine

the Factors Associated with Attrition

in an I Can Cope Program Evaluation

Nancee M. Hirano

Few studies to date have evaluated the
effectiveness of information and support groups such as
the American Cancer Society's I Can Cope programs.
In addition, no study had been conducted to determine
the characteristics of persons at risk for dropping out
of this type of group. The present study attempted to
identify a profile of characteristics for such persons
by performing a secondary analysis of data collected
during an evaluation study of the I Can Cope programs in
California. The convenience sample (N = 125) consisted
of cancer patient and family members participating in
one of 10 I Can Cope programs. Significant differences
between subjects who stayed and those who did not were
found in the variables of ethnicity for family members
and the affective state of fatigue among patient-
subjects. As this was a preliminary study utilizing
secondary analysis of data, recommendations for further
research are outlined.

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Introduction

Over 5 million Americans alive today have a history of cancer (American Cancer Society, 1988). These cancer patients, their family members, and friends are often faced with a multitude of threats and demands related to the disease and its accompanying treatments (e.g. physical discomfort, threat of death, changes in social relationships and lifestyle) (Miller, 1983). Studies have been conducted which described and determined the needs and strategies of persons dealing with these threats and demands (Johnson, 1982; Tringali, 1986; Weisman, 1979; Weisman & Worden, 1975; Wright & Dyck, 1984). Two strategies noted to be commonly used in coping with cancer are to seek information and to receive social support (Derdiarian, 1986; Hampe, 1975; Lovejoy, 1986; Miller & Nygren, 1978; Revenson, Wollman, & Felton, 1983; Weisman & Worden, 1975; Wright & Dyck, 1984).

Health care professionals and organizations have created various programs incorporating information seeking and social support strategies. For example, in 1979, the American Cancer Society (ACS) developed a program (I Can Cope) which incorporated the provision of information about cancer with an informal social support

system.

The importance of conducting research in assisting persons to cope with cancer has been emphasized in nursing literature (Commission on Nursing Research, 1980; Oberst, 1978). In addition, due to limitations in resources available in health care today, cost-containment issues have taken on increased importance (McNaull, 1981). These factors together increase the significance of evaluating programs used to assist a person in dealing with cancer. Unfortunately, to date, few studies have assessed the efficacy of information and support groups such as I Can Cope (Cain, Kohorn, Quinlan, Latimer, & Schwartz, 1986; Johnson, 1982; Tanquary, 1987). In addition, no study has yet been conducted to determine the characteristics of persons with cancer who begin the I Can Cope program and then drop out.

In a 1985 evaluation of selected California I Can Cope programs, a 50% attrition for subjects (persons with cancer and their family members/friends) was observed (Tanquary, 1987). Whether this attrition rate in subjects meant that an equal number of participants in the I Can Cope classes dropped out of the programs as well cannot be determined. However, the magnitude of attrition for subjects from the study indicated a need

for further investigation. Were there specific
characteristics of this group of persons who dropped out
before the final class? This information might assist
facilitators to identify persons at risk for not
completing the program. Thus, the purpose of this study
was to determine whether selected characteristics of
this group could be identified to create a profile of
persons at risk for not completing the program.

Literature Review

Johnson (1982) studied the effects of a structured
patient educational course (i.e. I Can Cope) on newly
diagnosed or rediagnosed (within the year) cancer
patients selected randomly from hospital outpatient care
settings (N = 52). In a pretest/posttest design, she
utilized Spielberger's State Anxiety Inventory,
Crumbaugh's Purpose in Life Test, and a knowledge test
to measure subjects' anxiety, meaningfulness of life,
and knowledge about their disease. After initial
pairing based on pretest dependent variable scores and
using age and sex as additional factors, subjects were
randomly assigned to treatment group or control group.
The treatment group consisted of a four week attendance
at eight 90-minute structured educational sessions (e.g.
classes on cancer information, coping and living with

cancer, and finding resources for assistance) while the control group subjects "met as needed with their physician or other health care personnel" (p. 121). After four weeks, or completion of the course for the treatment group, subjects were again tested using the same instruments to compare differences in pretest/posttest scores for the dependent variables of anxiety, knowledge, and meaning of life.

