

Social Support and Cancer: Findings Based on Patient Interviews and Their Implications

Christine Dunkel-Schetter

University of California, Los Angeles

Past research indicates that social support is beneficial to cancer patients in adjusting to the stress of the disease. In this article, a brief review of research on social support is provided as a framework within which support among cancer patients can be examined. Research on cancer is then reviewed, and selected results from an investigation of 79 cancer patients are reported. The findings indicate that: health care providers are particularly important sources of support to cancer patients; of several types, emotional support is seen as especially helpful; and the types of support seen as most helpful by those with cancer depends on who provides them. In addition, variability in stress among cancer patients mediated the frequency of interpersonal problems, and the association between support and various indices of adjustment. Implications of these results for future research on social support in stressed populations, especially cancer patients, are discussed.

Who among us cannot think of a loved one, friend, or acquaintance who has had cancer? It is an illness of major proportions in our society. One in four individuals and two out of three families have encountered this disease and it is a major cause of death in the United States (American Cancer Society, 1981). In addition, the treatments for cancer are infamous for their adverse consequences and side effects. Cancer also has some subtler properties of equal psychological significance. When occurring as a chronic disease, it is a series of events, or a "stress process," extending over months or years. The treatments are frequently

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Correspondence regarding this article should be addressed to Christine Dunkel-Schetter, Department of Psychology, 1283 Franz Hall, University of California, Los Angeles, CA 90024.

not successful; at their worst, they merely extend a painful and stressful life. Finally, multiple ambiguities can accompany the disease—whether the cancer will recur, whether it will prove fatal, and when and how death will occur. In these ways and others, the experience of cancer can be uniquely stressful.

A prevailing assumption in the psychosocial literature on cancer is that the support patients receive from family, friends, and medical staff influences their adjustment. People with cancer are thought to adjust more successfully over time when they receive strong and consistent support. When the support system malfunctions, a cancer patient would seem less able to adjust. In this paper, past research on social support and cancer will be briefly reviewed, and the results of an investigation with cancer patients reported. The discussion is placed within the broader framework of support research in general, in order to illuminate implications beyond the cancer-specific ones.

The Larger Context: Research on Social Support

Three different research traditions have developed in the past 10 to 15 years surrounding the topic of social support. The first is an epidemiological approach in which very large, representative samples of community residents are polled concerning their social resources, and their health and well-being. These studies do not usually include measures of stress (cf. Williams, Ware, & Donald, 1981), but are focused on the effect of social networks on morbidity and mortality at several follow-up intervals. Results indicate that individuals with social ties live longer and have better physical and mental health than those without such ties (Berkman & Breslow, 1983; Berkman & Syme, 1979; Blazer, 1982; Henderson, Byrne, Duncan-Jones, Scott, & Adcock, 1980; House, Robbins, & Metzner, 1982; Lowenthal & Haven, 1968; Lynch, 1977; Mueller, 1980). As such, this research tradition focuses on the direct effects of support (House, 1981). Investigations are often strong in design and analysis. However, they typically do not measure support, but rather, social contacts. For example, social connectedness as indexed by marriage, church membership or other organizational affiliation is often the only indicator of support (Berkman & Breslow, 1983). These investigations are also largely atheoretical.

A second tradition in social support research tests the hypothesis that support is beneficial primarily in times of stress—i.e., the buffering hypothesis (Cobb, 1976; Cohen & Wills, 1983; Eckenrode & Gore, 1981). This paradigm involves measures of life events over one to two years as indicators of individuals' levels of "life change" or stress. Several studies demonstrate that there is a weaker link between past stress and subsequent health and well-being for individuals with social support than those without support (Andrews, Tennant, Hewson, & Vaillant, 1978; Dean & Lin, 1977; LaRocco, House, & French, 1980; Mitchell & Trickett, 1980; Pearlin, Lieberman, Menaghan, & Mullan,

1981). Methodological problems abound in this research (Schaefer, 1980; Thoits, 1982; Turner, in press). Two important ones are the confounding of support and stress, and ambiguities about the direction of causality. For example, life-event lists often include loss of social relationship events, thus confusing the connection between support and stress.

The third research area, on which the present paper focuses, is closely related to the second in its concentration on support in times of stress. It differs, however, in that support is examined as a resource for individuals undergoing particular crises or stresses. For example, individual investigations have examined support (or closely related concepts) in physical and psychological adjustment to job loss (Cobb & Kasl, 1977; Gore, 1978), occupational stress (House, 1981), marital disruption (Wilcox, 1981), teenage pregnancy (Barrera, 1981), childbirth (Sosa, Kennel, Klaus, Robertson, & Urrutia, 1980), widowhood (Maddison & Walker, 1967; Parkes, 1975; Pihlbad & Adams, 1972; Raphael, 1977; Vachon, 1979), stroke (Dzau & Boehme, 1978; Robertson & Suinn, 1968), hypertension (Caplan, Robinson, French, Caldwell, & Shinn, 1976; Earp, 1979), heart disease (Finlayson, 1976; Lynch, Thomas, Mills, Malinow, & Katche, 1974), and a variety of other acute, chronic, and life-threatening illnesses (Bunn & Clarke, 1979; Davidson, Bowden, & Tholen, 1979; De Aranjó, van Arsdel, Holmes, & Dudley, 1973; Litman, 1966; Porritt, 1979; Weisman & Worden, 1975). Most of these studies include tests of both the direct and the indirect (buffering) effects of support; but, unlike the first two traditions of research mentioned above, the samples are composed of subjects who have all undergone a common stressful experience.

