

THE CONFIDANT RELATIONSHIP AND PSYCHOLOGICAL ADJUSTMENT AMONG
PERSONS WITH LYMPHATIC CANCER OR MULTIPLE MYELOMA

by

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CHAPTER I

INTRODUCTION

Recent figures show that more than one death in five (21.1%) in the United States results from cancer, and 870,000 new cases of cancer were expected to occur in 1984 (Silverberg, 1984). The need for adaptation to cancer by victims and families is all too frequent. Numerous studies have implied that social support acts as a moderating influence that reduces psychological and physiological illness and distress following the occurrence of significant stressful life events, including development of cancer (Gotay, 1984; Peters-Golden, 1982; Funch & Marshall, 1983; Schwartz, 1977; Lieber, Plumb, Gerstenzang & Holland, 1976).

Several studies (Porritt, 1979; Brown, Bhrolchain & Harris, 1975; Lowenthal & Haven, 1968; Weiss, 1974) have addressed the issue of whether the main health sustaining effect of social support arises from the quantity or the quality of one's interpersonal relationships, but findings are ambiguous and inconclusive. Available information is inadequate to determine whether the person having many acquaintances is better protected from life stresses than is the person with an intense intimate confidant relationship. It is unclear, for example, if socially supportive relationships potentiate one another, such that numerous relationships offer greater benefit than the sum of the support from the individuals.

This study investigated the relationship between an intimate, reciprocating, available confidant and psychological adjustment after development of two systemic forms of life-threatening illness, lymphatic cancer and multiple myeloma. Increased knowledge about the potency of the confidant relationship as a factor facilitating

psychological adjustment may aid the development of intervention strategies, such as best use of counseling with the person with cancer and with significant others to improve the confiding nature of the relationships.

PROBLEM STATEMENT

Additional information is required to determine whether some correlation exists between the presence or absence of a confidant relationship and psychological adjustment in persons with lymphatic cancer or multiple myeloma. State anxiety and state depression can be considered reflective of psychological adjustment.

REVIEW OF RELATED LITERATURE

Literature will be reviewed in four subsections. The subsections will be: stressful life events; social support and coping; the confidant relationship; and, psychological adjustment to cancer.

Stressful Life Events

Certainly not all occurrences in life can be accepted with equanimity. Some life events strain the individual's capacity to maintain an equilibrium. Several authors have discussed the effects of stressful life events.

Rahe (1974) proposed that "life change units", consisting of recently occurring significant life events, are filtered through one's recollection of previous life experiences. This process augments or attenuates the power of the life change units. Following this assignment of valences, psychological ego defenses are effective at shielding the individual from disruption by some life events. Ego defenses are not adequate to protect one from all stressful events: events too potent to be deflected by ego defenses activate body

systems, producing physiologic change. Coping abilities, defined by Rahe (1974) in a narrow sense, are those physiological mechanisms that reduce the extent of physiological change. Physiological changes may or may not be interpreted as illness, depending on the individual health/illness behavior pattern.

Sarason, Johnson & Sigel (1978) developed an instrument to measure the degree of stress generated by recently occurring life experiences. After testing the instrument, they concluded that life stress is a multidimensional phenomenon whose effects are largely determined by the perceptions of the person undergoing the stress. Perception was thought to act alone or with other variables to intervene in the causal relationship between a stressor and subsequent negative life changes. Sarason, et al. (1978) described the relationship between a stressor and negative health sequelae as difficult to measure, as the person experiencing stress may demonstrate symptoms of physical illness, or the person who is physically ill may have exaggerated perceptions of the stress in life events.

Synthesizing the perspectives of Sarason et al. (1978) and Rahe (1974), stress may be viewed as a multidimensional force that can produce negative life changes, and whose potency as a change agent is related to the nature of the stressor, to previous life experiences with similar and other stressors, and to factors that attenuate or exacerbate perception of the stressor as a threat to the well-being of the individual. In order to control the influence of some of these factors in a study of intervening variables between stressor and outcome, selection of a life event as uniformly stressful as possible, and with which the subject has had minimal experience is

desirable.

Cancer as a Uniformly Negative Stressor

Development of cancer may represent a life event that, with few exceptions, is viewed by those experiencing it as a significant stressor leading to negative life changes. Sontag (1978) reviewed popular literature, both poetry and prose, throughout history. She concluded that cancer has become a metaphor for suffering and death, and that in Western culture, cancer is viewed as vile and unerringly fatal.

Yalom (1980) discussed an existential model for psychotherapy that asserts that fear of death is a significant central issue for all persons. In that model, fear of death is a source of anxiety and a motivator for behavior. If, as concluded by Sontag (1978), cancer is a metaphor for death, and death is a universally stressful issue, then cancer may be considered similarly stressful.

This perspective is supported by Albrecht, Walker and Levy (1982) who studied social distance from the stigmatized. In that study, subjects were asked to rate the social desirability or undesirability of persons having one of a number of conditions. Albrecht, et al. (1982) found that while persons having cancer were stigmatized less than persons with criminal habits, drug addiction, or mental illness, persons with cancer were stigmatized more than persons with heart disease, diabetes, or disfiguring scars.

Peters-Golden (1982) compared perceptions between a group of women having experienced breast cancer, and a group of men and women drawn from a normal population. She found that persons without cancer believed that shame and disfigurement were the paramount concerns for the woman with breast cancer. Those women having personally

experienced breast cancer reported pain and fear of dying were their most significant concerns.

The above results were consonant with conclusions drawn by Wortman (1984) from anecdotal experiences drawn from long association with cancer patients. She reported that others were so influenced by their own fears and misconceptions about cancer that feedback to the cancer patient was often inaccurate or irrelevant, often to the extent of being useless or injurious to the patient. Thus, the literature suggests that cancer is an illness whose development is likely to be stressful both intrapsychically and interpersonally.

Investigations of the relationship between life stressors and negative health outcomes are frequent in the literature. Uhlenhuth and Paykel (1972) asked three groups of psychiatric patients and nonpatient relatives of psychiatric patients to report occurrence of psychiatric symptoms and recent history of stressful life events. Patients were grouped according to the form of treatment received: as inpatients, outpatients, or as day treatment patients. Symptoms and life experiences were self-reported by patients and by nonpatient relatives. Life experiences were drawn from a list of stressful life events and were ranked by respondents according to perceived degree of stress. Patients of all three groups, especially the inpatient and day patient groups, reported significantly greater numbers of stressful life events than did the nonpatient group. A positive correlation was demonstrated between stress scores and symptom intensity among outpatients and day patients. Women patients reported symptom intensities 25% higher than did men. Uhlenhuth and Paykel's (1972) study supports the conclusion that life stressors, including

cancer, correlate with increased occurrence or perception of psychiatric symptoms. Porritt (1979) noted a methodological problem with such studies, however: ex post facto self-reports may be influenced by one's satisfaction with life. A person displeased with his or her lot may identify life experiences as more stressful than might a more satisfied person. Also, as noted by Sarason, et al. (1978), pre-existing health conditions may cause the individual to exaggerate the attribution of stress to life events, especially when considered retrospectively.

In a study of the relationship between stress, social support, and survival from breast cancer, Funch and Marshall (1983) questioned 352 mastectomized women about stressors. Stressors were grouped as objective (e.g., death or illness of a family member, or unemployment within the household) or subjective (e.g., tiredness, feeling upset, or perceiving family income as inadequate). Subjects were grouped by age into premenopausal, perimenopausal, and postmenopausal categories because of the significance of hormonal influence on breast cancer. After a 20 year period, living subjects were again interviewed. Resultant data indicated that objective stress was related to decreased survival of women in the older group, and subjective stress was related to decreased survival among younger women. Neither objectively apparent nor subjectively perceived stress correlated with survival among the perimenopausal women. The study thus demonstrated a link between types of stress and physical health outcomes for women in certain age groups who had experienced cancer.

Not all studies have reported negative health sequelae arising from stress. Maloney (1982) measured state and trait anxiety, somatic complaints, family problems, and job satisfaction among 30 intensive

care nurses and 30 non-intensive care nurses, assuming that the intensive care nurses were subjected to a higher level of job-related stress. Contrary to the expected outcome, the non-intensive care nurses demonstrated higher levels of anxiety, somatic complaints, and family problems. Job satisfaction was similar between the two groups. Maloney (1982) suggested that perhaps nurses highly reactive to stress did not remain in the area of intensive care, leaving those who adapt well to stress. Another proposed explanation was that a high degree of identification within the group of intensive care nurses allowed a strong sense of available social support. The former explanation may not be operant in the case of persons with cancer: one may self-select out of a highly stressful job; the person who develops cancer cannot walk away from the disease.

Another study did not support correlation between increased stress and psychological distress, as measured indirectly by frequency of use of mental health services (Blazer, 1980). Increased life event scores from 986 community based elderly subjects were not significantly associated with greater use of mental health services. Available social and economic resources were negatively correlated to a significant degree with an increase in the use of mental health services.

While most studies in the literature suggest some relationship between exposure to stress and negative psychological and physiological health changes, the degree of correlation varies considerably from one study to the next. This range of results suggests some variable or variables may intervene to alter the effect of stress on health outcomes. Intervening variables frequently proposed as buffering agents against stress are coping abilities and social support.

Social Support and Coping

Social support and coping, defined in various terms, have been considered in a number of studies in the literature. Several studies have examined these variables with stressful life events and their sequelae.

Pearlin, Menaghan, Lieberman and Mullan (1981) examined life events, long term life strains, self-concept, coping, and social support as factors influencing the formation of depression. In the conceptual model proposed by Pearlin and associates (1981), chronic life strains, such as long term financial worries, when added to situational events, such as loss of a job, produce a heightened sense of stress. Stress is perceived as a threat to the well-being of the individual. The perceived threat acts to erode self-concept, especially in the areas of self-esteem and sense of mastery. Altered self-concept leads to generation of symptoms, such as those of depression. Coping and social support were seen as acting to reduce the perception of threat, thus attenuating disturbance to self concept.

Pearlin, et al. (1981) endorsed Selye's (1956) definition of coping, which holds that stress is a noxious influence that produces disequilibrium. Coping behaviors are attempts to return the organism to a state of homeostasis. Pearlin and associates (1981) conceived of social support as including the critical variables of intimate communication, trust, and solidarity. They noted, "...being embedded in a network is only the first step toward having access to support; the final step depends on the quality of the relations one is able to find within the network" (p. 340). This model suggests that socially supportive persons cannot be treated as a homogeneous

group. Different persons in the support network may benefit the subject differently. Similarly, different persons in the support network may represent different degrees of cost to the subject. Coping and social support were considered to be interactive; for example, one may artificially enlarge one's armory of coping alternatives by learning from socially supportive others.

To test their conceptual framework, Pearlin, et al. (1981) followed 1106 adults over a five year period. Initial ages ranged from 18 to 65 years. Occurance of life events, life strains, self-concept, coping, and social support were measured, as were occurrence of symptoms of depression. No significant relationship was demonstrated between either coping or social support and depression. A weak relationship was found between coping and social support and maintenance of a sense of mastery. Treated interactively, coping and social support correlated negatively with depression related to job disruption, but were not seen to vitiate response to other stressful events. Results of the study by Pearlin, et al. (1981) were consistent with their hypothesis that coping and social support act on perception of the stressor, rather than on symptoms of depression arising directly from the stressor.

A limitation of the study was that depression was the only outcome measured. Further, social support as used in the study was not clearly defined, a number of life strains were examined, and the five year period between the initial and follow-up interviews was arbitrarily selected.

Revenson, Wollman and Felton (1983) conducted a longitudinal study of shorter duration than that cited above to evaluate the

effect of social support on a sense of mastery, self-esteem, acceptance of the patient role, and acceptance of death. Subjects were all persons having experienced the stress of development of cancer. All subjects were selected by convenience from the practices of physicians, and were diagnosed as having either lymphatic cancer or leukemia. Those forms of cancer were selected as criteria for admission to the study as they are systemic forms of cancer not usually disfiguring or requiring mutilative surgery. Half of the subjects had been diagnosed within the previous year. Subjects were interviewed for a second time seven months after the initial interview.

Revenson, et al. (1983) estimated social support by asking the frequency of social contacts within the week previous to the interview. Social contacts were grouped according to the following characteristics: warmth and friendliness, understanding and sympathy, helpful advice, useful information or suggestions, doing something nice for the subject, providing help to the subject, sharing enjoyable activities with the subject, and spending pleasant time with the subject. Subjects were asked to list stresses associated with their illnesses. Stresses cited included existential issues such as death anxiety and fear of an uncertain future, and stresses arising from physical aspects of their disease, such as alopecia resulting from chemotherapy, and disruption of usual routines.

Significant correlations were a positive relationship between higher levels of social support and greater feelings of personal growth, and a negative relationship between level of social support and a sense of personal mastery. Revenson and associates concluded that while social support had little appearance of influencing

personal adjustment, a more accurate assessment might be that supportive relationships contribute both "true" support and an element of stress. The true support component was seen as those aspects of social support that contributed to healthy adjustment to the disease. Socially supportive relationships were seen as stressful as well as beneficial, in that the subjects worried about supportive others and suffered inaccurate or insufficient feedback from others.