Based on her results, Johnson concluded that the "use of a structured educational program as part of the rehabilitation program for persons who must adapt to living with a chronic disease" (p. 122) was supported. Utilizing Hotelling's T test, she noted significance for change scores on all three variables (i.e. anxiety, knowledge, and meaning in life) ($p < .01$).

Unfortunately, as Johnson did not address the issues of reliability and validity for the instruments used, the findings may be disputed. In addition, the method of matching is used to "control those characteristics that are likely to affect the experimental outcome" (Polit & Hungler, 1983, p. 146). Thus, to match subjects based on the variables being studied is questionable.

A small sample size ($N = 52$) for the number of variables studied also raises further methodological

questions (i.e. threats due to sampling error).
Finally, without indicating the types of diagnoses or
the extent of disease, generalizability of results to
all cancer patients is debatable.

Cain, Kohorn, Quinlan, Latimer, and Schwartz (1986)
studied the long-term psychosocial benefits of a
structured informational support group similar to I Can
Cope on a convenience sample ($\underline{N}$ = 80) of women being
treated at Yale-New Haven Medical Center for a new
diagnosis of gynecological cancer. Subjects were
initially interviewed utilizing the Hamilton Depression
Rating Scale, the Hamilton Anxiety Scale, and the
interview version of the Psychosocial Adjustment to
Illness Scale (PAIS) and then randomly assigned to one
of three counseling modes. These modes were defined as:
(a) standard (i.e. usual interaction between patient
and health care professionals), (b) thematic individual
(i.e. individual meetings for eight weekly sessions of
information and support), and (c) thematic group (i.e.
eight group sessions similar in content to the thematic
individual mode). Subjects were again interviewed using
the previously mentioned instruments at one to two weeks
and sixth months after completion of the counseling
portion of the study.

Using one way analysis of variance, the researchers concluded that thematic counseling (either individual or group) was effective in reducing long-term psychosocial distress in women with gynecological cancer. When scores for anxiety, depression, and psychosocial adjustment from the initial assessment were compared with those from the final assessment, significant differences between subjects in the thematic counseling groups and the standard group were noted ($p<.01$). Cain et al. utilized interviewer-rated scales (i.e. Hamilton Anxiety and Depression scales, the PAIS) in this study and reported a 90% agreement between the interviewers on independent ratings. Unfortunately, previous use of the instruments with a cancer patient population was not mentioned and raises the question of validity of the measure.

Using a convenience sample of patient and family member participants ($N = 125$) of 10 I Can Cope groups in California, Tanquary (1987) evaluated the effectiveness of the programs in terms of knowledge about the disease, psychological distress, problem reduction, and life satisfaction. Self-administered questionnaires utilized in the assessment of knowledge, psychological distress, problem reduction, and life satisfaction included the California Division of ACS's Knowledge Quiz (KQ), the

Profile of Mood States (POMS), the Cancer Inventory of Problem Situations (CIPS), the Functional Living Index (FLIX), and Tanquary's Group Satisfaction Scale (GSS).

At the first session of the selected I Can Cope programs, patient-subjects were asked to complete demographic information along with the KQ, the POMS, the CIPS, and FLIX. As the CIPS and FLIX proved to be confusing and irrelevant to family members during a pilot study, family member-subjects completed only demographic information, the KQ, and the POMS. During the eighth class session and at three months after completion of the program, patients and family members were again asked to complete the previously mentioned instruments with the exception of the demographic information sheets. In addition, all subjects were given the GSS to complete.

