

RELATIONSHIP OF PATIENTS' PERCEIVED PURPOSE OF CHEMOTHERAPY
(CURE VERSUS CONTROL) TO THEIR COPING STRATEGIES

by

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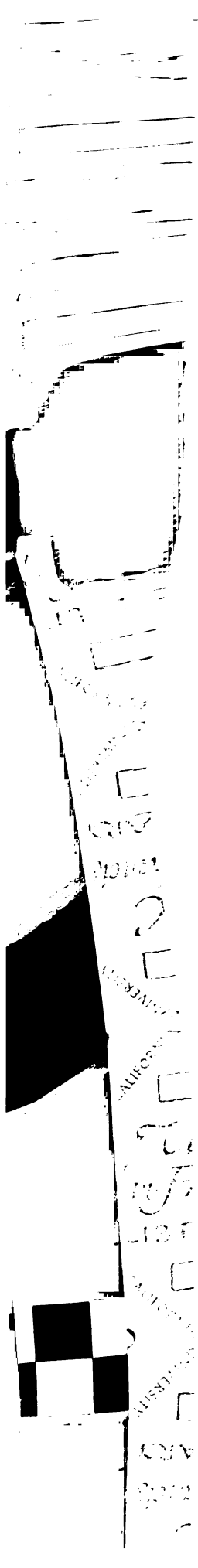
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Chapter I

THE STUDY PROBLEM

Introduction to the Problem and Significance

Cancer threatens both the quantity and quality of life of an individual and poses significant physical and psychological challenges. Advances in cancer treatment have resulted in prolonged survival and cure for some patients. Interventions from health care professionals should facilitate maintaining and or improving patient resources to cope with the demands of the illness. Coping is important in maintaining psychological well-being among individuals with cancer.

Following the current trend in health care delivery, cancer chemotherapy treatment has moved from the inpatient acute care setting to the outpatient clinic. As a result, cancer patients are often left to cope with the effects of their treatment without the presence and direct assistance of a health care professional. Coping has its costs as "people expend energy, effort and resources - physical, material, financial, and interpersonal - in trying to manage any severe crisis or difficulty" (Singer, 1984, p. 2307).

Lee (1986) states the psychological adjustment to cancer depends partly on the patient and his or her psychosocial environment and partly on the disease, its course and treatment. During the illness, the patient may use various coping strategies and may vacillate between

them. According to Singer (1984) whether a coping style is useful, let alone successful, depends on the range of possible outcomes.

Chemotherapy treatment can be used for two possible outcomes, namely cure or control of cancer. Patients' perception of the purpose of chemotherapy (cure versus control) could influence the number and types of coping strategies used. Although various studies have examined how patients cope with cancer and various treatments, little has been documented regarding the use of coping strategies in relationship to the perceived purpose of chemotherapy.

Gotay's (1984) findings suggest that coping strategies vary depending on the particular concern. Dodd and colleagues (1992 and 1993) suggest that the more frequent a concern the greater the number of coping strategies initiated. Less attention has been placed on identifying the strategies to manage the concerns than on the concerns themselves. Health related concerns have been identified as a primary concern in several studies (Dodd, Dibble, & Thomas, 1992; Dunkel-Schetter, Feinstein, Taylor, & Falke, 1992; Gotay, 1984; McCorkle & Benoliel, 1983; Weisman & Worden, 1976-77, 1986). How patients appraise the purpose of chemotherapy treatment could influence their identified concerns and subsequent coping strategies.

Purposes of this study - The purposes of this study were:

1. To determine if there is a difference in the number of

coping strategies used based on patients' perceived purpose of chemotherapy (i.e., cure versus control).

2. To determine if there is a relationship to patients' perceived purpose of chemotherapy (i.e., cure versus control) and types of coping strategies used.

Assumptions - The underlying assumptions in this study were:

1. The experience of receiving chemotherapy is stressful to the cancer patient.
2. Coping strategies are used to manage stress.

Definition of terms - The definition of terms used in this study were:

1. Patients were those persons over 18 years of age who were receiving cancer chemotherapy on an outpatient basis who met the study's inclusion criteria and agreed to participate in the study.
2. Coping strategy was defined as an action or psychological mechanism that a person utilized to bring about relief of a concern.
3. Perceived purpose of chemotherapy was indicated by the patients as either "to cure the cancer" or "to control their disease."

CHAPTER II

CONCEPTUAL FRAMEWORK AND REVIEW OF THE LITERATURE

Conceptual Framework

The theoretical framework for this study was guided by the larger study (Dodd et al., 1986-1990) which used the stress, coping and adaptation theory of Lazarus and Folkman (1984). This model focuses on the relationship between the person and the environment and allows for reciprocal feedback between the person and the environment. The relationship between the person and the environment is influenced by two processes: cognitive appraisal and coping. Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). The entire process of appraisal and coping is dynamic and may change over time as individuals interact with their environment.

Coping has two widely recognized major functions: regulating emotional responses to the problem (emotion-focused coping) and dealing with the problem causing the distress (problem focused coping)(Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Greun, 1986; Leventhal & Nerenz, 1983). Problem focused forms of coping are generally used when situations are appraised as responsive to change, whereas emotion-focused forms of coping are relied upon more

when situations are appraised as not responsive to change. Folkman and colleagues (1986) have shown that people use both forms of coping in virtually every type of stressful encounter. Folkman and Lazarus (1980) have reported that health problems which are appraised as not responsive to personal control are more effectively dealt with through emotion-focused strategies.

Cognitive appraisal is a continuous evaluative process of categorizing information and the significance of events (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) identified three main types of cognitive appraisal: primary appraisal, secondary appraisal, and reappraisal. In primary appraisal, the person evaluates what a particular encounter means to his/her well-being. Is it irrelevant, benign, or stressful? In secondary appraisal, the person evaluates what, if anything, can be done to manage a particular encounter. Various coping options are evaluated, such as altering the situation, accepting it, seeking more information, or holding back from acting impulsively and in a counterproductive way. Reappraisal is a changed appraisal based on new information.

Appraisal processes are influenced by personal characteristics and situational factors (Lazarus & Folkman, 1984). Personal characteristics include various values, commitments, goals, and beliefs about oneself and the world.

Situational factors include novelty, predictability, and uncertainty of the event, situational ambiguity, and timing within the life cycle. Situational and personal factors are interdependent and their significance for stress and coping response result from each person's cognitive appraisal.

Lazarus and Folkman's (1984) theory of stress and coping has relevance for the oncology patient due to the variety of situational and personal factors involved. How a person appraises and copes with the stressful situation of chemotherapy may be influenced by perceived purpose of chemotherapy (i.e., cure versus control). Primary appraisal of chemotherapy is assumed to be stressful. According to Lazarus and Folkman (1984), stressful appraisals include harm/loss, threat, and challenge. Harm/loss refers to damage the person has already sustained, threat refers to anticipated harms or losses, and challenge refers to events that hold the possibility for mastery or gain. Kobasa (1979) suggests that people who appraise a stressful situation as challenging do better than persons who see the situation as threatening or harmful.