The problems in this tradition of support research are harder to characterize because the research is drawn from different disciplines with different objectives and uses a variety of research designs—chiefly quasi-experimental and cross-sectional retrospective designs. Many investigations in this tradition are by researchers in applied settings, such as hospitals and workplaces, who recognized the importance of support to their specific stressed groups. Unfortunately, this research is generally on small samples, uses simplistic conceptualizations of support and adjustment to stress, questionable analyses, and suffers from inadequate reporting of procedures. This tradition has also leaned toward intervention with little attention to basic research, what support is and issues such as the ways in which it is helpful.

A large number of studies within the third tradition of research concentrate on support as a factor in recovery from and adjustment to illness (Wallston, Alagna, DeVellis, & DeVellis, 1983). In a review of this research, DiMatteo and Hays (1981) concluded that social support is associated with recovery from illness or injury. Yet they point to several problems in the literature that weaken this conclusion. These problems include: poor conceptualization, definitions, and measurement of both adjustment and support; a failure to examine interac-

tions with sociodemographic characteristics, personality, coping style, and the severity of the illness; a paucity of experimental designs, or of rigorous nonexperimental ones; and a neglect of the negative aspects of social support. Most of these problems are, in fact, characteristic of social support research in general, especially of studies on cancer.

A Focus on Cancer

Until the mid-1970s, the term "social support" was used only informally by health care providers and researchers in the cancer field. Anecdotal references to this concept were plentiful (e.g., Quint, 1963), but empirical research was almost nonexistent. In the past ten years, however, the concept has received considerable attention in research on psychosocial aspects of cancer. Weidman-Gibbs and Achterberg-Lawlis (1978), for example, observed an inverse relationship between the perceived emotional support from family members and the degree of fear and noticeable pain among 16 terminal cancer patients. Similarly, Carey (1974) reported that perceived support was associated with interviewer assessments of better emotional adjustment among 74 advanced cancer patients. Interviewing 41 women who had had mastectomies, Jamison, Wellisch, and Pasnau (1978) found a positive association between perceived support and self-rated emotional adjustment. Among children with cancer, still other researchers found a significant link between availability of opportunities to communicate and indices of adjustment, e.g., observer-rated negative mood (Kellerman, Rigler, Siegel, & Katz, 1977), as well as with adaptive coping strategies (Spinetta & Maloney, 1978). In such studies, the formulations of social support are generally weak, as noted in a review on support following treatment for breast cancer (Lindsey, Norbeck, Carrieri, & Perry, 1981). Most of the above studies, for example, used single-item self-report assessments of overall perceived support.

Three later investigations, with larger samples and better conceptualization, provide further evidence for the value of support in adjustment to cancer. One study of 151 breast cancer patients found that social support from network members was significantly associated with affect or mood during the first year following mastectomy (Funch & Mettlin, 1982). Similar results were reported by Lichtman, Wood, and Taylor (1982) based on interviews with 78 women who had been diagnosed as having breast cancer 1 to 16 years previously. In their study, perceived support from family members and friends was significantly associated with a composite measure of emotional adjustment, derived from patient and physician ratings.

Finally, Bloom (1982) analyzed data from questionnaires filled out by 130 nonmetastatic (not with advanced disease) breast cancer patients. Using multiple regression—and controlling for background factors such as marital status, age, and socioeconomic status—Bloom found that women who reported more sup-

port (as measured by family cohesiveness and amount of social contact), exhibited fewer self-destructive coping behaviors (e.g., smoking, worrying). Exhibiting fewer of these behaviors was in turn associated with having a better self-concept, experiencing less psychological distress, and feeling more power over the illness. However, there were no direct associations between support and adjustment.

All of the above findings are correlational; they do not necessarily indicate causal relationships. However, interview studies by Weisman and Worden (1975) and by Vachon (1979) conducted over time provide evidence that the amount of social support at the time of diagnosis is associated with the level of emotional distress from six months up to two years later, and with the patient's length of life (see also Funch & Marshall, 1983). In addition, three quasiexperiments conducted with cancer patients indicate benefits of support interventions as assessed by patients' self-esteem, self-concept, self-efficacy, negative affect, rate of return to work, and level of physical activity (Bloom, Ross, & Burnell, 1978; Ferlic, Goldman, & Kennedy, 1979; Gordon, Friedenbergs, Diller, Hibbard, Wolf, Levine, Lipkins, Ezrachi, & Lucido, 1980). Unfortunately, the treatment in each of these studies was multifaceted, including many things in addition to social support.