Tanquary found that participants had improved in terms of knowledge, psychological distress, problem reduction, and life satisfaction. Utilizing a T-test, changes for patients' KQ mean scores in pre-test/post-test (t = -6.19, p<.01) and pre-test/follow-up (t = -4.24, p<.01) were noted to be statistically significant. Relatives KQ mean scores changes also demonstrated significance in pre-test/post-test (t = -4.23, p<.01)

and pre-test/follow-up (t = -4.79, p<.01). In addition, POMS subscale scores were analyzed employing T-test comparisons. From pre-test to follow-up, patients had statistically significant decreases in their average Tension subscale scores (t = 2.45, p<.05). Tanquary reported statistically significant changes in patients' average Hostility scores as well, however, no t-values were given. Between pre-test and post-test, family members were also reported to demonstrate statistically significant changes by an average increase in the Vigor subscale scores (t = -2.27, p<.05) and a decrease in the Fatigue subscale scores (t = 2.47, p<.05). Other variables were analyzed based on subjective perceptions of percentage increases in responses (e.g. an increase from 59% to 69% of relative who felt the program had a "great amount of impact" on their knowledge).

Despite an adequate original sample size for the number of variables being studied, the remarkable attrition rate for subjects between the initial and second data collection times (from N = 125 to N = 69) may have had a major influence on Tanquary's results. In addition, only the POMS, CIPS, and FLIX have been previously utilized with cancer patients. Both the California Division of the American Cancer Society's Knowledge Quiz (KQ) and Tanquary's Group Satisfaction

Scale (GSS) were developed for use in this study. Therefore, although Tanquary (1987) stated that the importance of using instruments that were specifically developed for cancer patients and relatives was sufficiently important to outweigh the problem of not having documented reliability and validity, without these data, the results may be debated. Finally, as the participants in this study were self-selected by virtue of attendance in an I Can Cope group, the generalizability of results to cancer patients not interested in an information/support group is questionable.

Theoretical Framework

According to Lazarus' stress and coping theory, coping refers to cognitive and behavioral attempts to manage environmental and/or internal demands and conflicts which may tax or exceed a person's resources (Cohen & Lazarus, 1979). Using cognitive assessment of a situation, a person evaluates whether an event is stressful (primary appraisal) while assessing the resources available to meet the demands of the situation (secondary appraisal) (Benner, Roskies, & Lazarus, 1980). The continuous modification of the previous assessment of stress due to new input (e.g. information)

from the situation or the person is known as

reappraisal.

A person may employ either problem-focused or

emotion-focused coping strategies in dealing with a

stressful event (Lazarus & Launier, 1978; Folkman &

Lazarus, 1980). Problem-focused coping strategies (e.g.

seeking information or social support) are more

frequently used as efforts to manage a stressful event

which the person appraises to be potentially changeable

or affected by the person's efforts. Conversely, when a

person deems the situation to be unchangeable, emotion-

focused coping is utilized more often (Folkman &

Lazarus, 1985).

The I Can Cope programs attempt to meet the coping

needs of cancer patients and family members by offering

the opportunity to utilize the problem-focused

strategies of information seeking and social support.

In addition, the programs may assist participants in

reappraising their use of emotion-focused coping

strategies. If individuals are attending I Can Cope

programs in order to meet these needs, then, in

determining characteristics of individuals at risk for

dropping out of the I Can Cope programs, an initial

assessment of the participants knowledge base/deficits

and their affective mood states is necessary (see

Figure 1).

Method

Subjects

The convenience sample (N = 125) for this study was drawn from cancer patients and family members who were attending an I Can Cope program within California. Cancer patients had a variety of diagnoses, were all 21 years of age or older, and able to read and write English. Family members were also 21 years of age or older, able to read and write English, and may or may not have been related to patients attending the program.

Procedure

The procedure for Tanquary's (1987) study has been previously described. The reanalysis for this research report included subjects' data from the demographic questionnaire, the POMS, and the KQ during the first data collection session. Although subjects completed the CIPS and FLIX, the amount of missing data for these instruments precluded their use in reanalysis.