Review of the Literature

This review emphasizes studies that evaluated concerns of cancer patients and coping strategies used to manage these concerns. The studies reviewed used a variety of instruments and terminology when describing concerns and coping. In addition, patients studied varied in types of

cancer, treatment, and stage in the disease trajectory. Only one study specifically related patients' concerns and coping strategies to the perceived purpose of chemotherapy (Dodd, Dibble, & Thomas, 1992 and 1993).

Patient Identified Concerns

One component of assessing how patients cope with cancer and its treatment is to identify patients concerns. Weisman (1979) whose work with concerns of cancer patients influenced other researchers, defined concern as "any issue or preoccupation which has salience for the individual, and not invariably needing to be resolved" (p. 44).

Weisman and Worden (1976-77) studied the existential plight of cancer in 120 patients within the first 100 days of diagnosis. Concerns were classified into 7 categories and evaluated at 4 to 6 week intervals by an Inventory of Current Concerns. Individuals ranked their concerns in the following order: existential, work, self, health, religion, family and friends. Existential concerns were fewer when distress was at a low level and tended to abate during the first 100 days. Weisman and Worden state that concerns are not necessarily severe problems, but the existence of multiple predominant concerns may tax the individual's coping resources. One limitation of this study was that findings were reported but actual statistical data were not included. Also, all patients were Caucasian.

Weisman, Worden and Soble (1980) interviewed 381 patients newly diagnosed with several types of cancer: to identify those patients at greater risk for future psychosocial distress, to intervene in those patients who were particularly identified as vulnerable, and to evaluate such interventions. There were no significant differences in the numbers or types of concerns with which patients had to cope between either the control, or the intervention groups. Coping effectiveness and vulnerability (emotional distress) appeared to have a reciprocal relationship. The authors confirmed that psychosocial intervention improves the resolution of existing problems, but not the actual number of problems that the patient would experience.

To contrast their work with initially diagnosed cancer patients, Weisman and Worden (1986) studied the emotional impact of recurrent cancer. Patients (N=102) with the same types of cancer as in their earlier work were evaluated. Patients with recurrent disease identified major concerns related to existential and health problems. In contrast to the situation at the initial diagnosis, patients reported fewer problems related to finances, family, work, and religion.

These studies conducted at different stages of the disease trajectory, provided the opportunity to compare identified patient concerns over the trajectory. The sample sizes were adequate and included a variety of cancers

(breast, colon, lung, gynecologic, Hodgkin's disease, and malignant melanoma). McCorkle and Benoliel (1983) used Weisman and Worden's Inventory of Current Concerns (ICC) to compare concerns of 56 lung cancer patients and 65 myocardial infarction (MI) patients at 1 and 2 months post diagnosis. Cancer patients experienced more symptom distress of all kinds than MI patients and also reported more health and existential concerns. Cancer patients reported existential, dependency, health concerns (symptoms), and finances as their primary concerns. Patients were interviewed and reported more concerns at 1 month than at 2 months. The findings of this study supported the earlier work of Weisman and Worden (1976-77) that existential and health related concerns are predominant within the first several months of diagnosis. The results of this study were limited to the self-reports of newly diagnosed persons engaged in a health-related crisis.

McCorkle and colleagues (1986) studied 166 patients with lung cancer. Concerns were measured with a modified version of the Inventory of Current Concerns (ICC). McCorkle and colleagues deleted the categories of family and friends and added the category of social dependency. The four highest ranking problems were: uncertain health, symptoms of illness, being too dependent on others, and financial concerns. The data showed a gradual decrease in recorded concerns over the six month period of study (M at

Time 1=31.28; M at Time 5=26.79).

Cancer Inventory of Problem Situations (CIPS) was developed to specifically document the problems experienced by cancer patients receiving therapy (Henrich, Schag, & Ganz, 1984). The CIPS classifies 27 categories of problems into four major groups: personal care, medical situations, interpersonal interactions, and miscellaneous. The CIPS was initially used in a study of 84 cancer patients. Sixty percent of the sample had metastatic disease and the majority (73%) were followed in the outpatient setting. Problems in the personal care category were identified by the majority of patients. Patients reported little difficulty in obtaining information from their physicians; however, they admitted they often do not understand what they are told. Patients admitted having difficulty in interpersonal situations. In addition, the cancer experience appeared to be disruptive on patients' finances, employment, ability to concentrate and peace of mind.

Ganz and colleagues (1985) compared the psychosocial impact of cancer using the CIPS in 240 men according to age. The patients in this sample had a variety of cancer sites and were at various phases of the disease. Overall, there were no significant differences between older (>65 years) and younger (<65) patients regarding problems related to chemotherapy, communication with the medical team, obtaining information, and discomfort during medical procedures.

Although the frequency of problems was not significantly different for the two groups, the intensity of problems in several categories was significantly different. Younger men had more severe problems with chemotherapy ($p = .03$), more discomfort with procedures ($p = .02$), and more anxiety in medical situations ($p = .02$). The authors suggest this may be due to the younger patients minimal experience with the health care setting versus the elderly patient who would more likely have had chronic illnesses requiring involvement with the health care setting. Another possibility may be that the younger patients received a more severe chemotherapy regimen than older patients. Younger patients had significantly more problems communicating at work ($p = .02$) and more difficulty working ($p = .001$). The authors conclude that the elderly cancer patient experienced less psychosocial disruption from cancer than the younger patient. Findings from this study are limited as only men were examined. Of the sample size, 34 percent were older than 65 years (mean age 71, range 65-86 years), and the remaining 66 percent were younger than 65 years (mean age 53, range 19-64). Additional limitation relates to the wide range of age (19-64) in the younger group.

Gotay (1984) studied two groups of women with cancer; one with precancer or early stage cervical cancer ($N=42$) and one with advanced breast or gynecological disease ($N=31$). Gotay used a modified version of Weisman and Worden's

Inventory of Current Concerns. Early stage patients mentioned an average of 3.1 (SD = 1.4) problems and advanced stage patients reported 5.1 (SD = 2.9) which was significantly different ($p < .0001$). Though the most common concern for both groups was the disease itself, other concerns varied significantly depending on the stage of disease. Women with early stage cancer were concerned about future childbearing, the affect on their job, and emotional disturbances. Women with advanced cancer were primarily concerned with restriction of activities, side effects of treatment, and the family's future.

This study was limited by several factors. Due to the small sample size possible significant differences were difficult to detect. The data were collected at only one point and changes could not be accounted for. Aside from differences in diagnosis, there were age and generational differences which could influence the results. The typical early stage patient was <30 years old while the typical advanced stage patient was >44 years old.

Based on results from past studies Dunkel-Schetter and colleagues (1992) delineated a set of specific cancer-related concerns: fear and uncertainty about the future due to cancer; limitations in physical ability, appearance, or life style change due to cancer; acute pain, symptoms, or discomfort from illness or treatment; and problems with family or friends related to cancer. Patients were asked to

pick whichever one had been most stressful for them or to designate one of their own. The most frequent problem associated with cancer in this sample of 603 patients was fear or uncertainty about the future (41%). Limitations in physical ability were the most stressful for 24%, pain was most stressful for 3%. Another 9% had experienced more than one of the problems listed, and 5% wrote in their own stressor. The remaining 6% denied any stress from cancer in the past six months. The sample included 78% women and 22% men, ranging in age from 21 to 88 years with a range of education and income with many sites and all stages of cancer represented. Patients varied both in treatment modalities and stages of treatment. The most common primary site of cancer was the breast (42%). Though the data were based on a one time interview the findings were representative of a range of cancer patients. Limitations of this study are common in coping research - lack of certainty as to whether self-reports of coping behavior accurately reflect how a person behaves. Inferences about causality are difficult in cross sectional designs such as this one.

