

Wortman, C. B., & Dunkel-Schetter, C. (1987). Conceptual and methodological issues in the study of social support. In A. Baum & J. E. Singer (Eds.), *Handbook of psychology and health, Vol. V: Stress* (pp. 63-108). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

4 Conceptual and Methodological Issues in the Study of Social Support

Camille B. Wortman
The University of Michigan

Christine Dunkel-Schetter
University of California, Los Angeles

The term *social support* has been used widely to refer to the mechanisms by which interpersonal relationships presumably protect people from the deleterious effects of stress (Cohen & McKay, 1984). In the past decade, there has been a great deal of interest in this construct; hundreds of studies have appeared in the literature, as well as numerous review articles (e.g., Antonucci, 1985; Broadhead et al., 1983; Caplan, 1979; Carver & Gottlieb, 1979; Cohen & McKay, 1984; Cohen & Wills, 1985; DiMatteo & Hays, 1981; Heller, 1979; Heller & Swindle, 1983; Thoits, 1982; Turner, 1983; Wallston, Alagna, DeVellis, & DeVellis, 1983; Wortman & Conway, 1985) and books (Cohen & Syme, 1985; Gottlieb, 1981; Henderson, Byrne, & Duncan-Jones, 1981; House, 1981). This research appears to be increasing exponentially; there were more citations on social support in the last few years than in the entire previous decade (House & Kahn, 1985). Although the nature, meaning, and measurement of this term are still being intensely debated in the literature (Gottlieb, 1981), social support has been claimed to have positive effects on a wide variety of outcomes, including physical health, mental well-being, and social functioning. On the basis of previous work, which is critically examined later, social support is currently regarded as a central psychosocial issue in health research (DiMatteo & Hays, 1981). The purpose of this chapter is to highlight some of the issues that researchers face in deciding how to conceptualize and measure this construct. These issues are presented as a set of general guidelines for social support researchers with specific illustration from our past work on cancer patients. That work includes reviews of the literature in medicine and psychology (Dunkel-Schetter & Wortman, 1982), systematic research (Dunkel-Schetter, 1984), and facilitation of cancer support groups for 5 years in the Chicago metropolitan area.

In this chapter, we draw from these sources of information to explore the issues confronting social support researchers. In the section to follow we provide an overview on social support highlighting the historical development, research trends, and weaknesses of this construct. Next, we briefly summarize our perspective and past work on social support and cancer. The remaining sections of the chapter examine definitions of social support, types and sources of social support, general strategies in the measurement of support, standardized scales to measure social support, causal mechanisms, alternative explanations, and directions for future support research.

AN OVERVIEW OF PAST WORK ON SOCIAL SUPPORT

In the 1970s, a number of influential papers appeared, suggesting that social support may have beneficial effects (Caplan, 1974; Caplan, Robinson, French, Caldwell, & Shinn, 1976; Cassel, 1974; Cassel, Cobb, 1976; Dean & Lin, 1977; Kaplan, Cassel, & Gore, 1977). These investigators based their claims for social support on a wide range of data from many different fields of inquiry. They interpreted this evidence to suggest that social support plays an important role in protecting people from the effects of stress, preventing physical and mental disorders, and ameliorating illness and psychiatric symptoms. These papers generated intense interest and excitement among researchers and practitioners throughout the social sciences. Investigators were enthusiastic about social support because they regarded social relationships as more amenable to change than exposure to stress itself or than other possible mediators such as personality traits or coping styles (Thoits, 1982). On the basis of these and other papers suggesting that social support is beneficial, a variety of intervention efforts has been developed to enhance the support available to distressed individuals (Conter, Hatch, & D'Augelli, 1980; Cowen et al., 1979; Lentz, 1976; Weisenfeld & Weis, 1979; see Mitchell & Hurley, 1981, for a review). Moreover, policymakers have maintained that such efforts should be strongly encouraged and that the facilitation of natural support networks should become an important national priority (National Commission on Neighborhoods, 1979; President's Commission on Mental Health, 1978; see Froland, Pancoast, Chapman, & Kimboko, 1981, for a review).