A strength of the study was that only systemic forms of cancer were considered as stressors. It was felt that generalized cancer, rather than that limited to a particular organ or site, would be perceived more uniformly as a generalized threat to the self-system. A limitation of the study was that socially supportive relationships were categorized only in terms of what behaviors were provided to the subject. Reciprocity within the relationship was not considered. Other methodological weaknesses were the small sample size (32 subjects), and the considerable range of recency of diagnosis (2 months to 8.5 years).

A study often cited to support the hypothesis that social support buffers the effects of stress was conducted by Nuckolls, Cassel and Kaplan (1972). While marred by serious methodological flaws, the study concluded that women experiencing a stressful lifestyle before and during pregnancy were significantly more likely to have problems at childbirth than were women with good self-concept, social resources, and positive attitudes about pregnancy.

Norbeck and Tilden (1983) replicated the study by Nuckolls, et al. (1972). In the modified replication, a larger sample was drawn from a more general population than the original sample of military wives. Results of the

more recent study partially supported the findings of the original study. High stress and low social support were found to relate to emotional disequilibrium. High stress, low social support, and emotional disequilibrium were related to complications of pregnancy, delivery, and infant well-being, but to a much smaller extent than found by Nuckolls, et al. (1972).

Tilden (1983) investigated the relationship between life stress within the previous year; emotional, informational, and tangible support available; and, emotional disequilibrium measured in terms of state anxiety, trait anxiety, depression and self-esteem. She found that among persons with either high or low levels of life stress, subjects with greater available social support experienced less emotional disequilibrium than did subjects with less available social support.

Wilcox (1981) randomly selected 320 adults living in a large community and applied instruments measuring psychiatric symptoms, mood states, life experiences, and available social support. Social support was measured in terms of emotional, tangible, and informational support, and in terms of supportive persons available to the subject. Wilcox (1981) found that life experiences considered interactively with social support were significantly correlated in a negative direction with levels of psychological distress.

Billings and Moos (1981) used a stratified sample of subjects in a study of the role of coping responses and social support in affecting mood and symptom formation resulting from life stresses. Stress was measured in terms of negative life change events. Respondants were asked to describe a recent personal crisis and the

coping behaviors associated with it. Social support was measured quantitatively by counting numbers of relationships and amount of social activity, and qualitatively by examining cohesion, expressiveness, and conflict within family relationships. Outcomes were measured in terms of mood states, degree of anxiety, and presence or absence of such physical symptoms as headache, loss of appetite, indigestion, and insomnia. Billings and Moos (1981) found small but significant differences in methods of coping used by men and by women. For both genders, dysphoria, elevated anxiety, and physical symptom occurrence were negatively correlated with social support. Quantitatively, social support was found to be quite similar for men and women. Qualitatively, women used richer social resources to better effect than did men.

Investigation of the relationship among pre-stress states, stressors, coping behaviors, social support, and physiologic and psychologic outcomes are complicated by difficulty in isolating variables. Individuals interact freely with their environments. Events of varying stress occur constantly, and health outcomes are influenced by a gestalt of personal vulnerabilities and environmental risk factors. Traumatic incidents in childhood may load subsequently experienced stressors with special meaning. Introjection of cultural values may affect coping behaviors. It is not surprising that correlational studies examining the role of social support as a buffering agent against the effects of stress have not demonstrated strong relationships between the variables. Still, evidence of such a buffering effect is accumulating, and investigations of intervening variables, such as those in the present study, are needed.

The Confidant Relationship

The confidant relationship is a special form of social support. The confidant relationship has been implicated as a stress buffering force: perhaps a main actor in diminishing negative health outcomes.

Lowenthal and Haven (1968) studied 280 elderly subjects living in a community over a period of three years to determine if social privilege or social isolation acted to affect adaptation to life events; specifically, whether a confidant relationship reduced vulnerability to sequelae of age-linked social losses. Psychological adaptation was rated using a satisfaction-depression scale, estimations by three psychiatrists who reviewed cases without seeing the subjects, and by asking subjects to report whether they felt old or young for their biological ages. Presence or absence of a confidant was self-reported.

In the study sample, 69% of the women and 57% of the men indicated presence of a confidant. The confidant was defined as someone the subject can "...confide in or talk to about your problems" (p. 22). Likelihood of having a confidant was highest for subjects between the ages of 65 and 74 years. Married subjects were most likely to have a confidant, widowed persons less so, and single persons least of all. Married men most often indicated their wives as confidants. Fewer married women named their husbands as confidants, instead reporting kin or other women.

Lowenthal and Haven (1968) concluded that while objective measurement is difficult to accomplish, the intimate confidant relationships helped preserve morale and mental health more than did high social interaction or social role. In fact, the authors suggested

that womens' apparent greater capacity for intimate relationships may contribute to the greater longevity of women.

A problem in the methodology of the study was that the confidant relationship was defined only by the willingness of the subject to disclose personal matters to someone. By that definition, a person removed from frequent contact with the subject or not in a reciprocal relationship with the subject could be considered a confidant: a relative seen once a year, a deceased spouse, or a pet could conceivably be considered a confidant. This unidimensional definition of the confidant relationship fails to consider the interactive nature of social relationships.

Ability to generalize study results was diminished by the selection of older subjects exclusively. The pattern of relating may change over the course of one's lifetime. The buffering effect of a confidant may be different for a person at age 20 than at age 70 years.

Noting that demographic variables often were related to incidence of mental illness, but that little had been done to establish the mechanism by which the variables were related, Brown, Bhrolchain and Harris (1975) examined the etiology of depression among urban women of lower socioeconomic status. One factor considered was the effect of having a confidant. In that study, the confidant relationship was defined as one in which the subject could discuss matters that were troubling and in which the subject made frequent contact with the other person. Women who reported a confidant relationship were divided into three groups: a) women with close ties to another person with whom very frequent contact was made (i.e., living together); b) women without the first type of relationship, but with a confiding

relationship with someone seen at least one time each week; and
c) women having neither of the first two classes of relationships,
but having a confiding relationship with someone seen less than one
time each week. A control group was composed of women reporting no
confiding relationship. While confiding persons reported by women
in the first group were not restricted by gender or familial relationship,
in that study all women in the first group named boyfriends or husbands
as confidants. Women in the first group were considered to have a
high degree of intimacy available. All other groups were considered
to have a low degree of intimacy available. Of 45 women studied,
all of whom reported experiencing a severely stressful event or major
difficulty within the previous year, 4% of women categorized as having
a high degree of available intimacy developed symptoms of depression.
Of women experiencing such a stressor but having a low degree of
intimacy available, 38% were found to have depressive symptoms.
Differences in the rate of development of depression among women with
either high or low degrees of intimate support were not significant
in cases where no stressful life event had occurred within the previous
year.

The investigators did not purposefully limit highly intimate
confidant relationships to opposite-gender persons living with the
subjects, but did suggest that such relationships may be especially
effective at buffering distress. They speculated that perhaps an
intimate relationship with a spouse or partner reinforced the subject's
ability to use available social support by affirming identification
with culturally accepted roles.

Frequency of contact between subjects and their confidants was

deemed very important. Subjects having contact with confidants less frequently than once a day were found to develop depression at a rate not significantly different from persons having no confidant at all.

Brown, et al. (1975) expanded the definition of the confidant used by Lowenthal and Haven (1968) in that they included frequency of contact as well as disclosure on the part of the subject as necessary in a confidant relationship. They did not, however, include the dimension of reciprocal disclosure by the confidant.

Sampling error may account for the finding that boyfriends or husbands were the only highly intimate confidant relationships among women in that study, considering the finding by Lowenthal and Haven (1968) that older women frequently cited kin or other women as confidants rather than husbands. The difference might also be explained by age differences between the subject groups.

Miller and Ingham (1976) studied persons coming to a medical practice in England in an attempt to gauge the stress buffering effect of the confidant relationship. Subjects were matched for age and gender from a non-patient population. No measure of stressful life experiences was used. Each subject was asked to report the frequency of nine physical symptoms: backache, headache, heart palpitations, dizziness, breathlessness, tiredness, anxiety, depression, and irritability. Subjects were asked whether there was someone with whom they could talk things over. If the answer was affirmative, the subject was further asked whether the person lived nearby, whether the person was reasonably available, whether the most personal matters could be discussed with the person, and whether that person reciprocated by disclosing to the subject. If the subject answered

affirmatively to each question, the subject was considered to have a confidant. No attempt was made to determine whether the confidant was a spouse, kin, or friend. Each subject was asked to subjectively report whether she or he had many friends in the neighborhood environment, or if employed, in the work environment. If the subject reported many friends in both environments, he or she was considered to have many acquaintances; if only in one environment, some acquaintances; if in neither, few acquaintances. The sample, drawn from medical practices, was composed of 4435 persons over the age of 16 years, with 36% being male, and 64% being female. A control group was constituted of 172 subjects not having seen a physician in over three months.

Among women, presence of a confidant was associated with lower scores for tiredness, anxiety, and depression. A significant negative correlation was seen between the number of acquaintances and the degree of symptoms, suggesting some advantage to greater numbers of supportive others. Results from males showed similar correlations, but the difference between reduced degree of symptoms elicited from men with confidants and men with many acquaintances was small. The men appeared to be able to use either a confidant relationship or large numbers of supportive others to similar effect, thus suggesting a sex difference in ability to use a confidant relationship.

Any estimate of the confidant relationship must include some subjective opinion about the degree of disclosure permitted by the parties in the relationship. Frequency of contact represents a component of availability that may be measured objectively by count. Brown, Bhrolchain and Harris (1975) asked subjects to categorize frequency of contact (daily, more than once a week, less than once

a week). Miller and Ingham (1976) accepted the more subjective response of whether the confidant was reasonably available. The latter study did, however, consider the dimension of mutuality in the confidant relationship, whereas previous studies had not.

Miller and Ingham's (1976) were similar with respect to gender differences to those of Lowenthal and Haven (1968), who stated that cultural restrictions imposed on men may tend to limit intimate contacts to sexual relationships. As the man becomes less virile because of age changes or because of illness onset, opportunity for alternate forms of intimacy may be less available for men than for women. Another possible explanation may be that men have different expectations from relationships than women, and may consider adequate availability or suitability for intimate personal disclosure differently than women.

Additional study of the confidant relationship is warranted because reported studies have drawn samples from populations lacking uniform stressors, and because previous studies defined the confidant in various terms. In the Lowenthal and Haven (1968) study, a geriatric sample was examined for responses to age-linked losses. No attempt was made to specify the type of losses or to select for subjects not affected by emotional or cognitive changes arising from organic neurologic conditions. Similarly, Brown, et al. (1975) did not identify the stressor against which the confidant relationship was presumed to protect the subject: possibly, the source of stress may have been the very confidant investigated as a stress buffering factor in the life of the subject. Miller and Ingham (1976) made no attempt to identify occurrence of a stressor at all, the study being strictly

correlational between frequency of symptoms reported, identification of a confidant, and numbers of friends.

Conceptualization of the confidant has been varied. Lowenthal and Haven (1968) considered the confidant someone to whom the subject could disclose personal matters. Brown, et al. (1975) included the criterion of very frequent contact between the subject and confidant, concluding that contact occurring once a day or more was necessary in the true confidant relationship. Miller and Ingham (1976) introduced the criterion of mutual reciprocity between members in the confidant relationship, but reduced estimation of frequency of contact to a nominal statement of reasonable frequency of contact between the confidant and the subject. As will be discussed in the subsequent conceptual framework for the present study, the confidant in this study is considered as multidimensional, influencing the subjects' sense of place in the environment, sense of efficacy, and sense of stability over time. Estimation of the effect of the confidant must include the subjects' ability to disclose to the confidant, the mutuality of the relationship, and an objective means of evaluating frequency of contact between the confidant and the subject.

Psychological Responses to Cancer

Development of a life-threatening illness is a significant event, to which intrapsychic, interpersonal, and behavioral adjustments must be made. It is difficult to imagine receiving a diagnosis of cancer with equanimity. That adjustment must be made to development of cancer is so apparent that this assumption is almost universal in the literature regarding cancer. Specific responses to cancer and how they influence adjustment are less well understood.

Derogatis, Morrow, Fetting, Penman, Piasetsky, Schmale, Henrichs and Carnicke (1983) examined prevalence of psychiatric disorders among cancer patients at three cancer centers. Each of the randomly selected 215 subjects was assessed by standard diagnostic psychiatric interview, self-report of symptoms, and observer estimate of global adjustment to illness and physical functioning. Where appropriate, each subject was assigned a diagnosis consistent with the American Psychiatric Association criteria, as stated in the Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. (1980). Of the 215 subjects, 47% were given psychiatric diagnoses. Ninety-four of the 101 subjects diagnosed were assigned diagnoses on Axis I, 19 were assigned diagnoses on both Axis I and Axis II, and seven were given only Axis II diagnoses. Axis I refers to diagnoses of current clinical syndromes, while Axis II refers to characterologic personality disorders. No attempt was made to eliminate persons having psychiatric diagnoses from the sample, nor were persons having neurological tumours excluded.

Adjustment disorders were found among 68% of all persons diagnosed, for a prevalence rate of 32%. The next largest diagnostic group was the major affective disorders, with a prevalence rate of 6%. Organic mental disorders had a prevalence of 4%, personality disorders 3%, and anxiety disorders 2%. No schizophrenic, schizophreniform, or manic disorders were found.