Chemotherapy patients (N = 64) recorded each concern as it was experienced over a six month period in a self-care behavior log (SCB) (Dodd, Dibble, & Thomas, 1992). Eleven categories of concerns were identified by Dodd and colleagues (1992) after refining categories of problems

developed by Weisman (1979) and modified by McCorkle & Benoliel (1983). The concerns reported most frequently were concerning patients' physical health related to cancer; patients' psychological-emotional health; financial; and employment issues. The average number of recorded concerns was 7.8. Eighty percent of the patients reported were very concerned about disease-related physical health and reported a high intensity rating for that specific concern. This finding is consistent with that of Benedict (1989) who reported most suffering was attributable to physical aspects of cancer. Cancer related health concerns was not a function of being newly diagnosed, being diagnosed with recurrence or progression, or having a lower performance score (Karnofsky). Patients experienced an average of almost eight concerns over the six-month study period. Those who perceived the treatment was to cure cancer had significantly more concerns than those who perceived the chemotherapy was to control the disease ($t(56) = 2.11, p = .04$). Limitations of the study include a disproportionate number of younger patients (mean 45.9 years) and Caucasians. The written self-report method used in this study may be culturally biased.

Coping Strategies

A major roadblock in studying coping in cancer patients has been the lack of consensus on the particular dimensions of coping behavior and how to measure these

dimensions (Dunkel-Schetter et al., 1992; Singer, 1984). Taylor (1984) characterized the coping literature as "a meandering unfocused giant" (p. 2315). Terminology is confusing and includes patterns (Dunkel-Schetter et al., 1992), strategies (Lazarus, 1986), and behaviors (Weisman & Worden, 1976). A variety of methods have been used to identify ways of coping. Coping has been described in terms of "state" or "trait". Trait is considered a consistent, specific manner of coping related to personality whereas state addresses coping from a situational perspective (Lazarus, 1980; Singer, 1984). The majority of studies reviewed in this section examine coping from a situational perspective.

Weisman and Worden (1976-77) developed the General Coping Strategies (COPE), an instrument which has a scale consisting of 15 broad types of behavior frequently observed when people try to deal with a specific problem. The relative effectiveness of each strategy to patient identified most important problem is then assessed. Weisman and Worden used COPE to evaluate the use of coping strategies in a sample of 120 cancer patients during the first 3 months following diagnosis. Patients who were considered to have effective coping appeared to accept the diagnosis and treatment and used confrontation, redefinition, and compliance with authority, whereas less effective coping employed suppression-passivity and stoic

submission.

The findings of this study were discussed without actual data being presented. The use of a list of 15 broad types of coping behaviors provided a larger scope of behaviors than other studies and subsequently more information. Also, the coping strategies used were based on the patient identified most important problem. Thus the coping strategies were specific to a problem rather than the broad issue of how one is "dealing with cancer."

Gotay's (1984) work with early stage cervical and advanced breast or gynecological cancer patients reported that most subjects used more than one strategy for managing an identified concern. Gotay used a modified version of Weisman and Worden's General Coping Strategies (COPE). One or more coping strategies were recorded for each problem and most had more than one strategy per concern. Taking firm action emerged as the most frequently-used strategy. Differences in coping strategies were noted between the two groups. Seeking information about the disease was frequently cited by the early stage groups (14%), but not by the advanced stage. Religious faith and prayer were frequently cited by the advanced patients, but not for early stage patients. Women in early stages of disease more frequently used the strategy finding something favorable about the situation while women with advanced stage disease more frequently used avoidance and denial. Analysis of a

particular problem - fear of cancer - showed different coping strategies to be predominant. Half of the early stage patients used the coping strategy of seeking more information while none of the advanced stage patients used that particular strategy.

An interesting finding in this study was that patients who had advanced disease did not exhibit more difficulties coping than those with early stage disease. Gotay suggests that future research needs to study coping strategies in relation to particular concerns since her findings show that coping strategies varied significantly based on the particular concern. Limitations of the study were discussed earlier in the concerns section.

Hilton (1988) investigated the relationship between commitments, uncertainty about the cancer situation, threat of recurrence, and control of the cancer situation and the set of coping strategies used by women to cope with their breast cancer diagnosis. Lazarus and Folkman's theory of psychological stress provided the framework for this descriptive correlational study of 227 nonhospitalized women who had a diagnosis of breast cancer. Coping strategies were measured with Lazarus and Folkman's revised Ways of Coping Scale. The Ways of Coping Checklist was developed by Lazarus and colleagues (1986) and is a commonly cited tool in the general stress and coping literature. The tool lists 67 coping strategies that are classified into eight types of

coping strategies: confrontative, distancing, self-control, seeking social support, accepting responsibility, escape-avoidance, painful problem solving and positive reappraisal. Canonical correlation procedure was used to measure the relationships among a set of independent variables (uncertainty, commitment, threat of recurrence, control of the course of the cancer) and the set of dependent variables (eight coping strategies). Two sets of canonical variate sets were significant at the .001 level with canonical correlations of .52 and .47. The first canonical set indicated that the use of escape-avoidance and accepting responsibility but not positive reappraisal strategies were characteristics of those women who had low commitment and low control together with high uncertainty and high threat of recurrence. The second set indicated that seeking social support, as well as the use of painful problem solving, escape-avoidance, positive reappraisal, and self-controlling strategies was adopted by women who had high threat of recurrence and high control.

The findings of this study provide a different perspective on the set of coping strategies that are appraised and used to manage the breast cancer diagnosis within the personal and situational context. Since no prior study has taken this approach, no direct comparison of the results is possible.

Perry (1990) reported significant relationships between coping methods employed by newly diagnosed cancer patients and the degree of loneliness experienced by these cancer patients. Coping methods were also ranked by frequency of use. The conceptual framework for the coping aspect of the study was Lazarus and Jalowiec. The Jalowiec Coping Scale lists 40 different coping methods that patients may use in response to stresses. These methods are categorized into three coping behaviors or strategies: confrontive (problem oriented), emotive (release of emotions), and palliative (passive). Among the 41 patients studied confrontive and palliative-type coping methods were the most favored while emotive-type coping were the least favored. Significant relationships were found between coping methods and loneliness. Results indicated that the more often the confrontive-type coping was used the less the likelihood of loneliness ($p = <.01$) and that the higher the use of emotive-type coping the higher the likelihood of loneliness ($p = <.001$).

Jarrett and colleagues (1992) used a modified Folkman and Lazarus Ways of Coping Questionnaire (WCQ) and Faith Courtauld Schedule for Coping with Cancer Interview in an attempt to develop a reliable, situation-specific approach to the measurement of coping response in women with breast cancer. The authors suggest that the two tools complement one another and indeed produce similar results. Both

methods identified the extensive use of cognitive avoidance and positive reappraisal. Their findings suggest that the majority of patients use a wide repertoire of coping responses and there is little change in the number of coping responses the women use in relation to the time since their diagnosis.