In recent years, this initial enthusiasm has been replaced by a more critical examination of the earlier claims (Antonucci, 1985; Broadhead et al., 1983; Caplan, 1979; Carver & Gottlieb, 1979; Cohen & McKay, 1984; Cohen & Syme, 1985; Cohen & Wills, 1985; DiMatteo & Hays, 1981; Heller, 1979; Heller & Swindle, 1983; House, 1981; House & Kahn, 1985; Thoits, 1982; Turner, 1983; Wallston, Alagna, DeVellis, & DeVellis, 1983; Wortman & Conway, 1985). A number of weaknesses in the early evidence have been discussed. Foremost among these is the lack of consensus about how social support should be defined and operationalized. As a number of investigators have noted (Bar-

rera, 1981; House, 1981; Thoits, 1982), such diverse indicators as the presence of littermates, the extent to which pregnancy was "wanted," and involvement in self-help groups have all been interpreted as evidence of social support's effectiveness in mitigating stress. Some investigators have used operational definitions of social support, which include a broad range of tangentially related constructs, such as social class, job satisfaction, or insufficient financial resources (House, 1981; Thoits, 1982).

Another commonly identified weakness concerns the research designs typically employed in investigations of social support; most of the conclusions about the construct are based on correlational data collected at a single point in time. Although associations between social support and positive outcomes have often been interpreted causally, investigators have identified several alternative explanations that are highly plausible (DiMatteo & Hays, 1981; Eckenrode & Gore, 1981; Heller, 1979; Heller & Swindle, 1983; Holahan & Moos, 1980a, 1981; Silver & Wortman, 1980; Thoits, 1982). For example, social competence has been proposed as the determinant of both support and outcomes (Heller, 1979). Finally, critics have noted that little is known about the underlying processes through which social support may effect health outcomes. Most of the available research merely documents a relationship between social support and health; the question of why or how social support influences health has only recently begun to receive attention (Caplan, 1979; Cohen & Wills, 1985; DiMatteo & Hays, 1981; Heller, 1979; Heller & Swindle, 1983; House, 1981; Lieberman, 1982; Mitchell & Trickett, 1980; Pearlman, 1982; Schaefer, Coyne, & Lazarus, 1982; Silver & Wortman, 1980). In short, investigators have come to appreciate the complex and multifaceted nature of social support and the need for more systematic and precise conceptualization and measurement of the construct.

Since the early studies, research in the area of support has become much more sophisticated. In the past few years, a number of well-controlled, prospective longitudinal studies have been conducted to assess the impact of social ties or social support on health outcomes (Berkman & Syme, 1979; Blazer, 1982; Broadhead et al., 1983; Funch & Marshall, 1983; House, Robbins, & Metzner, 1982; Wallston et al., 1983). The majority of these studies have provided clear evidence that social relationships have a beneficial impact on health. An impressive feature of these studies is that they have included "hard" outcomes such as mortality. There have also been a number of experimental studies in which participants have been randomly assigned to a supportive treatment or a control group (Gottlieb, 1981; Gruen, 1975; Levy, 1983; Porrit, 1979; Raphael, 1977; Sosa, Kennell, Klaus, Robertson, & Urrutia, 1980; see Broadhead et al., 1983; Wallston et al., 1983; Wortman & Conway, 1985, for reviews). In all but one of these experiments (Gottlieb, 1981), respondents assigned to the supportive treatment showed better mental and/or physical health outcomes than control respondents. In some of the individual studies, the results have been quite dramatic. For example, Sosa et al. (1980) examined the effects of a supportive companion on pregnancy outcomes. As they entered the hospital, pregnant wom-