Wortman (1984) recently reviewed the research literature on social support and cancer, and highlighted the major problems facing researchers. One problem she notes is that of defining and operationalizing the many types of support (e.g., emotional, informational, or instrumental) and assessing whether each is provided by specific other individuals in the social network. A related issue is the paucity of studies on specific natural helping behaviors as opposed to general and abstract assessments of support availability. Still another issue Wortman (1984) raises is that most research on social support focuses exclusively on the positive aspects of interpersonal relationships and neglects the ways in which social network members may fail to provide support or even cause additional stress (Heller, 1979; Suls, 1982). In the case of cancer, interpersonal problems seem to be a frequent consequence of the disease. Cancer can lead others to avoid the patient, to close off communication about difficult emotional topics, and to exhibit nonverbal signs of rejection stemming from uncertainty over how to respond (Dunkel-Schetter & Wortman, 1982; Wortman & Dunkel-Schetter, 1979). In one recent study, for example, breast cancer patients reported that support often did not materialize and when it did, it was often inappropriate (Peters-Golden, 1982).

It appears that the experience of cancer represents a paradoxical circumstance: social support is potentially a strong resource for adjusting to cancer, yet reaction to the disease can interfere with support's provision. This problem also occurs among other distressed populations such as rape victims, the bereaved, and the disabled (Coates & Wortman, 1980; Coates, Wortman, & Abbey, 1979).

An Investigation of Social Support Among Cancer Patients

Overview

Based upon the foregoing research, an investigation on social support and cancer was conducted (Dunkel-Schetter, 1982a) through cooperation with Northwestern Memorial Hospital in Chicago, Illinois, to address the following three primary questions:

1. What do cancer patients identify as supportive and unsupportive behaviors of others?
2. Do cancer patients receive adequate support from others?
3. Is the support received associated with adjustment, and in what ways?

The first two questions were of interest because of the perceived need for more exploratory and qualitative approaches to understanding social support, especially in respect to cancer. While past researchers hastened to measure support, to document its positive effects, and to develop interventions, little attention has been devoted to natural helping behaviors (cf. Gottlieb, 1978) or the extent to which specific groups receive sufficient support (Wortman, 1984). The third question was aimed at replicating and extending past research on the value of social support in adjusting to cancer through designing multiple operationalizations of both support and adjustment.

Procedures

Patients with breast and colo-rectal malignancies were chosen as the study population because these are two of the most prevalent cancers in the general population. The Tumor Registry at Northwestern University identified all hospital patients under 70 years of age who had been diagnosed with primary cancers of these types within a 12-month period. Letters were sent to each potential respondent, explaining the project and requesting an interview by telephone. Patients who refused were offered the option of completing comparable mail questionnaires. Taped interviews conducted by interviewers who used a standardized protocol lasted about an hour. The interview contained a combination of closed-ended items, open-ended items with standard probes, and standardized scales concerning interpersonal relationships, social support, and levels of physical and psychological adjustment. Following each interview, ratings on the respondent were completed by the interviewer.

The Sample

Sixty-six percent of the 120 patients approached for interviews agreed to participate ($n = 79$). Eleven of the 79 in the sample completed mail question-

Table 1. Sample Characteristics

Gender		Religious preference	
Women	68 (86%)	Protestant	18 (35%)
Men	11 (14%)	Catholic	25 (32%)
Mean age	56 years	Jewish	17 (22%)
Range	30 to 70 years	None/other	9 (11%)
Marital status		Education	
Married	49 (62%)	High school	24 (30%)
Divorced/separated	10 (13%)	Some college or	27 (35%)
Widowed	12 (15%)	vocational training	
Never married	8 (10%)	College degree	17 (21%)
Employed at diagnosis	56 (73%)	Graduate education or	10 (13%)
Mean income	\$33,975	degree	
Ethnicity			
Anglo	72 (91%)		
Black	5 (6%)		
Asian	2 (3%)		

naires. Since there were no differences on any responses between questionnaires and interviews, all observations were pooled.

Three quarters of the sample were diagnosed as having breast cancers, and one quarter as having intestinal malignancies. Approximately 60% were diagnosed with early stage cancer (stages I and II) and 40% with advanced cancer (stages III and IV). These groups were considered to have good ($n = 47$) and poor ($n = 32$) prognosis. Nearly all were initially treated with surgery and about one third also underwent radiation or chemotherapy treatments. Patients were interviewed from 7 to 20 months after their diagnosis. Analyses considering time since diagnosis revealed no significant differences on any variables. Sociodemographic information and other background data are contained in Table 1.