Analysis of the data from the WCQ identified the frequently used coping strategies as cognitive avoidance, positive reappraisal of their illness and life, control of emotional expression and concentration on aspects of the disease over which they have some control. Coping strategies rarely used were wishful thinking, social avoidance, and blaming of self or others.

Findings of this study were difficult to interpret due to the use of two different tools and the difference in sample size for each tool. The WCQ was completed by 153 women who had been in remission for 9 months to 10 years. The Faith Courtauld Schedule was administered to 49 women who had been in remission for 6 months to 12 years. As the authors modified each tool the reliability and validity are questionable.

Dunkel-Schetter and colleagues (1992) used an adapted version of the Ways of Coping Inventory (WOC) to identify five patterns of coping: seeking or using social support, focusing on the positive, distancing, cognitive escape-avoidance, and behavioral escape-avoidance. These are the

first coping patterns to be identified with a large and heterogeneous sample of cancer patients (N = 603) and they are similar to those identified earlier with smaller samples of cancer patients (Felton & Revenson, 1984; Weisman & Worden, 1976-77). Relationships of these coping patterns to sociodemographic characteristics, medical factors, stress appraisals, psychotherapeutic experience, and emotional distress were tested using correlational and regression techniques.

The level of appraised stress from cancer was related to three of the five patterns of coping (seek and use social support, cognitive escape-avoidance, behavioral escape-avoidance), whereas the specific cancer-related problem with which subjects were coping was not predictive of the ways people coped. Type of cancer, time since diagnosis, and whether a person was currently in treatment had few or no relationships to coping. This study replicated earlier evidence that escape-avoidance coping is associated with more emotional distress. The authors identify limitations of this study as those common in coping research, i.e., do self-reports of coping behavior accurately reflect how a person behaves? Also, inferences about causality are difficult in cross-sectional designs such as this one.

Payne (1990) used grounded theory to analyze the coping responses of 24 women with advanced breast or ovarian cancer receiving palliative chemotherapy. The results suggested

that four predominant coping styles were used; think positive/fighter (n=8), acceptance (n=8), fearfulness (n=5) and hopelessness (n=3). Additionally, a wide range of coping strategies that reduced the threat of chemotherapy were identified. Favored strategies included those that reduced the threat of the treatment such as minimization and selective attention.

Although grounded theory provides interesting results it is limited by subjective analysis which leave the conclusions open to interpretation. In the discussion of coping strategies comments were made without inclusion of actual data making it difficult for the reader to make his/her interpretation. Generalizations of this study are limited due to the small sample size and subjective analysis.

Carver and colleagues (1993) examined the pattern of various aspects of coping as they occur over the course of a crisis. Women (N=59) diagnosed with breast cancer were interviewed over a period of slightly more than a year. Coping was measured with a self-report inventory called the COPE which Carver had developed earlier. The COPE is described as assessing a broad range of coping responses, some of which are not measured by other widely used instruments such as the Ways of Coping Checklist. Responses assessed by the COPE range from aspects of problem-focused coping (e.g., active coping, planning), to use of social

support, to turning to religion as a coping device, to positive reframing of the situation, to aspects of avoidance coping (e.g., denial, behavioral disengagement).

This study found that many coping reactions were more prominent early in the crisis than later and that some kinds of coping reactions occurred more than others. Acceptance was the most reported coping response and reports of behavioral disengagement were significantly lower than any other coping response at each measurement point. In addition to acceptance, humor and positive reframing were related to good outcomes. Overt denial, behavioral disengagement (thoughts of giving up), and avoidance coping were linked to poor outcomes.

Carver and colleagues examined the relationship between the flexibility of coping and the relationship to emotional adjustment. Flexibility refers to the use of multiple aspects of coping strategies, rather than restricting oneself to one or two. Two possibilities were suggested. One is that greater flexibility may relate to better emotional adjustment, as whatever coping strategy works best at the moment, shifting as needed. Alternatively, the use of multiple coping strategies may reflect ineffectiveness of the various strategy. Findings found no significance to the number of coping strategies used and emotional adjustment.

The fact that acceptance predicted less distress is consistent with Weisman and Worden (1976-1977) that cancer

patients must accept the reality of their situation to adjust to it. The data contradict the argument that denial is the most beneficial response as long as it doesn't interfere with treatment (Meyerowitz, 1983). Carver and colleagues report that this is the first study which situational reports of acceptance and the use of humor were shown to have beneficial prospective effects on subjective well-being. They state the scales for acceptance and humor are not part of most other instruments and they stress the importance of assessing a diverse range of coping strategies. The authors acknowledge that though the internal reliability of most COPE scales were adequate there were some difficulties with others. Generalizations of this study are limited due to the sample consisting only of women with early stage breast cancer with a good prognosis.

Heim and colleagues (1993) examined the variability and stability of coping in breast cancer patients (N=74) over time and situation. In a prospective longitudinal design the patients were followed for 3-5 years at 3-6 month intervals. Their findings were based on the Bernese Coping Modes, an instrument developed for their study. Using a semi-structured interview an observer ranks 26 different coping modes into three classifications: behavioral, cognitive or emotion-oriented.

Results confirm arguments in favor of both variability and stability in coping activity over time and situation.

Attention and care (support seeking), acceptance-stoicism, problem analysis, diversion and tackling were the most important coping strategies to be found in these subjects over time. The least favorable coping strategies were self-accusation, release of anger, active avoidance and rebelling. The patients showed a broad and intensive range of coping behaviors with an average of ten strategies reported at each interview. Some strategies were particularly prevalent at all observation points, while others varied depending on the time and situation.

The data accumulated in this study were quite comprehensive. Based on information provided by the authors the reliability of the Bernese Coping Mode is adequate. The instrument has been widely applied in German, as well as French and Italian versions.

In Dodd and colleagues (1992 and 1993) study there were seven categories of coping strategies identified based on refinement of Cohen and Lazarus' (1979) and McCorkle and Benoliel's (1981) categories. The strategies used most frequently were direct action, seeking information, and seeking social support. The average number of reported strategies was 1.8 (SD 0.7). There were no significant predictors found for the number of coping strategies used. Older patients performed fewer coping strategies. The pattern of coping strategies was uneven, with some concerns (e.g., psychologic and emotional health) receiving more

strategies than others (e.g., family, spiritual). The greater the frequency of a concern, the greater the number of coping strategies used.

This study was unique in that this was the first time a continuing, written self-report of patients' strategies has been documented. In previous studies patients selected coping strategies from a preset list (Gotay, 1984; McCorkle & Benoliel, 1981; Weisman & Worden, 1976-77) or interview data were analyzed (McCorkle & Saunders, 1985). Limitations of this study have been previously discussed.