en were randomly assigned either to a control group receiving standard care or to a supportive treatment group. Women in the treatment group were given access to a supportive lay companion (a woman who was previously unknown to the expecting mother). Women with a supportive companion were significantly less likely to develop complications (e.g., Cesarean section, meconium staining, etc.) during labor and delivery than were women in the control group. Even when only uncomplicated deliveries were compared, the length of labor was markedly shorter for women who had a supportive companion (8.8 hours vs. 19.3 hours). Taken as a whole, these studies provide little insight into the mechanisms through which social support may influence health outcomes. Nonetheless, they suggest that we may be dealing with a variable that is quite powerful and is therefore worthy of serious consideration among researchers studying many different populations.

Researchers interested in studying social support are faced with a wide range of decisions. What operational definition of support is most appropriate? Should the investigator focus on particular types of support, such as emotional support, to the exclusion of others, such as financial assistance? Should he or she assess support from a variety of potential providers (e.g., spouse, children, relatives, friends, physicians, nurses, other cancer patients) or just a few? From specific individuals (e.g., from family member A, family member B) or from broad categories of people (e.g., family or friends)? Should the focus be on so-called "objective" indicators of support (e.g., number of friends or number of hospital visits), subjective or perceived support, or both? Should the support provided to the recipient be assessed purely from the recipient's point of view or from others' perspectives (e.g., family, health-care providers) as well? Finally, should the investigator rely on available measuring instruments to assess social support, or must scales be developed specifically for each population studied?

A central premise of this chapter is that appropriate decisions on these and other methodological questions require a careful consideration of the issues faced by the persons in the specific population under study. In defining social support, for example, some investigators have included emotional support only and have excluded the provision of tangible aid such as help with household chores, child care, and so on (see Cobb, 1976). Yet, such tasks may represent a major difficulty for individuals who are seriously ill (DiMatteo & Hays, 1981). Thus, tangible support from family and relatives may be particularly important in buffering stress among cancer patients, for example, and operational definitions that exclude tangible support may be unduly restrictive (House, 1981).

SOCIAL SUPPORT AND CANCER

Elsewhere, we have maintained that people with cancer have an enhanced need for social support and that social support is a valuable resource for coping with the disease. However, we have also argued that those who have cancer may be

especially likely to experience problems in obtaining adequate support for a variety of reasons, including the intense fear and stigma associated with this illness. These problems include family and marital difficulties (Greenleigh et al., 1979; Lee & Maguire, 1975; Meyerowitz, Sparks, & Spears, 1979; O'Malley, Koocher, Foster, & Slavin, 1979), problems in one's social life (Cobb, 1956; O'Malley, Koocher, Foster, & Slavin, 1979; Peters-Golden, 1982; Silberfarb, Maurer, & Crouthalem, 1980; Sutherland, Orbach, Dyk, & Bard, 1952), and problems with health care professionals (Abrams, 1966; Cobb, 1956; DiMatteo & Hays, 1981; Parkes, 1974). Although not all the evidence is consistent (cf. Lichtman & Taylor, in press), there seems to be some consensus that communications between cancer patients and others are frequently problematic (Bean, Cooper, Alpert, & Kipnis, 1980; Cobb & Erbe, 1978; Gorden et al., 1980; Harker, 1972; Klagsburn, 1971; Krant, Beiser, Adler, & Johnson, 1976; Krant & Johnson, 1977-1978; Spiegel, 1979; Weidman-Gibbs & Achterberg-Lawlis, 1978; Wellisch, Mosher, & VanScoy, 1978; Winder, 1978; Wortman & Dunkel-Schetter, 1979).