Derogatis, et al. (1983) reported the finding of a 47% prevalence rate for mental illness among cancer patients is higher than the 12% to 30% prevalence often cited among the general U.S. population. The prevalence was similar to that of mental illness in other medical cohorts.

As noted above, over two-thirds of those diagnosed met criteria for diagnosis of an adjustment disorder. Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. (American Psychiatric Association, 1980) criteria for diagnosing an adjustment disorder are as follows: a) maladaptive reaction to a stressor, developing within three months of exposure to the stressor; b) impairment of functioning or symptoms in excess of normal or expected response to the stressor; c) not merely an overreaction to the stressor or exacerbation of a pre-existing mental disorder; d) assumption that the disorder will subside if the stressor is eliminated or a new level of adjustment is achieved; and, e) the condition does not meet criteria for other diagnosis or uncomplicated bereavement. Symptoms of adjustment disorder may be manifest in anxiety, depression, withdrawal, conduct changes, or a combination of the foregoing.

Psychosocial adjustment to mastectomy was the focus of a study by Jamison, Wellisch and Pasnau (1978). Forty-one women subjects were drawn by convenience from a self-help group membership and by referral from the American Cancer Society. Each subject was extensively questioned regarding emotional responses before and after development of the cancer, in terms of relationship with spouse, and attitudes toward hospital and medical personnel. Additionally, subjects were asked to complete instruments relating to marital adjustment, locus of control, and personality.

Results indicated mastectomy was related to varied responses in the spousal relationship, from little change to expression of anger and hatred. Women under the age of 45 years reported subjectively poorer adjustment and greater use of mental health services than

did women over the age of 45 years. Over one-fourth of women in the study sample considered suicide because of the mastectomy or because of emotional states associated with the illness. Women who considered suicide tended to view health care providers as poorly understanding their needs. Concerns cited by the subjects related to a sense of mutilation, loss of feelings of femininity, and fear of death.

While numerous women expressed difficulty adjusting to their mastectomies, the majority (60%) rated their adjustment as excellent or very good. Seventy-one per cent rated their husbands' reactions as extremely or very understanding, and 76% felt that the mastectomies had no effect or had a positive effect on sexual satisfaction. It is interesting to note the prevalence of mental illness among cancer patients as found by Derogatis, et al. (1983) was 47%, a figure similar to the 40% of women reporting difficulty adjusting to having a mastectomy (Wellisch, et al. 1978). Whether these data relate to similar variables is not clear.

Another study examining adjustment to breast cancer was reported by Peters-Golden (1982). In that study, 100 women attending cancer clinics at a health sciences university were selected by convenience and compared to 100 men and women attending that same institution's dental clinic. All of the women in the first group had been diagnosed with breast cancer; none of the subjects in the control group had personally experienced cancer in any form. The purpose of the study was to compare perceptions about social support available to cancer patients between the two groups. Subjects were interviewed to obtain data on personal definitions of health, beliefs about how one acquires cancer, aspects of communication about cancer, actually occurring or

expected feeling following diagnosis, changes in social relationships after development of cancer, and opinions about alternative treatments for cancer. Both groups were asked to cite what they thought were the major concerns of women having undergone mastectomy.

Of the cancer-free sample, 39% thought the stares of others would be a major concern, 24% named fear of recurrence, 19% named changes in self-image, 15% cited concerns about appearing normal, and 10% reported adjusting to old routines would be a concern. Four per cent of the cancer-free sample thought mastectomized women would have nothing to worry about. Responses of women having experienced mastectomies were not presented in per centages, but the report indicated that the major concerns of the sample with cancer were invalidism, dependancy, recurrence, and death. The cancer-free group seemed much more concerned with cosmetic effects of the illness.

In the Peters-Golden (1982) study, half of the women with cancer saw the support they received as adequate, 26% felt they received inadequate support, and 9% reported that they received inconsistant support. Approximately three-fourths of both groups believed they were or would be treated differently after developing cancer. Although similar portions of both groups felt the cancer victim is treated differently after diagnosis, there was little agreement as to how interpersonal relationships would change. The cancer-free group expected others would pity them (32%), or be nicer to them (29%), or avoid them (15%). The women in the cancer group believed others pities them (14%), were nicer to them (3%), or avoided them (56%). Additionally 72% of the subjects in the cancer group felt they were misunderstood by others. The investigator concluded that persons

not having cancer did not appreciate the true concerns of the cancer patient and greatly overestimated the extent of social support available to the person who develops cancer.

Both the Jamison, et al. (1978) study and the Peters-Golden (1982) study made no effort to limit the amount of time having passed between the time of diagnosis and admission to the study. Response to grief and crises is generally considered to be time-bound. Adjustment 20 years after development of cancer may be very different from that six months after diagnosis. For example, fear of death from recurrence of cancer may diminish with time. In the Peters-Golden (1982) study, it was difficult to understand why the groups were composed as they were. No attempt was made to match the control group to the cancer group, except to draw them from the same institution. If the intention was to study the effect of breast cancer on the social support systems of women, perhaps the control group could have been constituted from persons in the support networks of women with breast cancer. If the purpose of the study was to compare expected and experienced responses to cancer, selection of a form of cancer such as breast cancer whose locus is so associated with sexual functioning and gender identity would seem to unnecessarily limit the generalizability of the data.

The studies cited above do support the hypothesis that the development of cancer is associated with increased likelihood of mental illness. Development of cancer is related to differences in perceived needs between persons with cancer and potentially supportive others.

Conceptual Framework

Several conceptualizations of social support appearing in the literature (Weiss, 1974; Cobb, 1976; Kahn & Antonucci, 1980) have

influenced the development of this study. Using the "convoy" model based on attachment theory, Kahn and Antonucci (1980) discussed intrapsychic patterns for intimate, mutual relationships, and thus most closely addressed the confidant relationship.

Kahn and Antonucci (1980) proposed that as an infant, each person establishes a primal relationship with a parent figure. The child and parent interact in a way that most nearly meets needs for each. Ideally, the child learns to trust the parent, learns to disclose needs, and learns to gratify parental needs, such that the relationship continues. As the infant develops, needs become more complex. Additional relationships must be formed to satisfy the expanded needs. A "convoy" of relationships is established, wherein the sum of the socially supportive relationships recapitulates the primal relationship with the parent. From the universe of potential social relationships, those persons are selected who best contribute to the reconstruction of the relationship with the primal parent. Throughout the life span, needs change according to one's situation, developmental level, and ego boundaries. The size of the convoy and its constituent members change over time.

Kahn and Antonucci (1980) described the function of the convoy as assisting the individual to meet complex needs exceeding the capacity of the central, primal relationship. In the present study, the confidant is conceived as the central figure within the convoy, to whom the subject first turns to meet needs, and around whom are arrayed the other convoy members. The confidant is a proxy parent with whom the subject can disclose personal worries, with whom frequent, direct contact is maintained, and with whom behavior occurs

that is aimed at reciprocally meeting the needs of both parties.

As suggested by Pearlin, et al. (1981) and Revenson, et al. (1983) it may be assumed that all relationships have costs as well as benefits. Wortman (1984) noted that "...persons with cancer are likely to find that their closest and most important relationships are characterized by both positive and negative elements" (p. 2347). Although the subject experiences cancer directly, the needs of the confidant are inevitably influenced by the disease process. Examination of the cost and reciprocity within the confidant relationship appears salient to understanding the influence of the confidant on the psychological state of the subject.

Numerous measures of psychological functioning may be examined in an effort to understand psychological adjustment. In this study, anxiety and depression are considered to be proxy variables for the broader concept of psychological adjustment. This is consistent with numerous studies and anecdotal accounts of affective states of persons with cancer (Derogatis, et al., 1983; Plumb & Holland, 1977; Peck, 1972; Krumm, 1982; Wortman & Dunkel-Schetter, 1979). Dysphoric states of depression and/or anxiety are considered to represent difficult adjustment to the presence of cancer.

The supportive relationship was seen in this study as an interactive factor that allows the subject to more accurately perceive stressors and facilitates selection by the subject of effective coping behaviors. By increasing accuracy of perception of stressors and assisting with selection of effective coping behaviors, social support may effect psychological adjustment to stressors.

Hypotheses and Research Questions

Nine research questions were addresses in this study. Directional hypotheses were associated with the first two research questions.

The research questions and hypotheses follow:

1. Is there a relationship between presence of a confidant and the level of anxiety among persons with lymphatic cancer or multiple myeloma? The associated hypothesis: Persons with cancer who have a confidant relationship will have lower levels of anxiety than will those who lack a confidant relationship.
2. Is there a relationship between presence of a confidant and the level of depression among persons with lymphatic cancer or multiple myeloma? The associated hypothesis: Persons with cancer who have a confidant relationship will have lower levels of depression than will those who lack a confidant relationship.
3. Does presence of a confidant vary with the age of subjects?
4. Does presence of a confidant vary with the gender of subjects?
5. Does presence of a confidant vary with the marital status of subjects?
6. Are cost, conflict, and reciprocity of intimate relationships perceived by subjects with confidants similar to those perceptions of subjects without confidants?
7. Do levels of anxiety or depression vary with age or gender of subjects?
8. Do levels of anxiety vary among persons who perceive the cost, conflict, and reciprocity of social relationships differently?
9. Do levels of depression vary among persons who perceive the cost, conflict, and reciprocity of social relationships differently?

CHAPTER II

METHODS

This study explored relationships between presence or absence of a confidant and psychological adjustment to lymphatic cancer or multiple myeloma, two systemic forms of cancer. The method by which those relationships were examined are discussed in this chapter. This chapter includes a description and rationale for the design of the study, criteria for selection of the sample, data collection methods, and procedures used. Instruments selected for data gathering are discussed, as are means to protect the subjects.

Design

This is an ex post facto correlational field study. Results were intended to provide additional data regarding the relationship between social support and health outcomes, specifically psychological health. An ex post facto correlational format was selected as being most likely to yield useful data within the constraints of the scope of the study.

In this study, the sample was divided between two groups: those with and those without a confidant relationship. Data resulting from psychological measurements were examined to determine if relationships existed between availability of a confidant and psychological states.

Subjects

Subjects were drawn by convenience from persons having received treatment at Oregon Health Sciences University (O.H.S.U.), Good Samaritan Hospital and Medical Center (G.S.H. & M.C.), and Providence Medical Center (P.M.C.). Before contacting potential subjects, a review of each subject's medical record was undertaken to determine

eligibility for the study. Criteria for admission to the study were as follows:

- a) a diagnosis of lymphatic cancer or multiple myeloma.
- b) the above diagnosis must have been made within 12 months prior to induction into the study. For computing recency of diagnosis, a period of 15 days or less was not counted as an additional month, while a period of more than 15 days was counted as an additional month.
- c) no prior cancer diagnosis of any form previous to the current diagnosis.
- d) not taking prescribed anti-depressant or tranquilizing medications, either for control of dysphoria or for other reasons.
- e) 18 years of age or older.
- f) able to read and understand non-technical written instructions in English.

At the Oregon Health Sciences University, all persons who met the above criteria, according to their records, were approached. At Good Samaritan Hospital and Medical Center, and at Providence Medical Center, Institutional Review Committees required that permission to contact potential subjects be obtained from treating physicians before such contact was made. Thus, at the latter two institutions, some few potential subjects were not contacted, as permission from the physicians was withheld.

Procedures for induction of subjects at O.H.S.U. are summarized in Figure 1. After identification by medical oncologists or by medical records personnel, patients were approached in person by the investigator while the patient was in the clinic or in the hospital.