Based on the literature review there are a variety of findings related to both the number of coping strategies and the types of strategies used. Most patients use more than one coping strategy at any given time (Gotay, 1984; Jarrett et al., 1992). Gotay (1984) reported that patients used different coping strategies based on different concerns, while Dunkel-Schetter (1992) reported that specific problems were not predictive of the way people cope. Some authors (Carver, 1993; Gotay, 1984) suggest that different strategies are used at different times during the disease trajectory while others (Dunkel-Schetter et al., 1992; Jarrett et al., 1992) found no difference in relationship to time since diagnosis. Dunkel-Schetter and colleagues (1992) also reported that type of cancer and whether a person was currently in treatment had few or no relationships to coping. Acceptance, taking action, seeking information and

seeking social support were frequently reported coping strategies.

Perceived Goal of Treatment (Cure versus Control)

A review of the literature found only one study which related patients concerns and coping strategies to perceived purpose of chemotherapy. Dodd and colleagues (1992 and 1993) reported that patients who believed in the curative purpose of their chemotherapy reported greater numbers of concerns. As patient perception was the primary focus of this study, no attempt was made to check these patients' perceptions for accuracy. There is some evidence to suggest that patients believe in the curative purpose of cancer treatment even when that goal is no longer attainable (Dodd, 1988a, 1988b). Dodd and colleagues (1992 & 1993) suggest that the significantly higher number of concerns reported by these patients may reflect the vigilance of this group who may have perceived or been told that they had more at stake. These findings were based on a subset of patients from the same database as this study. Patients (N=64) who provided completed self-care behavior logs became the sample for their study. Limitations of this study as discussed earlier related to young age of sample and potential for cultural bias.

Chapter III

METHODOLOGY

Research Design

An analysis was performed of data obtained from a larger study entitled "Coping and Self-Care of Cancer Families: Nurse Prospectus" (Dodd et al., 1986-1990). The overall purpose of the larger longitudinal survey study was to identify coping strategies and self-care behaviors utilized by patients receiving chemotherapy for cancer and their families.

Research Setting

Patients were referred by nurses and physicians from seven health care settings in the greater San Francisco Bay Area (San Francisco and adjacent counties). Research settings were large outpatient clinics and office practices.

Sample

The nonrandomized sample consisted of 100 adult cancer patients who were: 1) 18 years of age or older; 2) initiating chemotherapy treatment either for curative intent or disease recurrence; 3) able to speak and read English; 4) mentally and physically competent; 5) diagnosed with selected types of cancer (breast, lung, colorectal, lymphoma, gynecological, genitourinary); and 6) expected to live at least six months according to their primary physician. Participants were not prevented from participating based on prior treatments (e.g., surgery,

chemotherapy, radiation therapy) or concurrent cancer therapy. Of these 100 patients, 66 became the sample for this study based on additional criteria. If a patient reported on the Omega Coping Strategies Questionnaire during any data collection point that their greatest concern was health related then they became part of the sample. Health related concerns included cancer concerns, health concerns and other physical concerns.

Instruments

The instruments used in this study were: the Demographic Questionnaire, Chemotherapy Knowledge Questionnaire (CKQ) and Omega Coping Strategies Questionnaire (COPE).

The Demographic Questionnaire (Appendix A) is a 12 item questionnaire used to obtain demographic information about age, gender, ethnicity, educational level, marital status, living arrangements, employment status, type of cancer, and chemotherapy experience (no previous chemotherapy versus previous chemotherapy).

The Omega Coping Strategies (Appendix B) is a questionnaire originally developed by Weisman and Worden (1976-1977) to measure cancer patients' coping strategies. This instrument was initially used by specially trained psychiatric social workers and administered to hospitalized cancer patients shortly after being diagnosed with cancer. Subjects were asked to report the problem of highest

priority in importance to them and were then intensively interviewed by the social workers to describe how they coped with their problem. The social workers then categorized the subjects' coping strategies from a pre-set list of 15 behaviors. Reliability and validity of the tool was established in an earlier study by Weisman and Worden (1976). General coping strategies represent 15 broad types of problem solving behaviors. Strategies were developed and validated after expanding a list of coping behaviors first described by Siddle, Moos, & Adams (1969). Construct validity has been established in Weisman and Worden's (1977) study of 163 newly diagnosed cancer patients.

For this study the patient was asked to identify the problem that had the highest priority or importance for that individual and was then asked to identify from a prepared list of 15 coping behaviors which strategies s/he is currently using to deal with the problem. A complete list of the strategies is found in Appendix B. Some of the strategies are seek more information about the problem; talk with others to relieve distress; try to forget, put it out of mind; reduce tension by drinking, overeating, drugs; withdraw socially into isolation, and blame someone or something. A patient's coping strategies are measured by the number of coping strategies he or she utilized to resolve the identified problem. Reliability testing using test-retest was not appropriate for this instrument since

the most important problem reported changed over the study period.

For purposes of this study the Chemotherapy Knowledge Questionnaire (Appendix C) was only used to determine the patients perceived purpose of chemotherapy. The patients were asked to identify the purpose of their chemotherapy as either to cure the cancer or to control the cancer (not cure).

Procedure

After human subjects approval was obtained potential subjects were initially approached by either the site coordinator or research assistants (graduate nursing students), usually in the clinic setting. Each potential participant received verbal and written information about the study. Written informed consent was obtained from eligible participants.

Data collection typically occurred in the subjects' home at his/ her convenience. Occasionally, data were collected in the clinic or hospital if this was preferred by the patient and not unduly inconvenient for staff. Data collection occurred over six months. Data for this study was collected at Time 1 (initiation of chemotherapy), Time 2 (three months after the initiation of chemotherapy), and Time 3 (six months after the initiation of chemotherapy). The Demographic Questionnaire and Chemotherapy Knowledge Questionnaire were typically administered as an interview at

Time 1. Subjects were asked to complete the Omega Coping Strategies Questionnaire at Time 1, Time 2, and Time 3 after receiving instructions from the research assistant.

Data Analysis

Data were analyzed using an IBM PC and the CRUNCH statistical software program. Independent group t-tests were computed to determine differences in the number of coping strategies used based on patient perception of purpose of chemotherapy (i.e., cure versus control). Fisher's Exact Test (2-tail) were computed to determine differences in the type of coping strategy used based on patient perception of the purpose of chemotherapy. Descriptive analysis were conducted on patient characteristics and disease status.

Chapter IV

RESULTS

Sample Demographics

Participants (n=66) were primarily Caucasian (79%), middle-aged (M=47 years, range 20-78), with two years of college education. The majority of the participants were female (70%), married or partnered (56%), with 18% living alone. The most common cancer diagnosis was breast cancer (53%), followed by lymphoma (15%), genitourinary/gynecologic (12%), colo-rectal (9%), lung (8%), and other (3%). The mean time since diagnosis was 15.6 months with a range of one month to 12 years. Seventy eight percent of the patients had no previous chemotherapy. Seventy percent of the patients perceived the purpose of chemotherapy as cure. (See Table 1).

Findings

Study Purpose #1: To determine if there is a difference in the number of coping strategies used based on patients' perceived purpose of chemotherapy (i.e., cure versus control).

In order to answer this question t-tests were computed. There were no significant differences in the number of strategies used at either Time 1 or Time 2.