The causes of these communication problems are complex and have been discussed in more detail in previous papers (Dunkel-Schetter & Wortman, 1982; Wortman & Dunkel-Schetter, 1979). The evidence suggests that cancer patients appreciate the opportunity to clarify their situation through discussion and supportive interactions with others. However, others often feel threatened, apprehensive, and uncomfortable about the person's disease. Moreover, although their feelings about the patient's illness are largely negative, others appear to believe that they should remain optimistic and cheerful in their interactions with the patient. The conflict between these feelings and beliefs may result in behaviors that are unintentionally harmful to the patient, such as physical avoidance, avoidance of open communication, and strained and uncomfortable interaction. The person with cancer often interprets these behaviors as evidence of rejection at the very time when support from others is especially important. As the process of coping with cancer unfolds, communication problems and misunderstandings can result in an interpersonal situation that is very troubled.

Ironically, then, cancer may often undermine one of the strongest potential resources people have in coping with the disease—their social relationships. In fact, the social relationships of the cancer patient may not only fail to buffer them against the stress of cancer, but they may provide additional sources of distress. It has been reported that the most virulent stress experiences are those involving the loss, disruption, or deterioration of social ties (Gore, in press).

In the past decade, several investigations of social support have appeared in the cancer literature. Investigators have found that perceived support is associated with positive outcomes, such as improved emotional adjustment or the use of more adaptive coping strategies (Bloom, 1982; Carey, 1974; Cobliner, 1977; Cohen, Dizenhuz, & Winget, 1977; Dunkel-Schetter, 1984; Funch & Mettlin, 1982; Jamison, Wellisch, & Pasnau, 1978; Kellerman, Ringler, Siegel, & Katz, 1977; Lichtman, Wood, & Taylor, 1982; Lewis & Bloom, 1978-1979; Peters-

Golden, 1982; Sheldon, Ryser, & Krant, 1970; Spinetta & Maloney, 1978; Weidman-Gibbs & Achterberg-Lawlis, 1978; Weisman & Worden, 1976-1977; see Dunkel-Schetter, 1982; Dunkel-Schetter & Wortman, 1982; Lindsey, Norbeck, Carrieri, & Perry, 1981; and Meyerowitz, 1980 for reviews). For example, Lichtman, Wood, and Taylor (1982) report that for the 78 women diagnosed with breast cancer whom they interviewed, perceived support from family and friends was significantly associated with a composite measure of emotional adjustment derived from patient and physician ratings. Similarly, Dunkel-Schetter (1984) found that among 47 breast and colo-rectal cancer patients with good prognosis, support was positively related to measures of psychological well-being. With few exceptions, these studies have been correlational and have been conducted at a single time point and so do not provide evidence regarding the causal relationship between support and adjustment. Although the evidence is not entirely consistent (Revenson, Wollman, & Felton, 1983), social support emerged as a predictor of patients' adjustment in two longitudinal studies (Vachon, 1979; Weisman & Worden, 1975). In a third longitudinal investigation (Funch & Marshall, 1983), social involvement was significantly associated with survival from breast cancer 20 years later. Moreover, evidence from three quasi-experimental studies (Bloom, Ross, & Burnell, 1978; Ferlic, Goldman, & Kennedy, 1979; Gordon et al., 1980) suggests that patients who participated in interventions involving support showed enhanced self-esteem and feelings of self-efficacy compared with patients in a control group who received no supportive treatment. However, it should be noted that the interventions were multifaceted, providing subjects with information and attention as well as emotional support. Despite weaknesses in individual studies, the literature is consistent in suggesting that social support may constitute an important resource in coping with cancer. For the remainder of this chapter, we draw from this discussion of cancer when considering the various conceptual and methodological issues that confront the researcher interested in social support. Although some examples may be pertinent only to cancer patients, we believe that most of our illustrations are generalizable—if not to most individuals experiencing a crisis, than at least to those who are experiencing chronic strains.