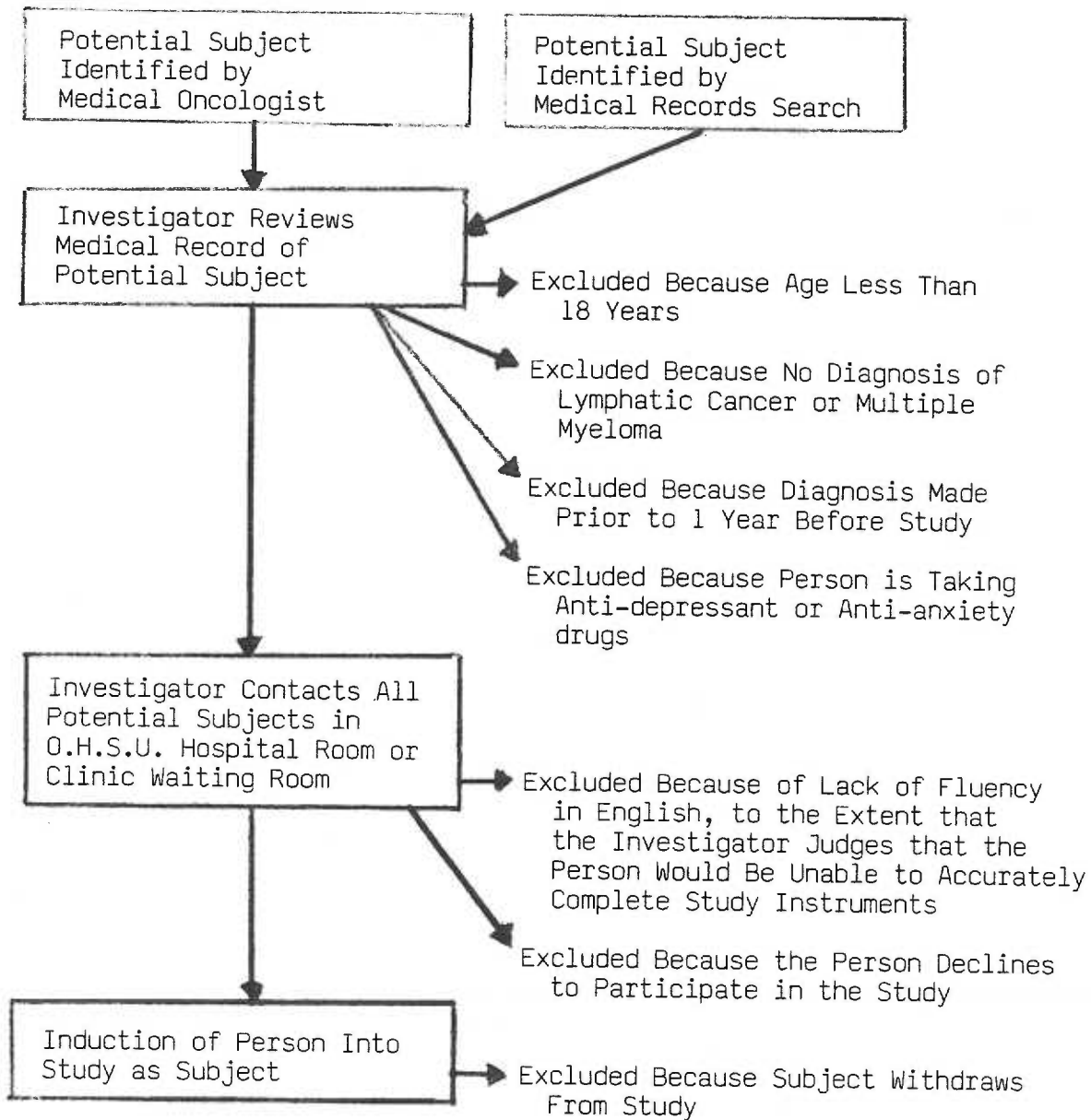


Figure 1: Summary of Procedure for Induction of Subjects Identified at Oregon Health Sciences University.

Procedures for induction of subjects at Good Samaritan Hospital and Medical Center and at Providence Medical Center (summarized in Figure 2) were somewhat different than those used at O.H.S.U. Subjects treated at the private facilities often went to the offices of their private physicians for treatment after being released from the hospital, whereas most subjects treated at O.H.S.U. hospitals returned to O.H.S.U. clinics for subsequent treatment. Therefore, potential subjects were not available in person to the investigator, and such persons were contacted by mail.

Subjects contacted by mail received the following items in a packet: a cover letter describing the study in general terms similar to the information given verbally to subjects at O.H.S.U. (Appendix A); a consent form allowing use of the completed materials in the study (Appendix B); the study instruments (Appendix C); and, a stamped return envelope.

Instruments

Four instruments were used in this study. Instruments were used to measure presence of a confidant, state anxiety, state depression, and the cost, conflict, and reciprocity of supportive relationships.

Presence of a Confidant Relationship

Each subject was asked to complete a one-page questionnaire developed for this study. The questionnaire was based on three characteristics of the confidant: disclosure by the subject (one item), disclosure by the confidant (one item), and frequency of contact between the subject and the confidant (two items). The questionnaire, included in Appendix C, was pilot tested with 16 graduate nursing students. In the pilot test, 62.5% met criteria for having a confidant

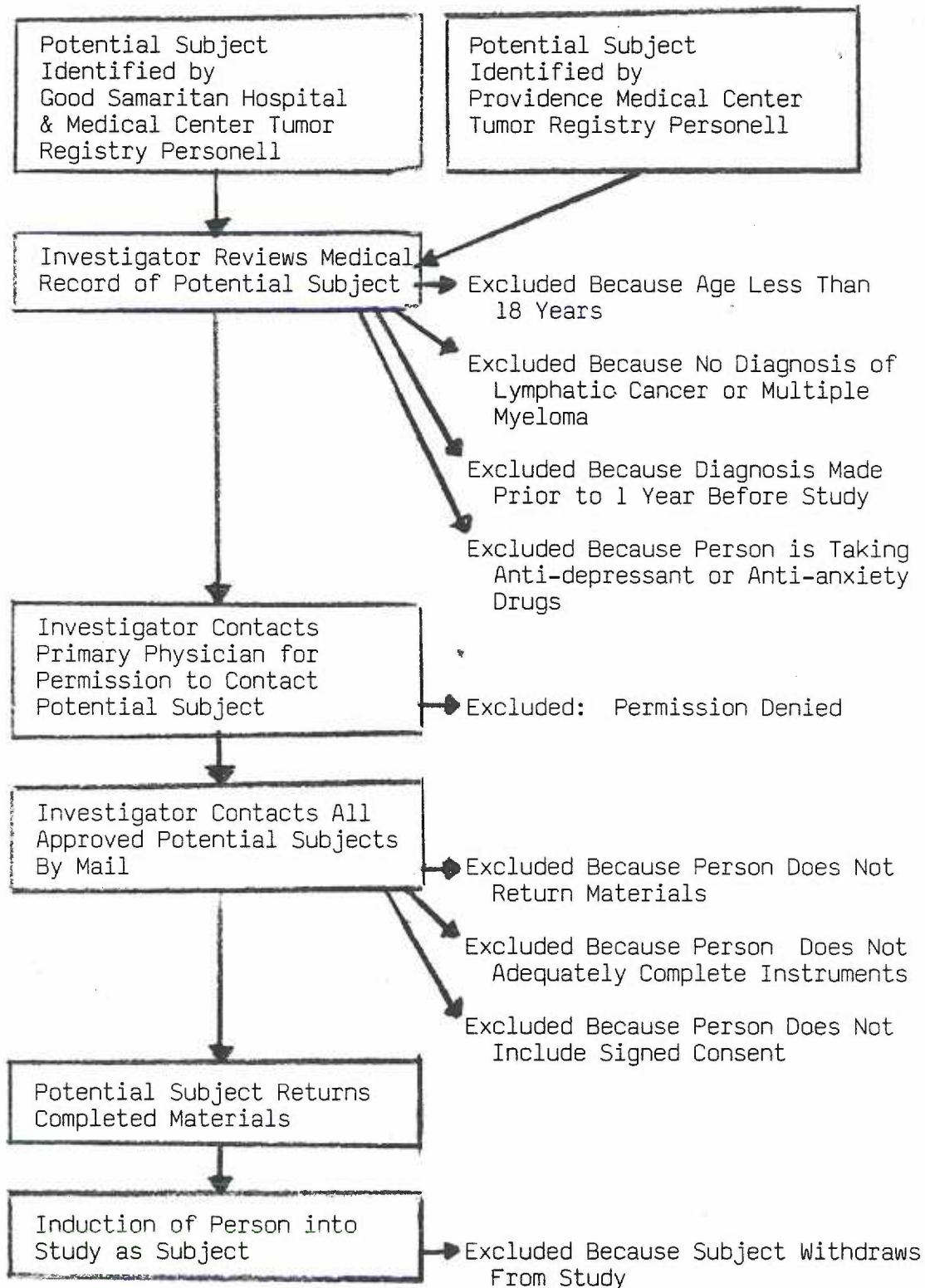


Figure 2: Summary of Procedure for Induction of Subjects Identified by Good Samaritan Hospital & Medical Center and Providence Medical Center.

as defined in the present study. This is consistent with the Lowenthal and Haven study (1968), wherein 67% of subjects were found to have confidants, using a less restrictive definition of the confidant relationship. Eight mental health professionals (nurse educators and nurse practitioners) reviewed the instrument and affirmed face validity.

State Anxiety

State anxiety was measured by use of Form X of the Spielberger State-Trait Anxiety Inventory (S.T.A.I.) (Spielberger, Gorsuch & Lushene, 1970). This instrument measures both state anxiety (that level of anxiety perceived by the subject at the time the questionnaire is completed) and trait anxiety (the level of anxiety generally felt by the subject). This instrument, included in Appendix C, consists of two scales of 20 questions each to which the subject selects the most applicable of four Likert-scaled responses. Subjects were asked to complete both scales, although only the state portion was used for this study. The state portion was considered more representative of the subjects current psychological adjustment.

Test-retest reliability of the state portion of the S.T.A.I. is low, as would be expected of an instrument measuring current emotional status. Internal consistency is high, and concurrent validity is also high (with IPAT Anxiety Scale, .75; with the Taylor Manifest Anxiety Scale, .80; with the Zuckerman Affect Adjective Checklist, .52).

State Depression

State depression was measured using Form C of the Lubin Depression Adjective Checklist (D.A.C.L.) (Lubin, 1965). This instrument was selected because it does not include items measuring physiologic

indicators of depression. Physiologic states often considered symptoms of depression (e.g., anorexia, lethargy, and fatigue) may arise from cancer or its treating agents. The D.A.C.L., included in Appendix C, consists of a list of 32 adjectives. The subject selects those adjectives that pertain to herself or himself at the time of completion of the instrument. Twenty-two of the items suggest depression and are positively scored. Ten of the adjectives suggest a normophoric state and are scored if not checked by the subject.

Split-half reliability of the D.A.C.L. was .92 for a normal sample, and .91 for depressed psychiatric hospital patients. Concurrent validity ranged from .32 to .50 when compared to the D Scale of the Minnesota Multi-Phasic Personality Inventory.

Cost, Conflict, and Reciprocity of Social Relationships

What one puts into significant social relationships, and how one perceives conflict and balance are factors addressed by the Cost and Reciprocity of Social Support (C.A.R.S.S.) questionnaire (Tilden & Stuart, in press). This instrument was selected to compare relationships between and within study groups because of the instrument's ability to address mutuality in relationships. The C.A.R.S.S., included in Appendix C, consists of six subscales. The first, Cost, relates to subject perception of the cost of significant relationships (the 5 items address cost in terms of time, thought, effort, services and things). The second subscale, Get, relates to what the subject perceives he or she is receiving from the relationship (seven items addressing affection, status, information, money, goods, appreciation, and services). The third subscale, Give, uses the same items as the Get scale but seeks perceptions of what the subject gives back to

significant others. The fourth subscale, Satisfaction, relates to the subject satisfaction with the balance of the relationship (two items regarding perception of balance and desire to change the balance). The fifth subscale, Conflict, uses three items to quantify the stress, trouble, and worry perceived by the subject as an aspect of significant relationships. The sixth and final subscale, Equity, consists of one item whereby the subject identifies perceptions of equality in the listed relationships.

To complete the instrument, the subject lists in descending order, the significant interpersonal relationships within the subject's social support system. The most significant relationship is entered as Person 1, the next most significant as Person 2, and so on through the five most important relationships. For each of the five persons so identified, the subject responds to the 25 items using a five point Likert scale.

Internal consistency, established during testing of the instrument in a pilot study of 28 subjects, ranged from .64 to .85 using Cronbach's alpha coefficient. In that pilot study, 64% of the subjects listed spouse or partner as Person 1, the most significant relationship to the subject. This suggests the instrument may be well suited to investigation of the confidant relationship.

Demographic Information

Demographic information was obtained from two sources: review of subjects' medical records, and from data entered by the subjects on the final page of the C.A.R.S.S. questionnaire. Data taken from the medical record included age, diagnosis, number of concurrent physical diagnoses, presence of any psychiatric diagnoses, recency

of cancer diagnosis, cancer history, and medications prescribed. Demographic data obtained from the C.A.R.S.S. instrument included marital status, education level, number of children, number of persons in the subject's household, and the number of family members living within a 50-mile radius of the subject.

Protection of Human Rights

Considerations were made in the design and conduct of this study to hold confidential any information provided by subjects. Attempts were made to minimize any risks to the subject.

Protection of Confidentiality

Subjects were assigned code numbers and were instructed not to write their names on any of the study materials other than the study consent form. The signed consent forms, the coded instruments, and the identifying key were stored in separate locations in locked files. Subjects were informed that participation was entirely voluntary and that they could withdraw from the study at any time. The subjects were informed that should they choose to withdraw from the study, any material completed by them would be destroyed, as would any record identifying them with the study.

Minimizing Risk to the Subject

Recognizing that research investigating psychological sequelae to stressful life events may generate anxiety in those persons having experienced the stressful event, instruments were selected that did not demand highly personal or detailed accounts from the subjects. Instruments were selected with an eye to brevity and ease of completion to further reduce the likelihood that contact by the investigator would be stressful to the subjects. Approximately 20 minutes

were required by subjects to complete the study instruments.

The voluntary nature of participation in this study was emphasized, as was the option to withdraw at any time. Each subject was told to contact the investigator, a Psychiatric/Mental Health Nurse Practitioner, should the subject become distressed.

CHAPTER III

RESULTS

Included in this chapter are characteristics of the sample, and description of the data obtained with respect to hypothesized relationships and research questions. Data analysis procedures and the rationale for the choice of analytical methods are discussed.