At Time 1, patients perceiving the purpose of chemotherapy as cure used 6.4 coping strategies, while those perceiving the purpose of chemotherapy as control used 7.1

coping strategies. At Time 2, patients perceiving the purpose of chemotherapy as cure used 6.8 coping strategies and those perceiving the purpose as control used 6.9 coping strategies. At Time 3, the patients perceiving the purpose of chemotherapy as cure used 5.9 coping strategies and the patients perceiving the purpose as control used 8.6 coping strategies. This difference at Time 3 was significant ($t = 3.15$ $p < .004$) (Table 2, Figure 1).

Study purpose #2: To determine if there is a relationship between patients' perceived goal of chemotherapy (i.e., cure versus control) and types of coping strategies used.

In order to answer this question Chi Square analysis were used. There were no significant differences in the proportion of the sample who used a particular coping strategy based on their perception of the purpose of chemotherapy (i.e., cure versus control) at Time 1.

At Time 2 patients perceiving the purpose of chemotherapy as control used the coping strategy "seek direction from an authority and comply" significantly more than those patients perceiving the purpose as cure ($X^2 = 3.2$, $p < .05$).

At Time 3 patients perceiving the purpose of chemotherapy as control used the coping strategies "do something, anything, however reckless, impractical" ($X^2 = 8.6$, $p < .003$) and "submit to and accept the inevitable" ($X^2 =$

4.6, $p < .04$) significantly more than those patients perceiving the purpose as cure. These significant differences are found in Table 3.

Table 4 reflects the number of patients with health related concerns using a particular coping strategy at each time period. The number of patients identifying their most important concern as health related decreased over time (Time 1 = 55, Time 2 = 44, Time 3 = 35). The most frequently used coping strategies at each time were seek more information about the situation, talk with others, take firm action based on present understanding, and do other things to distract self. The strategy try to forget, put it out of mind increased to 74% at Time 3 from 51% at Time 1 and 57% at Time 2. Withdraw socially into isolation; reduce tension by drinking, overeating, drugs; do something, anything, however reckless, impractical; blame someone or something; and blame yourself, sacrifice or atone were used less than 15% of the time with atone and blame the least used coping strategies at each time.

Chapter V

DISCUSSION

Significance

The purposes of this study were: 1) to determine if there was a difference in the number of coping strategies used based on patients' perceived purpose of chemotherapy (i. e., cure versus control); and 2) to determine if there was a relationship between patients' perceived purpose of chemotherapy (i.e., cure versus control) and types of coping strategies used. This study is unique in that it examines coping strategies related to a specific type of concern (health related concerns) and patient perceived goal of chemotherapy.

The results of this study support other studies which demonstrate that people use more than one coping strategy to deal with a problem (Gotay, 1984; Heim et al., 1993; Jarrett et al., 1992; Lazarus, 1990; Payne, 1990). At Time 3 patients perceiving the purpose of their chemotherapy as control used significantly more coping strategies than those perceiving the purpose as cure (See Figure 1).

Lazarus (1990) suggests that many diverse coping thoughts and acts may occur during the same personal crisis, dependant on the perceived threats or surfacing at different times. At Time 3, six months after the initiation of chemotherapy, patients are experiencing the cumulative effects of treatment and disease process and may be feeling

more threatened, thus mobilizing more strategies to cope with health related concerns.

Surprisingly there were only three significant differences in the types of coping strategies used by patients based on their perceived purpose of chemotherapy. At Time 2 a greater number of patients perceiving the purpose of chemotherapy as control (78%) used the strategy "seek direction from an authority and comply" than did those perceiving the purpose as cure (42%). At three months the appraisal of chemotherapy treatment may be changing. Although chemotherapy may initially be appraised as a challenge, by three months the effects of treatment are present and reappraisal may be occurring. Some patients may be seeking direction from health care providers on whether it is worth the effort to continue treatment. Does the outcome warrant the side effects of treatment? This is in contrast to the patient who perceives chemotherapy as cure and is willing to tolerate the side effects because the outcome is perceived to be much different.

At Time 3 significant differences were noted in two coping strategies - "do something, anything, however reckless, impractical" and "submit to and accept the inevitable". The coping strategy "do something, anything, however reckless, or impractical" was used by 44% of the patients who perceived the purpose of chemotherapy as control. In sharp contrast, none of the patients who

perceived the purpose of chemotherapy as cure used this strategy. Perhaps those perceiving cure continue to appraise chemotherapy as a challenge, whereas those perceiving control have reappraised chemotherapy as being both harmful and/or threatening. Their response is to try anything to make the situation better and this is also seen in their use of significant greater numbers of coping strategies. At the same time period 67% of patients perceiving the purpose of chemotherapy as control used the coping strategy "submit to and accept the inevitable", while only 20% of those perceiving cure as the outcome used this strategy.

An interesting finding is noted with the coping strategy try to forget, put it out of mind. Over half of patients using this strategy remained stable at Time 1 (51%) and Time 2 (57%). However, at Time 3 the patients using this strategy increased to 74%. One explanation is that this sample consisted predominately of breast cancer patients (53%) who at six months would have completed their course of chemotherapy and want to try to forget their diagnosis and treatment and get on with their "normal" life.

The number of patients identifying their most important concern as health related decreased over time. Based on data of the larger study (Dodd et al., 1986-90) this decrease is likely due to attrition of the entire sample (30%) as health related concerns continued to be identified

as the greatest concern at each time.

The frequent use of the coping strategies seek information, talk with others, and take action were consistent with findings from other studies (Dunkel-Schetter et al., 1992; Gotay, 1984). Atone and blame others were the least used coping strategies at each time. These results support findings from other studies (Gotay, 1984; Jarrett et al., 1992).

In summary, the data from this study suggest that patients who perceive the purpose of their chemotherapy as control may at times use greater numbers of coping strategies and different types of coping strategies than those who perceive the purpose as cure.

Limitations

A limitation of this study is the results are based on secondary analysis of data collected from a larger study (Dodd et al., 1986-90). Additional limitations of this study and the larger study are the majority of patients were women (70%) and the most common diagnosis was breast cancer (53%) which limits the generalization of the findings to other cancer populations. Also, the sample size (n=66) was small and decreased at each time period Time 1 (n=55), Time 2 (n=44), and Time 3 (n=35). The sample population was primarily Caucasian (79%) and had two years of college which is not representative of the general population.

Seventy percent of the patients perceived the purpose

of their chemotherapy was to cure their cancer. Comparisons of actual prognosis and perception were not done. Coping strategies were not studied for effectiveness or concerns other than health related concerns.

Nursing Implications

Nurses should facilitate maintaining and/or improving patient resources to cope with the demands of the illness. Findings of this study suggest it would be useful for nurses to ask patients their perception of the purpose of their chemotherapy. Those patients who perceive the purpose of chemotherapy as control may be at greater risk of stress six months after initiation of chemotherapy and could benefit by nursing intervention directed at facilitating coping. Cunningham and colleagues (1991) suggest that systematic teaching of coping strategies may improve the quality of life of cancer patients.

Nurses should keep in mind the frequently used coping strategies seeking information, talking with other, and taking action. By encouraging communication and providing information oncology nurses can facilitate effective coping of cancer patients and their support systems.