Instruments

Knowledge Quiz

The Knowledge Quiz is a 40-item questionnaire, developed by the California Division of the ACS, consisting of statements about cancer and its impact.

Subjects were asked to respond to each statement as "yes" indicating truth of the statement or "no" indicating the statement's falseness. If subjects were unsure of the correctness of the statement, they were given the option of indicating "uncertain". With questions answered "uncertain" being considered incorrect, the KQ was scored based on the total number of correct answers. As the instrument was developed specifically for the evaluation study, reliability and validity were not established.

Profile of Mood States (POMS)

The POMS is a 65-item Likert-type questionnaire which measures six independent mood or affective states (i.e. tension, depression, hostility, vigor, fatigue, and confusion). A total mood disturbance score is obtained by summing all subscale scores with the vigor subscale being negatively weighted. The higher this score, the greater the person's mood disturbance. The POMS lists adjectives describing how people feel (e.g. sad, uneasy, alert, efficient, weary). Subjects were asked to choose, on a 5-point scale of 0 ("not at all") to 4 ("extremely"), the rating that best described how much in the past week they had been feeling like the word given.

A variety of studies have utilized the POMS with

cancer patient populations (Dodd, 1983; Dodd, 1984; McNair, Lorr, & Droppleman, 1971; Weisman & Worden, 1976). Therefore, the POMS has been shown to have adequate reliability and validity for this population.

Results

Descriptive Demographics

As seen in Table 1, the subjects ($\underline{N}$ = 125) were predominantly patients (56.8%), females (66.4%), and Caucasians (82.4%). Their ages ranged from 22 years to 80 years with the average age being 55 years (SD = 13.9). The greatest number of subjects earned between $10,001 and $25,000 ($\underline{n}$ = 48), followed by those earning $25,001 to $40,000 ($\underline{n}$ = 32). Seventy-two percent of subjects were married with 14.4% single or living together. The remainder of the sample (13.6%) were separated, widowed, or divorced.

For the study population, breast and lung cancers, and multiple sites (i.e. metastatic disease) were the most common diagnoses (16%, 6.4%, and 7.2%, respectively) (see Table 2). The greatest percentage of subjects (71.4%) who responded had been diagnosed within 0 to 12 months of beginning the I Can Cope program. Of the respondants, 50 (71.4%) indicated they had had surgery for their cancers while 20 (28.6%) stated they

had not. In addition, 66.0% of subjects indicated they had previously undergone or were currently undergoing chemotherapy while 27 subjects (62.8%) responded positively to the question of having had or currently having radiation therapy. Only 7 subjects (24.1%) indicated current or previous use of hormonal therapy. Respondents indicated the current status of their cancer as follows: (a) 16 "cured"; (b) 22 "localized"; (c) 27 "spread"; and (d) 19 "don't know".

When asked if they had a serious illness in their household, 71% of subjects (n = 89) responded positively with the same number indicating someone close to them had had cancer. The majority of subjects (n = 112, 89.6%) noted that family members had been supportive since the cancer diagnosis. Similarly, 111 (88.8%) of the subjects stated friends had been supportive since the diagnosis.

For the KQ, the study population (n = 111) had a mean score of 25.6 (S.D. = 6.0). The lowest score was 7 with the highest score being 37 out of a possible 40. The descriptive statistics for the POMS subscale scores of Tension, Depression, Hostility, Vigor, Fatigue, and Confusion may be seen in Table 3. The Total Mood Disturbance scores which indicated the extent of subjects' mood distress had a range of -16.0 to 157.0

with a mean of 36.2 (S.D. = 36.0).

Data Analysis

In answering the research question posed regarding differences between those subjects who dropped from the evaluation and those who stayed, a T-test was performed on the demographic variable of age. Chi-square analyses were performed on all other demographic variables (e.g. ethnicity, marital status, types of therapies). The KQ and the POMS data were analyzed utilizing T-tests.