Characteristics of the Sample

At the beginning of this study, subjects were approached by this investigator as they attended oncology outpatient clinics at the Oregon Health Sciences University. Eighteen potential subjects were contacted there, 16 of whom agreed to participate in this study. The rate of participation was thus 88.9% for subjects inducted by this method.

Subjects from Good Samaritan Hospital and Medical Center and Providence Medical Center were contacted by mail. Twenty-three potential subjects were contacted this way. Of those, 14 returned the completed materials and signed consent form, for a participation rate of 60.9%. Record review of persons participating in the study or declining to participate suggests that those persons opting not to participate were demographically similar to those persons agreeing to participate.

Demographic characteristics of subjects in both the Confidant Group and the Confidant-Free Group are portrayed in Table 1. The groups did not significantly differ in age, gender, number of children, number of persons sharing single family dwellings, number of family members living within a 50-mile radius of the subject, type or recency of diagnosis. Significant differences existed between groups

Table 1

Characteristics of Subjects

Characteristic	Group		Test	p
	Confidant Group n = 15	Confidant Free Group n = 15		
Age				
Mean	52.87	59.27	$\bar{t} = 1.018$.159
Range	21 - 79	28 - 78		
Gender				
Female	5	8	$\chi^2 = 0.543$.461
Male	10	7		
Race				
White	15	14	$\phi = .186$	
Black	0	1		
Marital Status				
Married	14	8	$\chi^2 = 4.261$.039
Single	0	1		
Separated	1	0		
Divorced	0	2		
Widowed	0	4		
Number of Children				
Mean	2.133	1.933	$\bar{t} = 0.665$.368
Range	0 - 6	0 - 5		
Family Members Living Within 50 Mile Radius				
Mean	3.429 ^b	8.308 ^c	$\tau_{pb} = .506$.178
Range	0 - 10	0 - 30		
Completed Years of Education				
Mean	13.733	11.071 ^b	$\bar{t} = 2.164$.020
Range	9 - 20	5 - 18		
Persons living in Subject Household (Single Family Residences Only)				
Mean	2.667	2.000 ^d	$\bar{t} = 0.088$.091
Range	1 - 6	1 - 5		

Table 1 (Continued)

Characteristics of Subjects

Characteristic	Group		Test	p
	Confidant Group n = 15	Confidant Free Group n = 15		
Concurrent Physical Diagnoses				
Mean	0.467	0.533	$\chi^2 = 0.194$	11.070
Range	0 - 2	0 - 2		
Months Since Diagnosis				
Mean	8.6	7.7	$t = 0.661$.259
Range	2 - 12	2 - 12		

a Categories collapsed for computing χ^2

b n = 14

c n = 13

d n = 12

as regarded marital status ($p = .039$) and educational level ($p = .020$), using χ^2 analysis with Yates' correction for the former and t statistic for the latter. Differences between groups in other demographic variables were not significant.

Of the 29 subjects describing residences, 27 lived in single family residences, one subject and his family shared a home with another family, and one subject lived in a nursing home. Subjects were being treated only for cancer, or for cancer and one or two concurrent non-cancer physical diagnoses.

Using nomenclature from the Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death (World Health Organization, 1977), cancer diagnoses were distributed as follows: 8 diagnoses of multiple myeloma, 6 of reticulosarcoma, 6 of nodular sclerosing Hodgkins disease, 4 of other named variants of lymphoma (malignant lymphoma and diffuse mixed lymphocytic-histiocytic lymphoma), 2 of Hodgkin's disease (unspecified), 2 of other lymphomas, and 1 each of nodular lymphoma and lymphosarcoma. No subject had more than one cancer diagnosis.

Examination of Hypotheses and Research Questions

As indicated, this study investigated nine research questions, with directional hypotheses associated with the first two. The first question was: Is there a relationship between presence of a confidant and the level of anxiety among persons with lymphatic cancer or multiple myeloma? The associated hypothesis was: Persons with cancer who have a confidant relationship will have lower levels of anxiety than those who lack a confidant relationship.

To test the data relative to this questions, mean anxiety scores

as indicated on the Spielberger State-Trait Anxiety Inventory state anxiety subscale were compared for the Confidant Group and the Confidant-Free Group. Student's t -test statistic was used, and differences in means were found not significant ($p = .095$) at a one-tailed probability level of $\alpha = .05$. Student's t -test statistic was selected as groups were independent and correlated, with $N < 30$. It must be noted that one subject in the Confidant Group varied markedly from the mean. That subject was in considerable pain, was quite aware that treatment had failed, and died within one week of participating in the study. If the outlying subject were excluded from the Confidant Group, the mean state anxiety score for the remaining, more homogeneous, members would have been significantly different from that of the Confidant-Free Group ($p = .020$). These data are summarized in Table 2.

The second research question was: Is there a relationship between presence of a confidant and level of depression among persons with lymphatic cancer and multiple myeloma? The associated hypothesis was: Persons with cancer who have a confidant relationship will have lower levels of depression than will those who lack a confidant relationship.

Again, the Student's t -test statistic was applied to determine whether means for the Confidant Group and the Confidant-Free Group were significantly different. No significant differences were found between Depression Adjective Checklist mean scores for the two groups (Table 2).

The third research question was: Does presence of a confidant vary with the age of subjects? Two statistical procedures were applied in an attempt to answer this question. Pearson's product-moment

Table 2

Comparison of mean scores for anxiety and depression between Confidant Group and Confidant-Free Group, with and without extreme case in the Confidant Group

Variable	Group n = 15	\bar{X}	Std. Error	Pooled Variance Estimate	
				t-value	One-tailed Probability
Anxiety	Conf ₁	34.60	3.73	1.35	.10
	ConfF	40.87	2.78		
	Conf ₂ ^a	31.50	2.27	2.61	.01
	ConfF	40.87	2.78		
Depression	Conf ₁	8.13	1.20	0.36	.37
	ConfF	8.73	1.16		

Conf₁ = Confidant Group, all subjects

Conf₂ = Confidant Group, extreme case deleted

ConfF = Confidant-Free Group

^a n = 14

correlation statistic was used to determine if a linear correlation was present. A slight negative correlation was found ($\underline{r} = -.189$). Student's \underline{t} -test indicated a non-significant relationship ($\underline{p} = .16$) between age and presence of a confidant.

The fourth research question was similar to the third: Does presence of a confidant vary with the gender of subjects? Because both gender and presence of a confidant are dichotomous, independent, and nominal in quality, χ^2 statistics were selected to analyse the data. Employing Yates' correction because in the 2×2 table the expected values were less than 10, the computed value with $df = 1$ was 0.543, with $\underline{p} = .46$. Thus, the relationship between gender and presence of a confidant was not significant.

The fifth research question: Does presence of a confidant vary with marital status? Single, separated, divorced and widowed subject categories were collapsed to yield a dichotomy: married or unmarried. The decision to treat single, separated, divorced and widowed subjects in a single group was based on the rationale that all were spouse-free states. Collapsing the categories allowed χ^2 analysis with no empty cells. Again using Yates' correction, the χ^2 value was 4.26 with one degree of freedom. Significant difference between the groups was found: more married subjects had confidant relationships than did unmarried subjects ($\underline{p} = .04$). The phi coefficient was .45, suggesting a moderate positive correlation between marriage and presence of a confidant.

The sixth research question was as follows: Are cost, conflict, and reciprocity of intimate relationships perceived by subjects with confidants similar to those perceptions of subjects without confidants?

Information used to address this question was obtained from the Cost and Reciprocity of Social Support Questionnaire. Each of the 29 subjects who completed the instrument ranked their socially supportive relationships. All 15 of the subjects in the Confidant Group ranked their confidants as their most important relationships. Mean scores on the C.A.R.S.S. subscales were compared to evaluate perceptions of subjects having or lacking confidants. Student's t-test was chosen for use in the analysis. No significant difference was found between means for four of the subscales: Cost ($p = .98$), Satisfaction ($p = .06$), Conflict ($p = .97$), and Equity ($p = .36$). Significant differences between group means were found for two subscales: Get ($p = .03$), and Give ($p = .04$) (Table 3). Each subsequent relationship (e.g., Person 2 for each subject, and so forth) was compared using the t-test. No statistically significant difference was found for any subscale for any relationship other than for Person 1 as described above. The group means for Person 1 for each C.A.R.S.S. subscale are indicated graphically in Figure 3. Means for each subscale are indicated as per centages of the highest possible subscale score, as total points attainable on each subscale vary.

The seventh research question was: Do levels of anxiety or depression vary with age or gender of subjects? To determine whether a significant relationship existed between age and anxiety, age and depression, gender and anxiety, or gender and depression, the t-test was selected. No significant relationship was found between age and state anxiety. No significant relationship was found between age and depression. Significance was found in the relationship between gender and state anxiety ($p = .03$); females reported higher levels of

Table 3

Comparison of mean C.A.R.S.S. subscale scores between the Confidant Group and the Confidant-Free Group

Subscale	Group n = 15	\bar{X}	Std. Error	Pooled Variance Estimate	
				t-value	Two-tailed Probability
Cost	Conf	11.80	2.04	0.02	.98
	ConfF ^a	11.86	1.68		
Get	Conf	23.33	1.25	-2.26	.03
	ConfF ^b	18.62	1.72		
Give	Conf	23.33	1.40	-2.24	.04
	ConfF ^c	18.58	1.60		
Satisfaction	Conf	7.07	0.38	-1.96	.06
	ConfF ^c	5.58	0.70		
Conflict	Conf	4.27	0.68	-0.04	.97
	ConfF ^b	4.23	0.76		
Equity	Conf	3.53	0.24	-0.94	.36
	ConfF ^b	3.15	0.34		

Conf = Confidant Group

ConfF = Confidant-Free Group

^an = 14

^bn = 13

^cn = 12

anxiety than did males. No significant relationship was found between gender and depression ($p = .07$), although a strong trend toward higher depression scores among women was apparent, and would have reached significance in the one-tailed test of a directional hypothesis (Table 4).

The eighth research question was as follows: Will levels of anxiety vary among persons who perceive the cost, conflict, and reciprocity of social relationships differently? To examine this aspect of the data, each of the C.A.R.S.S. scores for Person 1 for all subjects were compared with state anxiety scores for all subjects. Student's t -test was selected as the statistic for analysis of the data. No significant correlation was found comparing state anxiety scores with any of the C.A.R.S.S. subscale scores. These data are summarized in Table 5.

The ninth and final research question was: Will levels of depression vary among persons who perceive the cost, conflict, and reciprocity of social relationships differently? As with the eighth question, C.A.R.S.S. subscale scores for Person 1 were compared with depression scores, using the t -test. As with the previous research question, no significant relationships were found (Table 5). Findings relative to the hypotheses and research questions are summarized in Table 6.

Secondary Analysis of Data

Following the initial data analysis, secondary analysis was performed to explore possible interaction effects. It seemed conceptually reasonable that presence or absence of a confidant taken out of context of the quality of the confidant relationship may not account for psychological adjustment. A 2-way ANOVA was used to test the effect of the

Table 4

Subject age and gender compared with S.T.A.I. state anxiety scores and Depression Adjective Checklist Scores

Variable	Anxiety	Depression
Age	-.137 (.24)	-.185 (.16)
Gender	-.342 (.03)	-.280 (.07)

p-value in parentheses
n = 30

Table 5

C.A.R.S.S. subscale scores for Person 1 compared with S.T.A.I state anxiety scores and D.A.C.L. scores

Variable	Anxiety	Depression
Cost	-.005 ^a (.49)	-.018 ^a (.46)
Get	-.004 ^b (.49)	.070 ^b (.36)
Give	-.068 ^c (.37)	-.130 ^c (.26)
Satisfaction	-.034 ^c (.43)	.054 ^c (.40)
Conflict	.081 ^b (.34)	.047 ^b (.41)
Equity	.040 ^b (.42)	.161 ^b (.21)

p-value in parentheses

^an = 29

^bn = 28

^cn = 27

Table 6

Summary of research questions and findings

No. Question	Significant Findings
1. Is there a relationship between presence of a confidant and the level of anxiety among persons with lymphatic cancer or multiple myeloma?	None, when extreme case is included. Significantly lower anxiety among Confidant Group if extreme deleted.
2. Is there a relationship between presence of a confidant and level of depression among persons with lymphatic cancer or multiple myeloma?	None.
3. Does presence of a confidant vary with the age of subjects?	None.
4. Does presence of a confidant vary with the gender of subjects?	None.
5. Does presence of a confidant vary with marital status?	Significantly more married subjects had confidants.
6. Are cost, conflict, and reciprocity of intimate relationships perceived by subjects with confidants similar to those perceptions of subjects without confidants?	Significant differences in mean C.A.R.S.S. Get and Give subscales only.
7. Do levels of anxiety or depression vary with age or gender of subjects?	Females had significantly higher anxiety.
8. Will levels of anxiety vary among persons who perceive the cost, conflict, and reciprocity of social relationships differently?	None.
9. Will levels of depression vary among persons who perceive the cost, conflict, and reciprocity of social relationships differently?	None.

of confidant and variables measured by C.A.R.S.S. subscales on anxiety and depression. Findings from secondary analysis procedures are summarized in Table 7.