Analyses of refusals indicate that individuals with breast cancer were more likely to participate than those with intestinal cancer (67% compared to 45%). Participation also dropped somewhat with more advanced cancer (from 70% of stage I cancers to 42% of stage IV cancers). These differential rates of participation as well as the preponderance of women in the sample should be considered in evaluating the results.

Measures

Social support measures were selected to assess aspects of the respondents' social networks, their perceived support from spouse or significant other and from the patients' networks as a whole, satisfaction with support, supportive and unsupportive natural behaviors, and problems in interpersonal relationships. These included both quantitative and qualitative items. One support variable was an interviewer rating; the rest were self-report items. All support measures were designed specifically for the present study, inasmuch as standard instruments

were unavailable then. The adjustment measures were selected to represent several possible facets of this concept. The primary ones were multiple-item indices of *functioning*, *symptoms*, *self-esteem*, and *affect*, each of which was either previously validated or was derived from a standardized instrument for the study's purposes.

Selected Results

Meaning of support. The first question addressed was: What do cancer patients identify as supportive and unsupportive behaviors? To operationalize this, the more colloquial terms "helpful" and "unhelpful" were used. Respondents were asked to describe the *most* helpful and the *most unhelpful* things anyone had done since the diagnosis; their transcribed answers were coded by two judges according to who had performed a behavior (source of support) and what was done (type of supportive or nonsupportive action). Agreement between the judges on this task was .75 for helpful behaviors and .76 for unhelpful ones, indicating a reasonable degree of consistency.

Physicians and other medical care providers were mentioned about as frequently as family members as sources of the greatest help. One hundred and fifty-two "most helpful" sources were identified, of which 34% were family members (primarily spouse, children, siblings), 30% were medical staff (e.g., physicians, nurses), and 16% were friends. Nine percent mentioned other individuals with cancer as most helpful, 6% indicated their boss or co-workers, and the remaining 5% identified various others (e.g., their rabbi). Concerning type of support, a wide range of typically measured supportive behaviors were reported. The categories coded were emotional support (love/concern, understanding, reassurance, encouragement), instrumental support (aid or assistance), informational support (advice, information of a problem-solving nature), and appraisal support (approval) (House, 1981). Eighty-one percent of all respondents mentioned some form of emotional support as one of the most helpful behaviors, 41% of the respondents mentioned informational support as most helpful, 6% of the respondents mentioned appraisal support, and 6% mentioned instrumental aid or assistance. Thus, help most often meant emotional support and rarely aid or assistance to these respondents.

Within the category of emotional support, the most frequently mentioned subcategory of response was love/concern; 46% of the 118 instances of emotional support were of this type. This subcategory included examples of mere presence, companionship, increased attentiveness, willingness to let the person talk, and listening, as well as direct expressions of love and concern. The following are examples: "He always has time to listen," and "[She/He] let me cry, permitted me to talk." One woman said her friend had been helpful by "being with me when I needed somebody. I think you need to be able to say 'I

can hold on to somebody' . . . [then] you're not alone." The second most frequently mentioned type of emotional support was understanding (29% of the instances). Another 26% involved reassurance or encouragement.

Examining the source and type of support together, emotional support and tangible assistance were reported as equally helpful across sources, that is, from family, friends, and medical personnel. However, information and advice were almost exclusively reported as helpful when provided by physicians and health professionals. For example, one respondent said the doctor had been the most helpful person since the cancer because "he spelled it right out for me, he told me it might not be malignant or it might be, and he told me the different types of treatment I might have . . . not in medical terms, but in lay terms you could understand." Another said "[the doctor] was honest, told me what to expect physically, and much more important, told me what to expect emotionally, and told me how to try to handle it."

Turning to unsupportive behaviors, 44% of the sample reported one or more instances in which others had been unhelpful. Sources of unhelpful acts included approximately equal distributions of family, friends, physicians, other medical staff, co-workers, and strangers. Categories for unhelpful behavior were difficult to develop because little conceptualization has been done in this area. For this reason, and because the number of instances is small, these results are discussed in an impressionistic manner.

A common theme concerned the style of medical care received or "bedside manner" of medical care providers. It was reported as unhelpful when physicians provided too little information; providing too much information was never mentioned. More frequent were the number of instances in which medical care was provided without any accompanying emotional support. Physicians were sometimes described as too cold or too clinical in manner, as seeming unfeeling about or insensitive to patients' feelings or emotional states, and too abrupt. A typical comment was "I felt like [the doctor] really wasn't caring about me as a person. [He was] just being very clinical and matter of fact . . . not at all cognizant of my feelings." Thus, it appeared as if technical medical care (i.e., instrumental support) provided in the absence of emotional and informational support was viewed as unhelpful.