Research studies of cancer patients and coping strategies should be continued. Further studies need to determine if coping strategies vary by types of concerns. Also, the effectiveness of coping strategies related to specific concerns should be measured. Research is also

needed to determine the best measure of coping strategies that are reflective of the cancer patient. Culturally sensitive research is necessary to insure that not just a specific population is continually studied.

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TABLE 1
DEMOGRAPHIC CHARACTERISTICS OF PATIENTS

<u>Characteristics</u>	<u>N</u>	<u>%</u>	<u>Mean(SD)</u>
AGE	65		46.9(14.7)
EDUCATION	66		14.3(2.6)
TIME SINCE DIAGNOSIS(mo)	66		15.6(28.3)
KARNOFSKY PERFORMANCE			
Time 1	66		78.9(14.8)
Time 2	49		81.9(18.1)
Time 3	45		82.3(13.6)
GENDER			
Female	46	69.7	
Male	20	30.3	
MARITAL STATUS			
Married/Partnered	37	56.0	
Other	29	43.9	
ETHNICITY			
Caucasian	50	79.3	
Other	13	20.6	
CANCER DIAGNOSIS			
Breast	35	53.0	
Lymphoma	10	15.2	
Gu/gyn	8	12.1	
Colo-rectal	6	9.1	
Lung	5	7.6	
Other	2	3.0	
CHEMOTHERAPY TREATMENT			
No previous chemo	49	77.8	
Previous chemo	14	22.2	
PURPOSE OF CHEMOTHERAPY			
Cure	46	69.7	
Control/Palliation	20	30.3	

TABLE 2
NUMBER OF COPING STRATEGIES USED

Time	Group	Mean(SD)	Statistic (t)	Significance
Time 1	Cure Control	6.4(2.5) 7.1(1.1)	1.43	NS
Time 2	Cure Control	6.8(2.4) 6.8(2.1)	.01	NS
Time 3	Cure Control	5.9(2.2) 8.6(2.0)	3.15	<.004

TABLE 3

SIGNIFICANT DIFFERENCES IN COPING STRATEGIES BASED ON PERCEIVED PURPOSE OF CHEMOTHERAPY (CURE VERSUS CONTROL)

TIME 2

Strategy	Use	Cure	Control	Statistic(X^2)	Significance
Seek direction	Yes	13	10	3.2	<.05
	No	18	3		

TIME 3

Strategy	Use	Cure	Control	Statistic(X^2)	Significance
Do something	Yes	0	4	8.68	<.0027
	No	25	5		

Strategy	Use	Cure	Control	Statistic(X^2)	Significance
Submit	Yes	5	6	4.62	<.04
	No	20	3		

TABLE 4

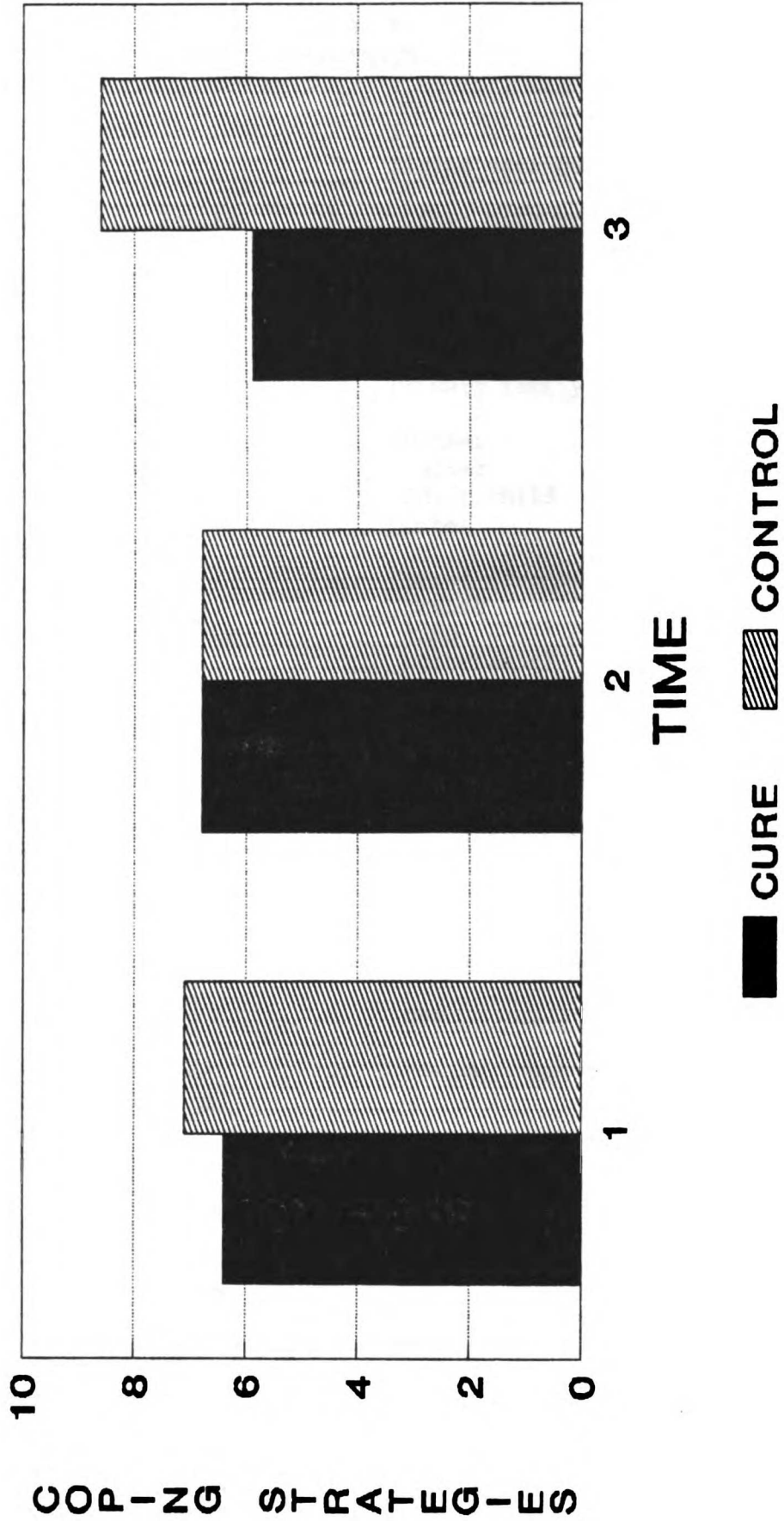
COPING STRATEGIES USED TO DEAL WITH HEALTH RELATED CONCERNS

	Time 1 (n=55)	Time 2 (n=44)	Time 3 (n=35)
STRATEGY	n (%)	n (%)	n (%)
Seek Information	47 (86)	38 (86)	28 (82)
Talk with Others	46 (84)	38 (86)	29 (85)
Laugh	22 (40)	15 (34)	15 (44)
Forget	28 (51)	25 (57)	25 (74)
Distract	43 (78)	33 (75)	26 (77)
Take Action	44 (80)	36 (82)	26 (77)
Accept	33 (60)	31 (71)	20 (59)
Submit	19 (35)	18 (41)	11 (32)
Do Something	5 (9)	5 (11)	4 (12)
Negotiate	27 (49)	20 (46)	17 (50)
Reduce Tension	7 (13)	6 (14)	3 (9)
Withdraw	7 (13)	4 (9)	2 (6)
Blame	5 (9)	5 (11)	1 (3)
Seek Direction	27 (49)	23 (52)	17 (50)
Atone	4 (7)	4 (9)	1 (3)

FIGURE 1

A comparison of number of coping strategies used between those patients perceiving the purpose of chemotherapy as cure and those perceiving the purpose as control at Time 1 (N=6.4 and 7.1, respectively), Time 2 (N=6.8 for both groups, and Time 3 (N=5.9 and 8.6, respectively). Time 3 is statistically significant ($p < .004$).