To accomplish this analysis, C.A.R.S.S. subscale scores for confidants in the Confidant Group and for the most important relationship in the Confidant-Free Group were artificially dichotomized into scores above and below the median. When compared to state anxiety and depression scores, one significant relationship was found. Subjects having confidant relationships were found to have lower depression scores when conflict within the most important relationship was high. This relationship is presented graphically in Figure 4.

Table 7

Summary of secondary analysis results for anxiety, depression, presence of a confidant, and C.A.R.S.S. subscales for Person 1

Variable	Source of Variation	Sum of Squares	df	\bar{X} Square	F	p
Anxiety	Main Effects	445.349	2	222.675	1.293	.29
	Confidant	322.736	1	322.736	1.874	.18
	Cost	107.688	1	107.688	0.625	.44
	2-Way Interactions					
	Confidant & Cost	64.340	1	64.340	0.374	.55
	Explained	509.690	3	169.897	0.987	.42
Depression	Main Effects	22.130	2	11.065	0.552	.58
	Confidant	4.727	1	4.727	0.236	.63
	Cost	16.691	1	16.691	0.832	.37
	2-Way Interactions					
	Confidant & Cost	47.709	1	47.709	2.379	.14
	Explained	69.839	3	23.280	1.161	.34
Anxiety	Main Effects	408.245	2	204.122	1.232	.31
	Confidant	376.102	1	376.102	2.270	.15
	Get	149.757	1	149.757	0.904	.35
	2-Way Interactions					
	Confidant & Get	251.713	1	251.713	1.519	.23
	Explained	659.957	3	219.986	1.328	.29
Depression	Main Effects	1.186	2	0.593	0.027	.97
	Confidant	1.150	1	1.150	0.053	.82
	Get	0.043	1	0.043	0.002	.97
	2-Way Interactions					
	Confidant & Get	8.632	1	8.632	0.400	.53
	Explained	9.818	3	3.273	0.152	.93
Anxiety	Main Effects	84.126	2	42.063	0.292	.75
	Confidant	55.356	1	55.356	0.384	.54
	Give	3.235	1	3.235	0.022	.88
	2-Way Interactions					
	Confidant & Give	0.159	1	0.159	0.001	.97
	Explained	84.285	3	28.095	0.195	.90
Depression	Main Effects	4.784	2	2.392	0.124	.88
	Confidant	2.410	1	2.410	0.125	.73
	Give	4.184	1	4.184	0.216	.65
	2-Way Interactions					
	Confidant & Give	0.149	1	0.149	0.008	.93
	Explained	4.933	3	1.644	0.085	.97

Table 7 (Continued)

Summary of secondary analysis results for anxiety, depression, presence of a confidant, and C.A.R.S.S. subscales for Person 1

Variable	Source of Variation	Sum of Squares	df	\bar{X} Square	F	p
Anxiety	Main Effects	260.441	2	130.221	0.810	.46
	Confidant	255.362	1	255.362	1.589	.22
	Conflict	1.953	1	1.953	0.012	.91
	2-Way Interactions					
	Confidant & Conflict	519.841	1	519.841	3.235	.09
	Explained	780.282	3	260.094	1.619	.21
Depression	Main Effects	1.563	2	0.782	0.045	.95
	Confidant	1.067	1	1.067	0.062	.81
	Conflict	0.420	1	0.420	0.024	.88
	2-Way Interactions					
	Confidant & Conflict	114.244	1	114.244	6.650	.02
	Explained	115.807	3	38.602	2.247	.11
Anxiety	Main Effects	268.826	2	134.413	0.882	.43
	Confidant	263.151	1	263.151	1.728	.20
	Satisfaction	9.796	1	9.796	0.064	.80
	2-Way Interactions					
	Confidant & Satis.	862.245	1	862.245	5.661	.03
	Explained	1131.071	3	377.024	2.475	.09
Depression	Main Effects	4.091	2	2.045	0.104	.90
	Confidant	3.641	1	3.641	0.184	.67
	Satisfaction	0.000	1	0.000	0.000	1.00
	2-Way Interactions					
	Confidant & Satis.	50.700	1	50.700	2.569	.12
	Explained	54.791	3	18.264	0.925	.44
Anxiety	Main Effects	442.435	2	221.217	1.306	.30
	Confidant	385.088	1	385.088	2.274	.15
	Equity	99.683	1	99.683	0.589	.45
	2-Way Interactions					
	Confidant & Equity	306.499	1	306.499	1.810	.19
	Explained	748.933	3	249.644	1.474	.25
Depression	Main Effects	32.742	2	16.371	0.769	.46
	Confidant	14.934	1	14.934	0.701	.41
	Equity	21.838	1	21.838	1.025	.32
	2-Way Interactions					
	Confidant & Equity	5.764	1	5.764	0.271	.62
	Explained	38.505	3	12.835	0.603	.62

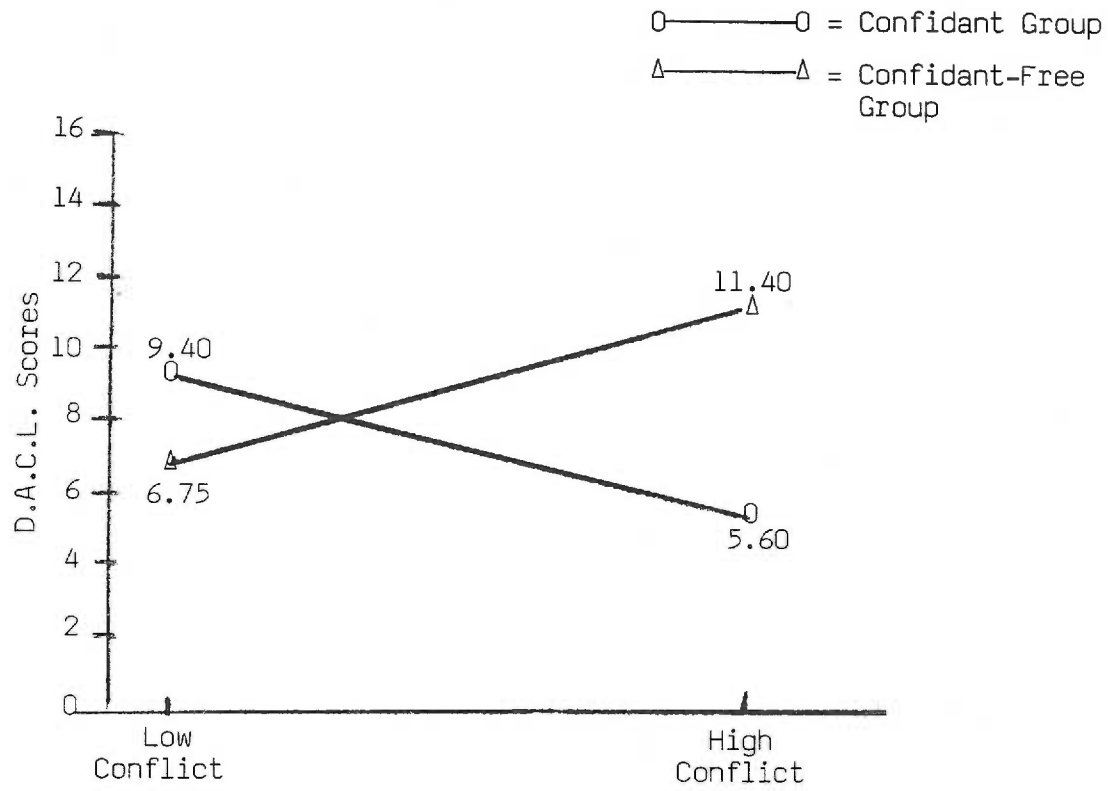


Figure 4. Interaction of conflict and presence of a confidant on depression scores.

CHAPTER IV

DISCUSSION

This chapter contains the interpretations of the study, a discussion of the strengths and limitations of the study, the relationship of the findings to extant literature, and suggestions for further research. This study is summarized in this chapter.

Interpretation of the Results

Two hypotheses were tested in this study. While trends in the hypothesized directions were evident, the Confidant Group and the Confidant-Free Group did not differ sufficiently to support the hypotheses.

One subject included in the Confidant Group was troubling in both conceptual and statistical terms. That subject did meet criteria for admission to the Confidant Group, but was in considerable pain, was aware that treatment had failed, and was aware that death was imminent. The subject died within days of participating in the study. The subject's state anxiety score was within three per cent of the maximum possible score, and was the highest for any subject in either study group. The Confidant Group, considered without the above described subject, was relatively homogeneous ($F = 1.80$, $df = 13$) and would have been significantly different from the Confidant-Free Group in terms of state anxiety. Statistically, the extreme case demonstrates how an individual case may affect markedly the results in a study using small numbers of subjects. Conceptually, it suggests that significant intervening variables were not accounted for. While all subjects faced potentially terminal illnesses, the outlying subject's comments suggested preoccupation with her death, often noted by existential psychotherapists as a universal source of anxiety (Yalom, 1980).

Further, the subject's comments suggested an external locus of control, cited by Pearlin, et al. (1981) as a factor in psychological adjustment. Also, the subject was in considerable pain. The Spielberger State-Trait Anxiety Inventory contains several items (e.g., "I feel pleasant", "I feel comfortable") that may reflect the subject's state of pain rather than anxiety. For this subject, the S.T.A.I. may have been invalid and tending to higher-than-accurate results. Hindsight suggests selection of an instrument less prone to influence by pain, in spite of the S.T.A.I. having been normalized with general medical-surgical patients. Hindsight further suggests advantages to including a measure of locus of control as a further measure of psychological adjustment or excluding persons in a moribund condition.

Evidence that the design of the study afforded control over some extraneous variables was found in the similarity of the Confidant Group and the Confidant-Free Group in terms of demographic characteristics. The groups were not significantly different in terms of age, gender, recency of diagnosis, number of concurrent physical diagnoses, number of persons sharing the subjects' households, the number of children, or the number of kin living nearby.

Significant differences were found in marital status between the two groups. Married persons were more likely to have a confidant, defined as a mutually disclosing relationship characterized by frequent contact. This is not surprising, as marriage is often described in similar terms. It was perhaps more surprising that the majority (53%) of persons lacking a confidant were married. Married persons not having confidants most often indicated inability to disclose intimate concerns. This supports Wortman (1984), who noted that cancer has such a

severe interpersonal impact that feedback to the person with cancer becomes inaccurate and the quality of communication between the person with cancer and significant others often declines.

Level of education was significantly correlated with presence of a confidant. Persons having completed more years of education were more likely to have a confidant. It may be that increased years of education facilitates communication or instills the value of using verbal means to deal with problems, and thus increases the likelihood of developing or maintaining a confiding relationship.

The Cost and Reciprocity of Social Support questionnaire (Tilden, 1984) provided a rich source of data for analysis. Use of the C.A.R.S.S. allowed the confidant relationship to be viewed in the context of other important supportive relationships in each subject's social network. All subjects in the Confidant Group listed their confidant as their most important relationship. This finding is consistent with the "convoy" model for social support (Kahn & Antonucci, 1980) and supports the conceptual framework for this study, which holds that the confidant is the central person in the support convoy, and the person most closely approximating the primal support relationship.

Having available the ranking of social relationships allowed comparison between the confidant relationship and the most important relationship for persons without confidants. That comparison indicated that persons having a confidant perceived a greater level of giving and receiving in the confidant relationship than persons lacking a confidant perceived in their most important supportive relationship. Had a directional hypothesis been proposed, as would have been consonant with the conceptual framework, means for satisfaction between groups for Person 1 would have reached significance ($p = .03$ for a one-tailed

test). Taken together, the increased sense of giving and getting, and the trend to increased satisfaction with the confidant relationship suggests a greater richness in the subject's support system when a confidant is present. This reinforces the assumption of the conceptual framework which holds that the confidant is the primary person around whom the social support system is built.

Implications of Findings for Nursing

With very few exceptions, clients of health care providers have two social support systems: a formal system, including persons whose job it is to support the client (nurses, doctors, ministers, etc.), and an informal system composed of family, friends, and neighbors. Wholistic assessment of the client requires consideration of both systems. Often the professional caregiver is in a position to facilitate better use of the informal system, such that client needs are better met. To that end, understanding the relationship between socially supportive relationships and health outcomes is valuable. This study was unable to demonstrate significant differences in anxiety or depression between persons having or lacking confidants, but trends were evident in that direction. Further research may verify the significance of the trends. Such evidence may be used in planning clinical nursing interventions, such as couples' counseling to increase the confiding nature of relationships. Another use may be in the design of cancer support groups. For example, significant supportive others may be included in more effective ways, or the focus of the group could be changed to stress mutual disclosure between the person with cancer and the most significant relationships. Nurses providing direct physical care to persons with cancer may

encourage significant others to be present during cancer treatments as a way of increasing understanding between the client and supportive others and to increase the perception of reciprocity between them.

Strengths and Limitations of the Study

To some degree, the rigor with which one attempts to control for extraneous and intervening variables introduces another methodological problem: small sample size. A larger sample size (≥ 30) for each group would have reduced the impact of the individual outlying subject. Trends were apparent in the direction proposed by both hypotheses and in respect to several of the research questions using data from the C.A.R.S.S. questionnaire. Statistical significance might have been found had the sample been larger. The small sample size seemed to be the most marked limitation to the study.