A second theme among unhelpful behaviors was the provision of information and advice by family and friends. While this type of support from providers was generally *helpful* (and it was seen as *unhelpful* when they failed to provide it), such support attempts were often seen as *unhelpful* when coming from family and friends. Attempts by nonexperts to provide advice or to inform seemed to be resented and disliked. This appeared to hold true whether the advice concerned how to recover quicker or how to cope.

Still a third theme among unhelpful behaviors pertained to the insensitive, hurtful, and thoughtless comments of friends. For example, patients reported

alarm at being asked "what their chances were," or whether the cancer was "all out." Others mentioned that they were upset by being told about other cancer patients' positive experiences. One remarked "I'm tired of people always telling me so-and-so had her breast removed and is doing fine. That may be, but so-and-so is not going through what I am with the treatment." Finally, some of the unhelpful actions of others can be characterized as overconcern or excessive emotionality. One patient reported "my sister-in-law cried and cried and cried, as if I were dead already, and I didn't like that."

In addition to open-ended questions about unhelpful behaviors, nine closed-ended items measured a priori categories of unhelpful behavior (Wortman & Dunkel-Schetter, 1979). The most frequently reported unhelpful behaviors were "minimizing problems or feelings about the cancer," and "being told not to worry because things would work out all right." Each of these had occurred for 37% of the sample. These behaviors are probably intended as guidance or informational support, but they seemed to be perceived as attempts to exert social influence on the way the person was coping.

Adequacy of support and communication. The second question addressed in the study was whether cancer patients receive enough support and whether they evidence problems in interpersonal relationships. Based on several different indicators, it appears that support was adequate for most of the sample. Over 95% of the respondents reported receiving as much love, assistance, information or advice, approval, and understanding from their spouse or closest significant other as they needed. Mean satisfaction ratings for these types of support were high, ranging on a 10 point scale from 8.00 (information/advice) to 9.08 (approval). In addition, satisfaction with overall support from spouse (or closest significant other) was high ($M = 9.13$, $SD = 1.49$) and satisfaction with support from the social network as a whole was only slightly lower ($M = 7.96$, $SD = 2.66$). Of the 53 respondents who said that something concerning the cancer was bothering them at the time of the interview, 83% had talked about it with their spouse or significant other; they showed little evidence of blocked communication. Three quarters of these patients found it helpful to have done so. Finally, interviewers rated 66% of the sample as having strong or very strong support.

A stable minority, about one quarter of the sample, experienced significant interpersonal problems or changes. Twenty-six percent of the sample reported changes due to the illness in their relationships with family members, 13% reported changes in relationships with friends, and 13% reported changes in relationships with people at work. Also, 15% reported socializing less often since the cancer.

Respondents' reports of the reactions of their family members to the cancer were coded for evidence of any interpersonal problems by two independent

judges, who had 97% agreement. Eighteen percent of the sample reported negative reactions in at least one family member. Most of these involved lack of support, as illustrated by the following quotes: "My daughter is not as accepting of me as she generally is . . . it's almost like I am a stranger now because I don't have a breast," and "my sister was very distressed . . . she was upset enough that she couldn't be very supportive." Interviewer reports were consistent with these findings, in that 16% of the sample was judged as having weak or very weak support, and 18% as having only fair support. These are overlapping rather than independent indicators; those persons judged to have weak support were also often those respondents who experienced unfavorable family reactions.

Eighty-seven percent of the sample indicated that they tried to cope by sometimes keeping their thoughts and feelings to themselves. Of these, 59% indicated they attempted to cope this way because of how they expected others to react if they expressed their feelings. They refrained from talking openly because they were afraid to bother, upset, or bore others; they did not want others to worry about them; they did not want to be pitied or to create a negative impression; or, when they wanted to talk, either no one was available to listen or it was inappropriate to talk. In addition, 28% of the sample felt that spouses or significant others did not really understand their feelings about the cancer.

In the case of each finding reported above, those patients evidencing problems in social relationships or support were also those with more advanced disease and poorer physical condition. Inasmuch as patients with advanced disease were less likely to participate in our study, the rates of interpersonal problems in this sample are probably underestimates for all cancer patients. Moreover, the frequency of interpersonal problems is likely to be very high in a subgroup of those with advanced cancer. Interpersonal problems, in turn, are likely to be an important factor in whether and how support is provided.

Support and adjustment. The results of this study on the associations between support and adjustment were quite complicated and will not be described in full here (for further information, see Dunkel-Schetter, 1982b). Three measures of support were involved: an eight-item composite index on *quantity of support* derived from self-report social network items (e.g., number of relationships, frequency of interaction), a five-item composite on *satisfaction with support* from spouse or closest significant other (one item each on love, understanding, approval, advice, and assistance), and an interviewer rating on overall *strength of support* on a five-point scale from very weak to very strong.