Upon analyzing the demographic data for subjects who stayed in the I Can Cope program evaluation and those who did not ($\underline{N}$ = 125), a significant difference was found between Caucasian and non-Caucasian subjects (i.e. greater numbers of Caucasian subjects dropped) (X^2 [1] = 4.46, $\underline{p}$<.05). After further analysis, this significant difference for ethnicity was noted to be among non-patient subjects rather than patient subjects ($\underline{n}$ = 52) (X^2 [1] = 4.71, $\underline{p}$<.05). No other significant differences were noted for the remaining demographic variables (e.g. time from diagnosis, cancer diagnosis, or age).

The Knowledge Quiz data did not demonstrate a statistically significant difference ($\underline{t}$ = -0.75) between the two groups. Subjects who stayed and those who

dropped out had mean scores of 25.9 and 25.1, respectively.

Although analysis of the POMS subscale scores for Depression showed a trend toward significance ($p<.1$), only data from the Fatigue subscales was found to have statistical significance between subjects who stayed and those who did not ($t = 2.17$, $p<.05$). Subjects who were less fatigued tended to remain in the program. Upon further analysis, this significant difference was found to be among patient-subjects who had stayed and those who did not ($t = 2.64$, $p<.05$).

Discussion

The evaluation of a program designed to assist cancer patients, family members, and friends in coping with the diagnosis of cancer and its treatments is a necessary component in this era of cost-effectiveness and limited resources. Studies have considered the effects of programs such as I Can Cope on the rehabilitation efforts of patients affected by a cancer diagnosis (Johnson, 1982). Other investigators have studied the psychological and social functioning of persons with cancer (Jacobs, Ross, Walker, & Stockdale, 1983; Cain et al., 1986). Only one study to date has looked at the effect of a program such as I Can Cope on assisting patients, family members, and friends at "key

stress points in the illness" (Tanquary, 1987, p. 1).

Analysis of the data from the present study indicated significant differences in terms of ethnicity (i.e. Caucasian vs. non-Caucasian). Specifically, these differences were between non-patients who stayed and those who did not. Questions may be raised regarding this finding since the majority of the study population was Caucasian (n = 103). Perhaps, the extreme size disparity contributed to this finding.

The average POMS subscale of Fatigue in patients was significantly different for subjects who stayed and those who dropped out. The finding seems reasonable to this author from a clinical standpoint since those who were more fatigued might have less energy to participate in extra-curricular activities such as I Can Cope.

However, the question may be raised as to why significant differences were not found in the Fatigue scores of family members. Perhaps, to achieve significance between the scores of those who stayed and those who dropped, another variable is needed. For example, if time since diagnosis was relatively short (i.e. newly diagnosed), then patients may still be functioning fairly independently and may not be requiring the assistance of family members. If the

sample size was larger, an analysis based on the patient's functional status or presence of metastatic disease in relation to Fatigue scores and attrition might indicate significance (i.e. increased caregiver strain). Or, perhaps relating the Fatigue scores with specific diagnoses might yield interesting information. Clinically, it would seem that a diagnosis involving a fairly rapidly progressing tumor, and consequent declining functional status, would increase the possibility of caregiver fatigue in caring for the patient.

In reviewing the data analyses conducted, of interest are the number of demographic variables which did not demonstrate significance. For example, age differences did not result in statistical significance. Perhaps this may be explained by the fact that the mean age for the group was 54.5 years (i.e. the majority of subjects were less than 65 years). One would think that the older the group members, the more likely they would be to drop since they may experience increased difficulties with, for example, mobility, transportation, or fatigue.

Income was also not noted to be significantly different between those subjects who stayed and those who dropped. Due to the possibility of increased

medical expenses, the patient or caregiver might need to spend additional time working. Thus, persons with lower incomes might be expected to have limited time to attend group programs. In addition, persons with lower incomes might have limited funds for transportation to the program. Or, if they required childcare to attend, the funds available for this necessity might be restricted.