As noted above, the sample size was restricted by criteria for inclusion in the study. Subjects were not admitted into the study if diagnosed with other than certain systemic forms of cancer. This limit represented an attempt to select a relatively homogeneous stressor less likely to introduce intervening variables such as might arise from forms of cancer treated with mutilative surgery in organs identified with specific role functioning, such as testicular cancer. Persons having been diagnosed prior to one year before the study were excluded to minimize the influence of life strains and to maximize the homogeneity of the stressor. Persons having been diagnosed with some form of cancer previous to the current one were excluded for similar reasons. Persons younger than 18 years of age, persons not fluent in English, or persons whose levels of anxiety or depression were chemically controlled were excluded to increase

reliability of responses. In spite of the difficulty these rigorous criteria generated in accumulating subjects, should this study serve the investigator as a pilot study for further research, these criteria would again be used as effective means of limiting effects of certain extraneous and intervening variables.

Another limitation to the study was the need to recruit subjects from three different medical centers. Opportunity for introduction of intervening variables arose at several levels. Procedures for induction were different at G.S.H. & M.C. and P.M.C. than at O.H.S.U. A greater per centage of subjects approached in person agreed to participate than did persons contacted by mail. It may be that, while demographic variables obtained from record review were similar, persons more anxious or depressed were less inclined to make the effort required to complete and mail the questionnaires than were anxious or depressed subjects approached in person. Two of the institutions required prior physician approval before a subject could be contacted. That approval was withheld in several cases. Reasons for withholding permission varied, but may have been in part a decision by the physician to shelter those distressed persons exhibiting the very outcome variables used in this study. While mean anxiety scores and mean depression scores were higher among subjects drawn from O.H.S.U., the degree of difference between subjects drawn from O.H.S.U. and subjects drawn from the private institutions was not significant.

A strength of the study was in the characterization of the confidant relationship. Previous studies stressed subject disclosure, or frequency of contact, but no study examined reciprocal disclosure

and quantified frequency of contact. The brief questionnaire designed for this study seemed to determine reliably the presence or absence of a confidant

Suggestions for Further Study

The influence of the confidant relationship on the physical and psychological well-being of individuals has, as yet, been little explored. Interest in these relationships has been shown by all health care disciplines in the fit of the client to his or her environment. Pioneering work is going on in nursing and other disciplines that suggests that social support has a role in preventing physiological and psychological illness and facilitating recovery from such illnesses when they occur.

The purpose of this study was to gain further information about the relationship between a type of socially supportive relationship and psychological adjustment to a stressor. The investigator urges replication of the study using a larger sample from the same population. Specifically, replication using a lymphatic cancer and/or multiple myeloma sample of at least 30 subjects per group would be useful.

Similar studies using other forms of stressful life event than cancer would be useful. Additional information about the effect of the confidant could be established by examining subjects stressed by cardiac illness, bereavement, job loss, graduate school, or disasters. Outcome measures other than anxiety and depression could be selected, perhaps locus of control, or sense of mastery. Physiologic parameters such as blood pressure, catecholamine levels, or heart rate could be compared between Confidant and Confidant-Free Groups experiencing cancer or other stressors. Frequency or intensity of a variety of physiologic or psychologic symptoms could be measured, for example,

frequency or intensity of headache, respiratory or gastrointestinal problems, suicidal ideation or attempts, frequency of contacts with health care providers, or use of over-the-counter nonprescription drugs by persons having or lacking confidants.

Further investigation into the role of the confidant in the social support network would be valuable. Investigation as to whether persons lacking confidants use other relationships more intensely than do persons having confidants would be useful. Investigation as to the use of the confidant over the life span, and use of the confidant by the different genders would be useful. Exploration of the trend to richer, more satisfying perceptions of the confidant as compared to the most important relationship of those persons lacking a confidant would be valuable.

Summary

This study sought to provide additional information about the influence of social support. Cancer was chosen as a significant stressor, and state anxiety and state depression were chosen as proxy variables for psychological adjustment. The independent variable in this study was the presence or absence of a supportive confidant relationship.

The study was based on the prior findings of several studies (Gotay, 1984; Peters-Golden, 1982; Funch & Marshall, 1983; Schwartz, 1977; Lieber, Plumb, Gerstenzang & Holland, 1976). These studies found correlations between socially supportive relationships and positive health outcomes in a variety of physical and psychological illnesses, including cancer. Stressful life events may produce negative health sequelae (Rahe, 1974; Sarason, Johnson & Sigel, 1976). Cancer, due to its stigmatizing nature (Sontag, 1978) is especially stressful

and may disrupt communication within the cancer victim's support system (Wortman & Dunkel-Schetter, 1979). The confidant relationship was found to be correlated with improved sense of well-being in elderly subjects (Lowenthal & Haven, 1968), reduced development of depression among women (Brown, Bhrolchain & Harris, 1975) and decreased frequency and intensity of common medical symptoms (Miller & Ingham, 1976).

The conceptual model for this study holds that persons assemble "convoys" (Kahn & Antonucci, 1980) of supportive others to recapitulate the primal supportive relationship experienced by the infant. The confidant represents the central figure in that support convoy, the person most closely approximating the primal caregiver. The confidant relationship is characterized by disclosure on the part of the subject of intimate personal concerns, by reciprocal disclosure on the part of the confidant, and by frequency of contact of at least once a day.

Nine research questions and two hypotheses were addressed by this study. Summarized, they were as follows: Does presence of a confidant correlate with reduced levels of anxiety or depression in persons experiencing lymphatic cancer or multiple myeloma? Does presence of a confidant correlate with demographic characteristics of a sample? Do persons with a confidant perceive or use socially supportive relationships differently than do persons lacking confidants?

To examine the questions, an ex post facto correlational field study was designed. Subjects were recruited by convenience from three medical centers until two groups of 15 subjects were attained. Each subject was asked to complete four instruments: a questionnaire designed and piloted for this study and used to determine presence or absence of a confidant; the Spielberger State-Trait Anxiety Inventory, Form X (Spielberger, Gorsuch & Lushene, 1970), the Lubin

Depression Adjective Checklist, Form C (Lubin, 1967); and the Cost and Reciprocity of Social Support questionnaire (Tilden, 1984). Data were analyzed using frequencies, phi statistic, Kendall Tau_b statistic, chi² statistic, Pearsons product-moment correlation coefficient, Student's t-tests, and 2-way ANOVA.

The hypotheses that state depression and state anxiety would be lower for persons having confidants were not supported to the degree of significance, although the means varied in the hypothesized direction.

Married persons and persons having completed more years of education were more likely to report having confidants. Women were more likely to report higher levels of anxiety. Persons with confidants were more likely to report giving and receiving more from their most important socially supportive relationships.

The importance of this study lies in the direction it provides for future research with larger samples. Using the criteria of this study for the confidant, future research should again test the effect of the confidant on anxiety, depression. Future research should consider adding locus of control as an independant variable. Future research could apply criteria used in this study to a variety of stressors. As greater knowledge of the effects of the confidant accumulates, the information may be used by nurses to better design interventions that optimize the functioning of the client's informal social support system.

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APPENDIX A

Cover Letter to Prospective Subjects

Dear

The enclosed materials are questionnaires used in a research study about relationships with others and how people with illnesses such as your own respond emotionally.

My name is Roger (Rod) Galyen. I'm a Nurse Practitioner and an Assistant Professor of nursing at Linfield-Good Samaritan School of Nursing, and a graduate student at the Oregon Health Sciences University. As a student, I spoke with many persons attending Oncology Outpatient Clinics at the Health Sciences Center. I found that persons close to someone with cancer sometimes influenced how the person with cancer felt about the illness. I also found that little research has investigated the influence of those relationships.

I obtained your name from information in the records at the hospital where you were treated. I am asking you to participate in a study. To be a participant in the study, you would need to read and sign the enclosed consent form, and fill out the four brief questionnaires. Altogether, it would take about twenty minutes of your time. I have included a stamped, addressed envelope for return of the materials.

While your participation in the study is important to me and may help others with illnesses such as yours, participation is voluntary. It is unlikely that you will benefit directly from this study, but the results will be used to help plan effective care for persons experiencing cancer.

If you agree to participate, please read and sign the enclosed consent form, and fill out each questionnaire. Do not put your name on any of the questionnaires, as code numbers will be used to assure that your responses remain confidential. Please answer the questions without suggestions from others.

Whether you agree to participate or not, I would appreciate return of the materials as soon as possible. Also, whether you agree to participate or not, I thank you for your consideration and wish you well. If I can answer questions or be of help, please call me at work (229 - 7177) or at home (266 - 2346).

Respectfully,

Roger Galyen, R.N., B.S.N., P.M.H.N.P.

APPENDIX B

Study Consent Forms

- a) Used at Oregon Health Sciences
University
- b) Used with subjects from Good
Samaritan Hospital and Medical
Center
- c) Used with subjects from Providence
Medical Center

THE OREGON HEALTH SCIENCES UNIVERSITY SCHOOL OF NURSING

Correlations Between the Confidant Relationship and Psychological Adjustment Among Persons with Lymphatic Cancer

Roger Denis Galyen, R.N., B.S.N.

I agree to participate in a study of how people react to development of lymphatic cancer. The study will look at how relationships with other people affect the way people with lymphatic cancer feel and think about life.

The study is being conducted by Roger (Rod) Galyen, R.N., B.S.N., under the supervision of Virginia Tilden, R.N., D.N.Sc.

I understand I will be asked to complete four questionnaires. All together, the questionnaires will take about 20 minutes to complete. These questionnaires will ask about my relationships with others and about my emotional feelings.

I understand that while I may not benefit directly from this study, others may be helped by the results of this study.

I understand that all information obtained from me will be kept confidential. Code numbers will be assigned to each participant to protect his or her privacy. Your doctor and the clinic staff will not have access to your responses. Information from this study will be reported in ways that do not identify a person with his or her specific answers.

The investigator has offered to answer any questions, and has informed me that he may be contacted by telephone at (503) 225-7828 should questions arise.

I have been informed that should I find any aspect of the study distressing, a psychiatric/mental health nurse is available to talk with me. If I find completion of the questionnaires is inconvenient at the time I meet with the investigator, a mutually convenient time will be arranged for completion of the questionnaires.

It is not the policy of the Department of Health and Human Services or any other agency funding the research project in which you are participating to compensate or provide medical treatment for human subjects in the event the research results in physical injury. The Oregon Health Sciences Center, as an agency of the state, is covered by the State Liability Fund. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through the fault of the Center, its officers or employees. If you have further questions, please call Dr. Michael Baird, M.D. at (503) 225-8014.

I understand that I may refuse to participate or withdraw from this study at any time without affecting my relationship with, or treatment at, the Oregon Health Sciences University.

I have read the foregoing and agree to participate in this study.

Signature: _____

Witness: _____ Date: _____

GOOD SAMARITAN HOSPITAL & MEDICAL CENTER

The Confidant Relationship and Psychological Adjustment
Among Persons with Lymphatic Cancer and Multiple Myeloma

Roger Galyen, R.N., B.S.N.

I agree to participate in a study of how people react to development of cancer. The study will look at how relationships with other people affect the way people with lymphatic cancer or multiple myeloma feel and think about life.

The study is being conducted by Roger (Rod) Galyen, R.N., B.S.N., under the supervision of Virginia Tilden, R.N., D.N.Sc.

I understand that I will be asked to complete four questionnaires. All together, the questionnaires will take about twenty minutes to complete. These questionnaires will ask about my relationships with others and about my emotional feelings.

I understand that while I may not benefit directly from this study, others may be helped by the results of this study.

I understand that all information obtained from me will be kept confidential. Code numbers will be assigned to each participant to protect his or her privacy. Neither your doctor nor the hospital will have access to your responses. Information from this study will be reported in ways that do not identify a person with his or her responses.

I understand that if I have questions about the study, I may contact the investigator by phone at (503) 266 - 2346 (home number), or (503) 229 - 7161 (work number).

It is not the policy of Good Samaritan Hospital & Medical Center, or any other agency funding the research project in which I am participating, to compensate or provide medical treatment for human subjects in the event the research results in physical injury. I should further understand that should I suffer any injury from the research project, compensation will be available only if I established that the injury occurred through the fault of Good Samaritan Hospital, its officers or employees, or my physician. Further information regarding this policy may be obtained from the Office of Research Administration at 229 - 7218.

I understand that I am free to refuse to participate or to withdraw from participation in this study at any time, and it will in no way affect my relationship with, or treatment at Good Samaritan Hospital and Medical Center.

I have read and understand the foregoing and agree to participate in this study.

Signature: _____ Date: _____

Witness: _____

The Confidant Relationship and Psychological Adjustment
Among Persons with Lymphatic Cancer and Multiple Myeloma

Roger Galyen, R.N., B.S.N.

I, _____, _____
(name) (address)
hereby agree to participate in a study, in which I will be asked to complete four questionnaires about my emotional feelings and about my relationships with others. The study is being conducted by Roger (Rod) Galyen, R.N., B.S.N., under the supervision of Dr. Virginia Tilden, R.N., D.N.Sc.