The measures of adjustment included two on *physical condition* (functioning, symptoms) and two on *psychological well-being* (affect, self-esteem). *Functioning* was assessed using 19 items composed from similar measures (Bergner, Bobbit, Pollard, Martin, & Gilson, 1976; Stewart, Ware, Brook, & Davies-

Avery, 1978) to capture changes from pre-cancer baselines in different areas of living. *Symptoms* were measured by a 16-item checklist of physical or somatic complaints adapted from past research (Derogatis, 1977; Langner, 1962). *Affect* was assessed with the 40-item Affect Balance Scale (Derogatis, 1975) and *self-esteem* with a ten-item instrument developed by Rosenberg (1975).

Support was significantly associated with adjustment. The results were fairly consistent across the three support indices, but the effects differed by prognosis (better versus poorer) and by category of outcome (physical condition versus psychological well-being). In general, the greater the support among those with a good prognosis, the more positive their affect ($r = .36, p < .01$) and the higher their self-esteem ($r = .36, p < .01$); but among those with a poor prognosis, these associations did not hold ($r = .00, r = .02$). Since there were no differences between prognosis groups in mean levels of support, affect, or self-esteem, this pattern suggests that the link between support and well-being may be attenuated under conditions of high stress. In other words, if a cancer patient has a poor prognosis, support is not related to his or her well-being, but it is when the prognosis is good. Perhaps this is because one's well-being is threatened in multiple ways by a poor prognosis, and support cannot possibly ward off all the threats.

Support was also inversely associated with physical condition, but only for poor prognosis patients. That is, the stronger a patient's support as rated by the interviewer, the more problems in functioning ($r = .43, p < .01$) and marginally more symptoms ($r = .23, p < .10$) poorer prognosis patients had. These results could mean that support is detrimental for poor prognosis cancer patients, where-as it is benign or beneficial for good prognosis patients. However, since these patients were experiencing more problems in functioning, a poor prognosis and its concomitant physical problems are likely to be eliciting more support.

Further analyses bolstered this interpretation. When individual support items were correlated with functioning and symptoms, less stable items showed similar effects to those above whereas more stable items showed reverse effects. For example, the number of immediate family members a poor prognosis patient had was correlated $-.31$ ($p < .05$) with problems in functioning and $-.27$ ($p < .10$) with symptoms. Since it is unlikely that the physical condition of the patient is influencing family composition, one might deduce that larger families somehow reduce the cancer patient's awareness of or actual incidence of physical problems. Third variable causation cannot be ruled out, of course.

Estimates by poor prognosis respondents of number of *close* family members (an unstable item), in contrast, were associated positively with problems in functioning ($r = .41, p < .01$) and with symptoms ($r = .28, p < .10$). Thus, symptoms and problems in functioning are probably influencing the patient's *perceptions* of closeness in the family. In other words, when one's condition deteriorates, closeness to family is perceived to increase. This perception may, in

fact, reflect objectively greater attentiveness on the part of family members due to the patient's deteriorating physical condition.

Past research on cancer and other groups has sometimes reported positive associations between support and adjustment like those found in the present study. Barrera's (1981) results with pregnant adolescents indicate that a negative effect of support on adjustment is unlikely. Similarly, Carveth and Gottlieb (1978) state that in cross-sectional research a positive association between support and stress is likely to reflect increased use of social supports as stresses mount. In one study on cancer, an association of greater support with poorer adjustment was found among a subset of 12 patients and is suggested to indicate that support is detrimental (Revenson, Wollman, & Felton, 1983). The results of the present study, however, provide evidence that this interpretation is unlikely. Yet because they too are based on cross-sectional data, firm causal inference is not possible. In general, caution in inferring so called "negative support effects" is suggested.

Discussion, Implications, and Recommendations

Sources and Types of Support

These findings raise several issues about the sources and types of support that are beneficial to cancer patients. Support from medical care providers is clearly important; in fact, cancer patients often view medical care as unhelpful unless it is also accompanied by emotional and informational support. Health care providers are seen as most effective when they provide a combination of direct assistance, advice or guidance, and emotional support. In contrast, specialization in support from family and friends was found. Respondents valued mainly emotional support from them—just being there in times of need, listening, and providing encouragement. Advice and information from family and friends, in turn, were seen as unhelpful and even bothersome. For example, comments that were even obliquely instructive (such as descriptions of other cancer patients' experiences) were reported to be upsetting. Surprisingly, tangible assistance (including caretaking) was not mentioned much among the most helpful actions of family and friends.

The foregoing indicates that what is supportive and helpful coming from one person can be viewed as inappropriate (Lieberman, 1982) or even stressful when provided by another. Therefore, support would consist of different actions depending on which social network members are considered. Understanding which sources are best able to provide the different types of support in a specific situation, such as cancer, is then of paramount importance. It may depend upon many factors, including network members' roles, expertise, social skills, and empathy. In addition, the level of intimacy, person similarity, and past oblige-

tion within the dyadic relationship are likely to play a part. The social psychological literatures on reactions to aid (Fisher, Nadler, & DePaulo, 1983) and on social power (French & Raven, 1959) are pertinent to determining the conditions for optimal provision of support.