No significant differences were found for the variables of diagnosis or time since diagnosis. Clinically, it would seem that a patient with metastatic or recurrent disease might be less likely to complete the course. If the subject was the patient, this might be due to disease progression and subsequent inability to function independently. If the subject was a family member, he/she might be needed to assist in patient care or to take over the functions previously performed by the patient in caring for the family. Thus, he/she might have little free time to attend programs.

In addition, the variables which measured functional status (e.g. activities of daily living, job, social activities) did not yield statistically significant differences between dropouts and those who stayed. This finding seems surprising in light of the author's clinical experience. It would seem that

persons with declining functional independence might be less likely to attend extracurricular events or remain in the group.

Results of the KQ analysis were also surprising in that subjects who stayed and those who dropped had almost identical mean scores. If the scores had been higher for those who dropped, it might have been attributed to the possibility that more knowledgeable persons had less of a perceived need to attend all classes. Perhaps, taking the KQ provided subjects with a better sense of what they knew or did not know. In addition, perhaps the KQ gave subjects added information regarding the class content. This information might have caused the subjects to say to themselves, "I know all about cancer" or "I know as much as I want to know about cancer".

Conversely, if scores for those who dropped were significantly lower, it might be due to embarassment at their lack of knowledge. This embarassment could be dependent upon how the facilitator presented the KQ and interacted with subjects.

Finally, in light of the KQ's lack of established validity, perhaps the results were not actually reflective of the knowledge possessed by members of each group.

Interestingly, the only subscale for the POMS which was statistically significant was Fatigue. Why the other subscales scores did not yield statistically significant differences is unclear. Clinically, one would think the Depression and Vigor subscale scores might have demonstrated significant differences between the two groups. For example, those subjects who were more depressed and, thus, exhibited signs of withdrawal and social isolation, might have been predicted to drop out more readily. Or, with depression, they might have had little energy to expend on attending the program. Similarly, since subjects who dropped were more fatigued, subjects who stayed might be expected to have higher Vigor subscale scores. Another possiblity for the significance of the Fatigue subscale scores might be attributed to conducting multiple T-tests on the data (i.e. the significance occurred due to a Type I error).

Limitations

Due to limitations of the study design, the results of this study cannot be generalized to other I Can Cope groups or to all cancer patients and family members. Methodological issues which occurred during the larger evaluation study included: (a) difficulty in

maintaining the committment of some of the group

facilitators secondary to a lack of supportive

communication methods used by the principal investigator

in contacting these facilitators (i.e. letters sent, no

on-site visit); (b) group facilitators' lack of

familiarity with the instruments used; (c) lack of an

on-site research assistant to assist subjects in

completing instruments correctly; and (d) difficulty

with instrument format (i.e. with the demographic

questionnaire, the KQ, the CIPS, and the FLIX) causing

subjects to either not respond or respond incorrectly.

These limitations may have contributed to the attrition

in the study as well as the large amount of missing

data.

In addition, limitations with the instruments used

in the study created further difficulties. For example,

the demographic questionnaire requested that some of the

subjects indicate the diagnosis and status of the

cancer. However, only a few of the subjects who were

family members or friends were asked these very

important questions. The reason for this discrepency is

unknown. Having such information for all subjects might

have provided more insight into the situations they

faced. Furthermore, if, as previously mentioned, the

CIPS and FLIX had not contained such large amounts of

missing data which precluded their use in data analyses,
significant factors might have been identified to
profile persons at risk for dropping out of the program.

One other limitation of this study is in the sample
selection bias. Subjects included in the present study
were all voluntary participants in at least one I Can
Cope class. Although I Can Cope is one of the better
attended programs sponsored by the ACS, only a small
percentage of the actual number of all cancer patients
and family members attend (ACS, 1987). If an equal
number of cancer patients and family members were
randomly chosen from cities throughout the United
States, and required to participate in an I Can Cope
group, one might expect the attrition rate to be even
higher.