I understand that I will be contacted once, by mail, to complete this consent form and to fill out the questionnaires. I understand that participation is voluntary, and that I may refuse to participate or withdraw from participation at any time without affecting my treatment at or relationship with Providence Medical Center.

I understand that confidentiality will be maintained by use of code numbers, and that responses will be displayed in a manner that does not identify responses with a specific person.

I understand that while I probably will not benefit from this study, others may be helped by the results of this study.

The investigator may be contacted at (503) 229-7161. I understand that I am encouraged to call with questions about the study or to discuss any aspect of the study I may find disturbing.

I understand that no fees or expenses or other costs to me will result from participation in this research.

I have read the foregoing and agree to participate in this study.

Signature: _____ Date: _____

Witness: _____

APPENDIX C

Study Instruments

- a) Confidant Questionnaire
- b) Spielberger State-Trait Anxiety
Inventory, Form X
- c) Depression Adjective Check List,
Form C
- d) Cost and Reciprocity of Social
Support Questionnaire

Is there someone to whom you can confide your most personal concerns?

Yes

No

Continue only if you answered "yes" to the first question. If there is more than one person to whom you can confide, please answer the following questions about the person you feel closest to.

How are you related to your confidant? For example, your confidant may be your mother, a friend, your spouse, a minister, or someone else.

How often do you see your confidant in person?

At least once a day.

Less often than once a day, but at least once a week.

Less than once a week.

Do you live with your confidant?

Yes

No

Does your confidant share her or his personal concerns with you?

Yes

No

Are there worries about your illness you cannot discuss with your confidant?

Yes

No

If you have worries about your illness you cannot discuss with your confidant, please list below what those worries are, in general terms.

Thank you for your cooperation.

SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I am regretful	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel rested	①	②	③	④
9. I feel anxious	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel "high strung"	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel over-excited and "rattled"	①	②	③	④
19. I feel joyful	①	②	③	④
20. I feel pleasant	①	②	③	④



CONSULTING PSYCHOLOGISTS PRESS
577 College Avenue, Palo Alto, California 94306

SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I tire quickly	①	②	③	④
23. I feel like crying	①	②	③	④
24. I wish I could be as happy as others seem to be	①	②	③	④
25. I am losing out on things because I can't make up my mind soon enough	①	②	③	④
26. I feel rested	①	②	③	④
27. I am "calm, cool, and collected"	①	②	③	④
28. I feel that difficulties are piling up so that I cannot overcome them	①	②	③	④
29. I worry too much over something that really doesn't matter	①	②	③	④
30. I am happy	①	②	③	④
31. I am inclined to take things hard	①	②	③	④
32. I lack self-confidence	①	②	③	④
33. I feel secure	①	②	③	④
34. I try to avoid facing a crisis or difficulty	①	②	③	④
35. I feel blue	①	②	③	④
36. I am content	①	②	③	④
37. Some unimportant thought runs through my mind and bothers me	①	②	③	④
38. I take disappointments so keenly that I can't put them out of my mind	①	②	③	④
39. I am a steady person	①	②	③	④
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	①	②	③	④

CHECK LIST

81

DACL FORM C

By Bernard Lubin

Name _____ Age _____ Sex _____

Date _____ Highest grade completed in school _____

DIRECTIONS: Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now -- Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

- | | |
|---|--|
| 1. <input type="checkbox"/> Cheerless | 17. <input type="checkbox"/> Buoyant |
| 2. <input type="checkbox"/> Animated | 18. <input type="checkbox"/> Tormented |
| 3. <input type="checkbox"/> Blue | 19. <input type="checkbox"/> Weak |
| 4. <input type="checkbox"/> Lost | 20. <input type="checkbox"/> Optimistic |
| 5. <input type="checkbox"/> Dejected | 21. <input type="checkbox"/> Low |
| 6. <input type="checkbox"/> Healthy | 22. <input type="checkbox"/> Deserted |
| 7. <input type="checkbox"/> Discouraged | 23. <input type="checkbox"/> Burdened |
| 8. <input type="checkbox"/> Bad | 24. <input type="checkbox"/> Wonderful |
| 9. <input type="checkbox"/> Despondent | 25. <input type="checkbox"/> Crushed |
| 10. <input type="checkbox"/> Free | 26. <input type="checkbox"/> Somber |
| 11. <input type="checkbox"/> Despairing | 27. <input type="checkbox"/> Interested |
| 12. <input type="checkbox"/> Uneasy | 28. <input type="checkbox"/> Joyless |
| 13. <input type="checkbox"/> Peaceful | 29. <input type="checkbox"/> Crestfallen |
| 14. <input type="checkbox"/> Grim | 30. <input type="checkbox"/> Lucky |
| 15. <input type="checkbox"/> Distressed | 31. <input type="checkbox"/> Chained |
| 16. <input type="checkbox"/> Whole | 32. <input type="checkbox"/> Pessimistic |



CARSS

COST AND RECIPROCALITY OF SOCIAL SUPPORT
QUESTIONNAIRE

Introduction

Every important relationship between two people has a bother side as well as a benefit side. Think of what support for and from others costs you in bother or trouble. The purpose of these questions is to measure the bother (trouble or cost) as well as benefits of important relationships.

CONTINUE...

(1)

In the spaces below, list all the people who provide personal support to you and who are important to you. Start with the **MOST IMPORTANT** person in your life. Use only first names or initials; this is only to help you remember who they are while you complete this questionnaire. For each person you list, state their **RELATIONSHIP** as shown in this example:

EXAMPLE:

a. Jim (Person) husband (Relationship)
 b. John (Person) father (Relationship)

YOUR LIST:

MOST IMPORTANT 1. _____ (Person) _____ (Relationship)
 NEXT MOST IMPORTANT 2. _____
 NEXT... 3. _____
 (etc.) 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____
 11. _____
 12. _____
 13. _____
 14. _____
 15. _____
 16. _____
 17. _____
 18. _____
 19. _____
 20. _____

(2)

PERSON 1 | PERSON 2 | PERSON 3 | PERSON 4 | PERSON 5

NEXT, ENTER THE NAMES OR INITIALS OF THE FIRST FIVE PEOPLE FROM YOUR LIST IN THE SPACES PROVIDED DIRECTLY ABOVE.

On the pages that follow, you will be asked to answer questions about these five people from your list. Select the number from the rating scale that best answers each question, and write it in the corresponding space. For example:

EXAMPLE ANSWERS (using the numbers from the rating scale below)

a. How important is this person to you?

Person 1 <u>John</u>	Person 2 <u>Jim</u>	Person 3 <u>Bill</u>	Person 4 <u>Wm</u>	Person 5 <u>Fred G.</u>
4	4	3	3	3

RATING SCALE

0	1	2	3	4
none or not at all	little amount	moderate	quite a bit	a great deal

As you answer each question on the following pages, rate the overall COSTS and BENEFITS of each relationship you listed, even though they vary from time to time. There are no right or wrong answers... just select the answer that is most like your HUNCH or GUT FEELING.

NOW, ANSWER THE QUESTIONS THAT BEGIN ON THE NEXT PAGE...

(3)

QUESTIONS

1. How much time does this relationship cost you?
2. How much effort does this relationship cost you?
3. How much thought does this relationship cost you?
4. How much in the way of services (i.e. babysitting, giving rides, helping out by doing things) do you put into this relationship?
5. How much money or gifts or loans of material things does this relationship cost you?

RATING SCALE

0	1	2	3	4
none or not at all	a little	a moderate amount	quite a bit	a great deal

(4)

PERSON 1	PERSON 2	PERSON 3	PERSON 4	PERSON 5
----------	----------	----------	----------	----------



(5)

CONTINUE...

IN EACH RELATIONSHIP, SCORE HOW MUCH YOU RECEIVE OF THE FOLLOWING:

- 6. Affection, love, or liking
 - 7. Status, or worth
 - 8. Helpful information or advice
 - 9. Money (gifts or loans)
 - 10. Goods (sharing or giving possessions)
 - 11. Appreciation
 - 12. Services or doing favors
- Are there any other things that were not mentioned that you receive? _____
(please specify & rate)

RATING SCALE

none or a moderate quite a great
not at all little amount a bit deal

0 1 2 3 4

(6)

PERSON 1	PERSON 2	PERSON 3	PERSON 4	PERSON 5
▽	▽	▽	▽	▽

(7)

CONTINUE...

IN EACH RELATIONSHIP, SCORE HOW MUCH YOU GIVE BACK TO THAT PERSON:

	PERSON 1	PERSON 2	PERSON 3	PERSON 4	PERSON 5
13. Affection, love, or liking	▽	▽	▽	▽	▽
14. Status, or worth					
15. Helpful information or advice					
16. Money (gifts or loans)					
17. Goods (sharing or giving possessions)					
18. Appreciation					
19. Services or doing favors					
Are there any other things that were not mentioned that you give? (please specify & rate)					

RATING SCALE

none or a moderate quite a great
not at all little amount a bit deal

0 1 2 3 4

(8)

(9)

CONTINUE...

- 20. How satisfied are you with the balance of receiving and giving back?
- 21. How much would you like to change the balance if you could?
- 22. Overall, how much stress for any reason does this person cause you?
- 23. How much trouble is this person to you?
- 24. How much concern or worry do you feel about this person?

	PERSON 1	PERSON 2	PERSON 3	PERSON 4	PERSON 5
▽		▽	▽	▽	▽

RATING SCALE

none or not at all a little a moderate amount quite a bit a great deal

0 1 2 3 4

FOR THE NEXT QUESTION, THE WORDING OF THE RATING SCALE IS A LITTLE DIFFERENT, SO LOOK AT THE NEW SCALE FIRST, THEN ANSWER THE QUESTION.

NEW RATING SCALE

very unequal somewhat unequal moderately equal almost equal completely equal

0 1 2 3 4

- 25. Overall, how equal is this relationship?

(10)

▽ ▽ ▽ ▽ ▽

--	--	--	--	--	--

(11)

CONTINUE...

FINAL QUESTIONS

6
8

Age at last birthday? _____ Sex: _____ Male
_____ Female

Legal marital status: _____ Single (never married)
_____ Married
_____ Divorced or Separated
_____ Widowed

Education level: Circle the highest grade of school that
you completed.

1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 1 2 3 4
grade school high school college grad school

Race: _____ Asian
_____ Black
_____ Hispanic
_____ White
_____ Other

Occupation: _____ (fill in)

How many people live with you in
your household? _____
(total No.)

How many of your blood-relatives (i.e. children, brothers, sisters,
and parents) live within fifty miles of you? _____
(total No.)

THANK YOU FOR YOUR PARTICIPATION.

AN ABSTRACT OF THE THESIS OF

Roger Denis Galyen

For the MASTER OF NURSING

Date of Receiving this Degree: May 10, 1985

THE CONFIDANT RELATIONSHIP AND PSYCHOLOGICAL ADJUSTMENT AMONG PERSONS
WITH LYMPHATIC CANCER OR MULTIPLE MYELOMA

Approved: _____

Virginia P. Tilden, R.N., D.N.Sc., Thesis Advisor

Several studies in the literature have demonstrated a positive correlation between available social support and reduced negative health sequelae from stress. Social support seems to be a factor in buffering the intensity and frequency of physiological and psychological symptoms.

This study tested the relationship between presence of a confidant relationship, characterized by intimate mutual disclosure and high frequency of contact, and psychological adjustment to a stressful life event. Development of one of two forms of systemic cancer within the previous year was held to be a significant stressor, and psychological adjustment was measured in terms of state anxiety and state depression. The investigation used an ex post facto correlational field study design. Two groups (N = 15 for each) were selected by convenience from three urban medical centers. Subjects in one sample group were determined to have confidant relationships; subjects in the other group lacked confidants. All subjects were diagnosed with lymphatic cancer or multiple myeloma within one year of admission to the study. All were adults. Subjects were contacted in person or by mail to complete four questionnaires. The first questionnaire was used to determine whether the subject had a confidant relationship. The second, the Spielberger State-Trait Anxiety Inventory Form X-1 was used to assess level of state anxiety. The third questionnaire, the Lubin Depression Adjective Check List Form C was used to measure state depression. The fourth, the Tilden Cost and Reciprocity of Social Support questionnaire was used to look at the context of the confidant relationship in the support network, in both quantitative and qualitative terms.

While trends in the hypothesized direction were apparent, state anxiety and state depression were not significantly lower among persons having confidants ($p = .10$ and $.37$, respectively). If, for conceptual reasons, one subject near death and in considerable pain was excluded, the remaining, more homogeneous Confidant Group demonstrated significantly lower anxiety scores ($p = .01$, using Student's t -test statistic) than did the Confidant-Free Group. Female subjects demonstrated higher anxiety scores ($p = .03$) than did males. More married subjects were found to have confidants ($p = .04$), as were subjects having completed more years of education ($p = .02$). In comparing the confidant with the most important relationship of subjects lacking confidants, persons having confidants

reported a greater sense of giving and receiving in the relationship ($p = .03$ and $.04$, respectively). Secondary analysis was conducted using 2-Way ANOVA to determine if interactive effects between presence of a confidant and perceived cost, conflict, and reciprocity influenced anxiety or depression. It was found that persons having confidants in high conflict situations demonstrated lower state depression scores.

Suggestions for application of study results and suggestions for further research are made. Limitations of the study and recommendation for replication are made.