One implication of the foregoing is that encouraging family and friends to be supportive to the cancer patient may be unwise, if it is interpreted to mean that they should offer guidance or problem-solving assistance. Instead, interventions for families might emphasize the importance of skillfully provided emotional support and the risks posed by not providing this. For physicians, education and training might focus on the importance of accompanying technical care with even modest amounts of emotional support, as well as information about the disease and how to cope with it. Another possibility would be a team approach to medical care involving a nurse practitioner or social worker who could serve as an emotional and informational support specialist. Some clinics and private practices now use such a model, but it may not be an adequate substitute for physician support.

These findings may have been influenced by the preponderance of women in the sample. Although not examined in this study due to the small number of men, gender differences in what is considered supportive are likely (Vaux, in press). Women, for example, may rely on medical care providers more for support than do men, and they may place a higher value on emotional support. Attention to these matters in future research on the helping behaviors of network members of cancer patients and other stressed groups seems warranted. The pattern found here may also have been influenced by how the items were worded. Asking about "help" may introduce a bias toward medical sources, yet there was no indication that this wording increased mention of instrumental support, the closest concept to help among the types of support studied. In general, it may be useful to clarify the distinction between help and support in future studies and to probe for behaviors of both types.

Prognosis and Level of Stress

A significant minority of cancer patients in this investigation experienced interpersonal changes or problems independently from their receiving support. As the prognosis worsens, interpersonal relationships can change, social interaction can decrease, provision of and satisfaction with support can decline, and problems in family relationships and communication can become more prevalent. All of these effects were more pronounced in this study among patients with more advanced disease than among those with early-stage disease. Thus, the extent of interpersonal difficulties and of problems in receiving adequate support seems to increase as a function of increases in levels of stress. One important implication of these results is that retrospective interviews with good prognosis

patients who were treated successfully in the past are unlikely to detect accurate rates of interpersonal problems for cancer patients in general.

Good prognosis patients in this sample were either cured and recovered by the time of the interviews or they expected to be soon; their reports reflect that they were more similar to well people than to ill people. Poor prognosis patients, in contrast, experienced the discomforts, ambiguities, and fears typically thought to be linked with cancer; they experienced ongoing stress. Prognosis, therefore, is an important variable to control, and in this study it was a reasonable indicator of stress level at the time of the interview.

In addition to influencing the incidence of interpersonal problems, prognosis also mediated associations between support and adjustment. Support was associated with greater psychological well-being only for the good prognosis group, as it has been in nondiseased samples previously (Turner, 1983). In addition, support was associated with physical condition among poor prognosis patients so as to indicate that the physical effects of advanced cancer may elicit support. Advanced cancer, it seems, has the simultaneous effects of eliciting more support and of causing more interpersonal problems. When a patient suffers, it is stressful for both patient and loved ones. Suffering indicates that support is needed and elicits reactions from network members. But providing support in this situation is not easy and can take an enormous toll (Dunkel-Schetter & Wortman, 1982; Wortman & Dunkel-Schetter, 1979). This strain, in turn, can increase interpersonal problems (see also Chesler & Barbarin, 1984).

The important mediating role of prognosis in this investigation highlights within-population variation in level of stress. As mentioned above, two individuals who have had cancer may have very different experiences. In fact, two cancer patients often differ more in level of stress than a cancer patient and a person without cancer. Pertinent to this issue, one interview item asked, "How stressful has it been for you to find out you had cancer and be treated for it?" In this sample, 36% of the respondents endorsed "extremely or very stressful," 27% endorsed "moderately stressful," 18% endorsed "slightly stressful," and 19% said "not at all stressful." Considering that every respondent had been diagnosed with a cancerous tumor in the breast or intestine within the past 20 months, such variability is somewhat surprising. Yet it exemplifies the great differences among subjects within a superficially homogeneous group.

This point applies also to many other stressed samples—e.g., divorced partners, women in childbirth, or widows. We tend to view many life events as uniformly and highly stressful. However, since level of stress was one determinant of interpersonal changes and of social support in this study, it is essential in future research to control variation in stress in samples of individuals experiencing similar misfortunes. Variation in stress level among subjects is no doubt due to differences in both objective conditions within the sample (e.g., differences in prognosis in cancer patients) as well as to differences in subjective appraisals of

those conditions (Lazarus & Folkman, 1984). Kessler, Price, and Wortman (in press) have discussed this distinction and the importance of attending to both categories of individual differences in research on stress.