FIGURE 1
NUMBER OF COPING STRATEGIES USED



APPENDIX A
DEMOGRAPHICS

1. Age_____
2. Sex___male ___female
3. Ethnic background
 ___Asian
 ___Black
 ___Caucasian
 ___Hispanic
 ___Native American
 ___Other
 ___Family has mixed ethnic background
4. Employment status
 ___full time
 ___no change in status
 ___part time
 ___no change in status
 ___part time
 ___change in status
 ___leave of absence
 ___disability
 ___not employed
 ___other
5. Educational background
 ___highest level/grade completed
6. Marital status
 ___married/partnered
 ___separated/divorced
 ___widowed
 ___single
7. Living arrangements
 ___lives with spouse
 ___lives with other family
 ___lives with significant other
 ___lives alone
 ___other (list)
8. Primary family role
 ___Mother
 ___Father
 ___Adult child
 ___Other
9. Cancer diagnosis
 ___breast
 ___lung
 ___colo-rectal
 ___GU/GYN
 ___lymphoma
10. Initial rx___Recurrence___
11. Prior chemotherapy
 Yes___ No___
12. Have you had any additional cancer treatment?
 Yes___ No___
 If yes, list ___
 when ___

APPENDIX B

OMEGA COPING STRATEGIES
(COPE)

Introduction

This instrument is used to measure strategies people use to cope with problems. You will be asked to identify the one problem that is of the most importance to you. You will then be given a list of fifteen coping behaviors which people may or may not use to deal with their problems and be asked to identify which behaviors you are using to deal with your problem. Obviously, there are no right or wrong answers.

What problem has the highest priority or importance for you?

What did you do (or are you doing) about it?

Yes No

- | | | |
|-----|-----|---|
| ___ | ___ | Seek more information about the situation |
| ___ | ___ | Talk with others to relieve distress |
| ___ | ___ | Laugh it off; make light of situation |
| ___ | ___ | Try to forget; put it out of mind |
| ___ | ___ | Do other things to distract self |
| ___ | ___ | Take firm action based on present understanding |
| ___ | ___ | Accept, but find something favorable |
| ___ | ___ | Submit to and accept the inevitable |
| ___ | ___ | Do something, anything, however reckless, impractical |
| ___ | ___ | Negotiate feasible alternatives |
| ___ | ___ | Reduce tension by drinking, overeating, drugs |

What did you do (or are you doing) about it?

___ ___ Withdraw socially into isolation

___ ___ Blame someone or something

___ ___ Seek direction from an authority and comply

___ ___ Blame yourself, sacrifice or atone

APPENDIX C**PURPOSE OF CHEMOTHERAPY**

(From Chemotherapy Knowledge Questionnaire)

I would like to know the purposes for your chemotherapy.

YES NO

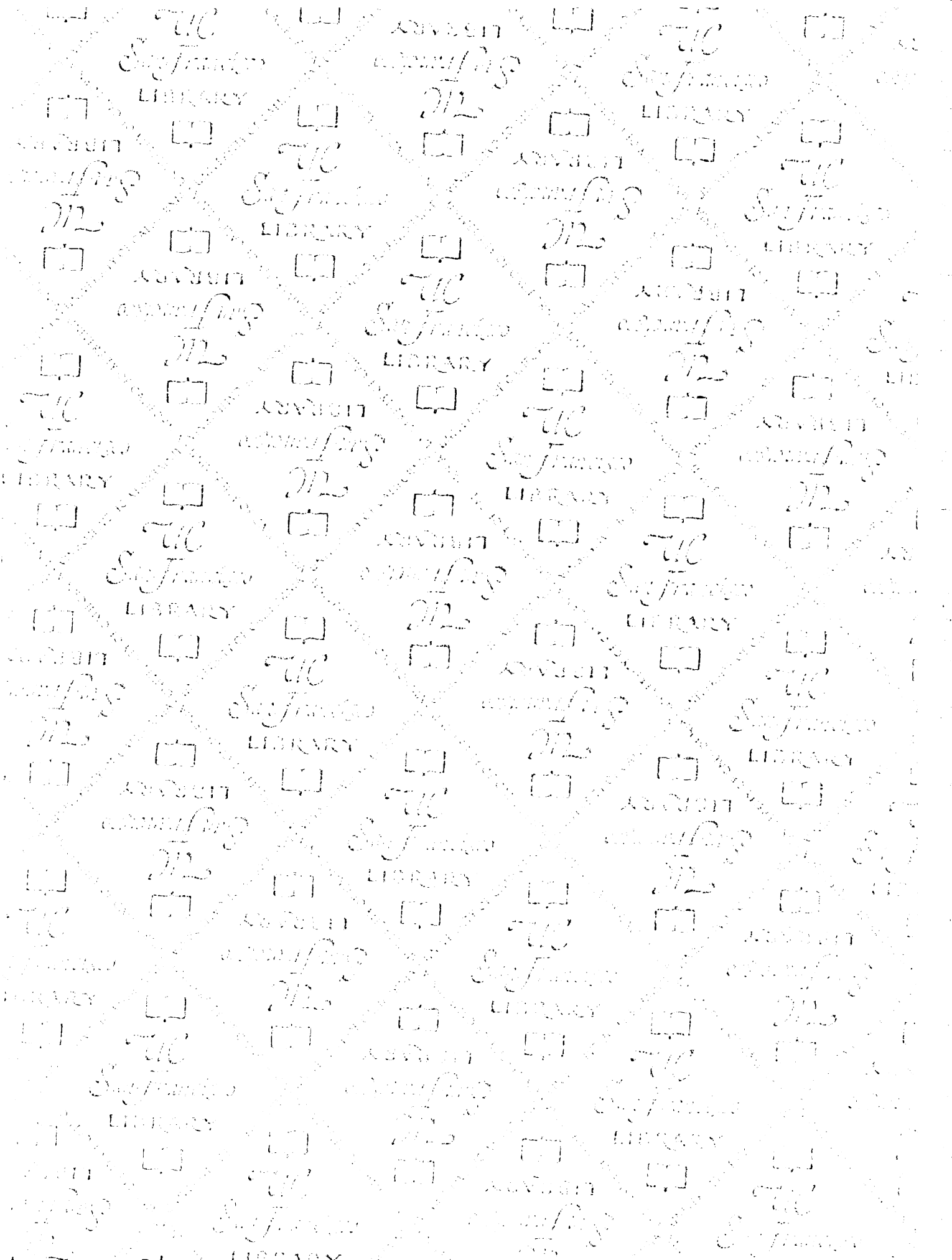
To cure the cancer

— —

To control the cancer (not cure)

— —

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