Recommendations

As this was the first study conducted to assess the
characteristics of those participants who might be at
risk for not completing an I Can Cope program, further
research is strongly recommended. In addition, this
study was a secondary analysis of data collected during
Tanquary's evaluation study in which the focus was not
on characteristics of attrition. By performing a study
with a specific focus on attrition characteristics,

greater understanding might be achieved. For example, future research might look at the variables of diagnosis and status of the disease for all subjects. Finally, further research of these characteristics using a study designed to control for the methodological problems discussed previously, especially instruments with established reliability and validity for the population of cancer patients and family members, is imperative.

Conclusion

In this era of cost-effectiveness and limited resources, health care professionals must be aware of and utilize resources which assist patients and family members in managing the demands and threats related to cancer. Resources such as the I Can Cope programs may be effective in helping cancer patients, their family members, and friends to cope with the disease and its accompanying problems. Facililtators who have the ability to identify potential attrition risk factors for these programs might then be able to focus special interventions on those at risk and help all participants to gain from the entire program. This gain might be translated into (a) better management of disease symptoms or (b) earlier re-entry into the health care system, thereby reducing morbidity and mortality.

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LAZARUS' STRESS AND COPING MODEL

Strategies   Instruments Used

Problem-focused coping   Knowledge Quiz

Emotion-focused coping   Profile of Mood States

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FIGURE 1.   THEORETICAL FRAMEWORK AND INSTRUMENTS USED

TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

	n	Percentage
Subject status		
* Patient	71	56.8%
* Spouse	29	23.2%
* Non-spouse relative or friend	25	20.0%
Sex		
* Female	83	66.4%
* Male	42	33.6%
Ethnicity		
* Caucasian	103	82.4%
* Black	7	5.6%
* Hispanic	6	4.8%
* Native American	3	2.4%
* Asian American	1	0.8%
* "Other"	1	0.8%
Marital status		
* Married	90	72.0%
* Single or living together	18	14.4%
* Separated, divorced, widowed	17	13.6%
Income		
* $0 - $10,000	15	12.0%
* $10,001 - $25,000	48	36.4%
* $25,001 - $40,000	32	25.6%
* > $40,001	21	16.8%
Time since diagnosis		
* 0 - 12 months	45	71.4%
* 1 - 10 years	16	25.5%
* > 10 years	2	3.2%

TABLE 2. DIAGNOSES, TREATMENTS, AND STATUS OF CANCER

	n	Percentage
Diagnosis		
* Breast	20	31.7%
* Multiple sites (i.e. metastatic disease)	9	14.3%
* Lung	8	12.7%
* Gynecological	5	7.9%
* Penile, Testicular, Prostate	5	7.9%
* Lymphatic	5	7.9%
* Colon/rectal	4	6.4%
* Throat/mouth	2	3.2%
* Skin	2	3.2%
* Pancreas	1	1.6%
* Bone	1	1.6%
* "Other"	1	1.6%
Chemotherapy		
* Current or previous use	33	66.0%
* Never used	17	34.0%
Radiation therapy		
* Currently or previously receiving	27	62.8%
* Never received	16	37.2%
Hormonal therapy		
* Current or previous use	7	24.1%
* Never used	22	75.9%
Status of cancer		
* Cured	14	17.1%
* Localized	22	26.8%
* Spread	27	32.9%
* Don't know	19	23.2%

TABLE 3. PROFILE OF MOOD STATES (POMS) SUBSCALE SCORES

Subscales	Range	Mean	S.D.
Tension (n = 103)	2 - 34	12.0	6.9
Depression (n = 112)	0 - 58	12.8	12.4
Hostility (n = 102)	0 - 41	9.0	9.4
Vigor (n = 114)	0 - 29	14.7	6.2
Fatigue (n = 111)	0 - 28	10.4	6.6
Confusion (n = 114)	0 - 24	7.8	5.3

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