Qualifications to a Simple Support-Adjustment Link

In addition to the importance of prognosis, two other qualifications in the association between support and adjustment deserve mention. One involves the multifaceted nature of adjustment. A distinction between psychological well-being and physical condition, distinguishable by factor analytic techniques, proved useful in the present study. Moreover, meaningfully different patterns of results for each of these with social support were obtained. As others have noted (Cohen & Lazarus, 1979; Lazarus & Folkman, 1984; Silver & Wortman, 1980; see also Kessler et al., in press), adjustment to stress may be accomplished in one respect and not in others, or even at the sacrifice of other facets of adjustment. For example, a former cancer patient may resume normal activities but continue to be depressed for some time. A patient may maintain emotional equilibrium by denying signs that the disease is progressing, thereby risking eventual physical decline. Or, a cancer patient may be free from mood disturbance or major difficulties in functioning, but continue to experience an array of troublesome treatment-related symptoms that impair quality of life. Thus, it is clearly important to treat adjustment as multidimensional in future studies.

Another qualification to the apparent association between support and adjustment concerns the measurement of support. In the study reported, three indices represented three different aspects of support: quantity of support (network dimensions), satisfaction with support, and strength of support as rated by interviewer. All three indicators yielded similar results. However, when the associations with physical condition among the poor prognosis patients were opposite to expectation, a closer item-by-item analysis provided some clarification. Thus, in future studies it may be useful to employ a wide variety of items capturing both stable and changeable aspects of support (Caplan, 1979; DiMatteo & Hays, 1981; Wortman, 1984). In particular, inclusion of both self-reports of perceived support, and social network measures will enhance the chances of drawing inferences in correlational research.

Recommendations for Future Research

At present, we do not know very much about what support is, who can best provide its different forms, which aspects of adjustment it influences, through what mechanisms or causal processes it operates, why support is not always provided, and finally, how attempts to be supportive fail or even sometimes

contribute to stress. Taking into account that these questions may be answered differently for different stressed populations, our knowledge is quite meager. One strength with respect to research on cancer is the interest among health professionals who bring direct experience with patients to bear in the research process. Natural support processes are instructive to observe and can be extremely difficult to quantify within the requirements of rigorous research.

It is becoming increasingly clear that the issues are complex (Broadhead, Kaplan, James, Wagner, Schoenbach, Grimson, Heyden, Tibblin, & Gehlbach, 1983; Monroe, 1983; Thoits, 1982). Stresses such as cancer have several *simultaneous* effects that take place *over time* and that are *interwoven*. One effect is to stimulate the attentiveness and support of the social network. Another effect is to create stress for network members themselves, which influences the quality and quantity of support provided (Chesler & Barbarin, 1984). Still other effects that are idiosyncratic to a particular type of stress will also influence the provision of support, such as beliefs and fears about cancer (Dunkel-Schetter & Wortman, 1982; Wortman & Dunkel-Schetter, 1979). Skillful support, in turn, contributes to subsequent adjustment.

Because the issues are so complex, we need to examine the characteristics and perspectives of both the recipient and the provider of support in the light of the past and present quality of their relationship, taking into account the stressful circumstances. In a 1981 Phil Donohue television show on children with cancer, one adolescent described how her physician's apparent aloofness upset her until she learned from the nurses that he would close his door and cry after each of her visits. Such emotional reactions on the part of providers are certain to influence their ability to provide effective support, yet these have been virtually ignored in support research to date (cf. Chesler & Barbarin, 1984).

Among the research designs possible for studying support, longitudinal studies have much appeal because they may enable us to capture changes over time and to untangle causal ambiguities (Monroe, 1983). However, prospective studies do not necessarily offer an answer to the problems posed. At any time point after diagnosis, social support may have already been altered by the disease. Furthermore, measuring support only prior to onset of cancer may be insufficient because it is probably illness-specific support (rather than premorbid levels) that influences adjustment. Thus, it is essential to conduct assessments at both of these times in order to benefit fully from a longitudinal approach.

Another possible way of clarifying causality in support-adjustment associations is the experiment (DiMatteo & Hays, 1981). Unfortunately, it is hard to conduct experimental research on this topic. One cannot manipulate whether a family supports its members in times of crisis. Nor does it seem that we should design dozens of interventions given our uncertain understanding of what is and what is not helpful, and from whom (Mitchell, Billings, & Moos, 1982). Al-

though such programs have been created in the past, they are rarely evaluated comprehensively, leaving open to question whether harm may occur in addition to benefits (see also Rook & Dooley, in press).

In general, the approach to investigating social support must be aggressive, informed, and rigorous, because the quality of future research is pivotal. Some major areas of support research in which strong contributions are being made include theory development (Cohen & McKay, 1984; Shinn, Lehmann, & Wong, 1984; Thoits, 1983), measurement (Bruhn & Philips, 1984; Heitz & Kaplan, 1983; House & Kahn, in press), and design and analysis problems (Depner, Wethington, & Ingersoll-Dayton, 1984). Unless future research on this topic is increasingly sophisticated, we are likely to misunderstand the intricacies of this and eventually become disillusioned. If, instead, future research is scientifically strong, the study of social support holds much promise.

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