DEFINITIONS OF SOCIAL SUPPORT

A full consideration of the various definitions of social support, and of the conceptual problems that surround many definitions, has been provided by a number of investigators (Antonucci, 1985; Caplan, 1979; Cohen & McKay, 1984; DiMatteo & Hays, 1981; Gottlieb, 1981; House, 1981; Lieberman, 1982; Thoits, 1982). The question of how social support should be defined is an important one, because the definition has implications for measurement. As both House (1981) and Thoits (1982) have noted, many of the early investigators in

the social support area failed to provide any definition of the social support construct. Many of the definitions that have been offered have been vague or circular. For example, Thoits criticizes Kaplan et al.'s (1975, p. 50) definition of social support, "support is defined by the relative presence or absence of psychological support resources from significant others," by noting that the term *support resources* is too imprecise to be theoretically useful. Similarly, House notes that Linn, Simeone, Ensel, and Kuo (1979, p. 109) define *social support* as "support accessible to an individual through social ties to other individuals, groups, and the larger community" and are essentially defining social support as support that is social.

This imprecision in the conception of support is often mirrored in operationalizations of the construct. As noted earlier, some investigators have used operational definitions of social support that include such diverse elements as financial resources, self-esteem, and job satisfaction—"conglomerates of anything that might protect people against stress and disease" (House, 1981, p. 15). Even more problematic is the tendency of some researchers to use operational definitions of support that include variables such as "adaptability" or "crying"—variables that may overlap considerably with the outcomes that are assessed (see Thoits, 1982, for a more detailed discussion).

Some investigators have provided definitions of support that are more specific and precise. For example, Cobb (1976) has defined social support as information leading individuals to believe that they (a) are cared for and loved, (b) are esteemed and valued, and (c) belong to a network of communication and mutual obligation. Kahn and Antonucci (1980) define social support as interpersonal transactions that involve the expression of positive affect, the affirmation or endorsement of the person's beliefs or values, and/or the provision of aid or assistance. Walker, MacBride, and Vachon (1977) have defined support as behavior that assures people that their feelings are understood by others and considered normal in the situation. House (1981) has emphasized that although such definitions differ slightly in focus, there is some consensus about the aspects of relationships that are within the general domain of social support. There is some disagreement among these investigators as to which aspects of social support are most important. Unlike earlier definitions, however, each of these is precise enough to permit a clear operational definition of the construct.

One conclusion that might be drawn from the above discussion is that in selecting a definition for social support, one should attempt to be as specific as possible and avoid definitions that combine diverse social assets into a single measure. If the investigator is interested in investigating the role of other assets or liabilities such as self-esteem or life difficulties, it is desirable to conceptualize and measure these constructs separately rather than to consider them to be part of the social support construct. Measures that are "conglomerates of anything that might protect people" (House, 1981, p. 15) make it difficult to interpret data suggesting a relationship between social support and well-being. Regarding

which type of social support should be emphasized in the definition—information, affirmation of beliefs, expressions of love, or tangible aid—it may be advantageous to assess more than one type of support. In the next section of the chapter, various typologies of social support are reviewed.

For the most part, the social support literature is characterized by a general assumption that support is beneficial. Consequently, some investigators have defined support in terms of its presumably positive effects. In illustrating this problem, House (1981) has pointed out that Caplan (1974) defines social support systems as attachments between people that serve to improve adaptive competence. Unfortunately, such a definition "begs the major question for research and practice—how, when, and for whom are supportive social relationships beneficial in adapting to stress" (House, 1981, p. 17). In the case of cancer research, it may be particularly important to avoid such effect-based definitions in light of the evidence, reviewed throughout this chapter, that many behaviors that are intended to be supportive may have detrimental effects. For this reason, investigators have argued that any presumed benefits of social support should be recast as hypothesized effects in need of empirical testing, rather than elements of its definition (Antonucci, 1985; Caplan, 1979; House, 1981).

TYPES OF SUPPORT

In recent years, investigators have moved away from considering social support as a unitary construct and have attempted to increase the specificity of the term by identifying its components. As noted in the previous section, Kahn and Antonucci (1980) identify affect, affirmation, and aid or assistance as distinct types of support. House (1981) distinguishes among emotional support, appraisal support (affirmation, feedback, etc.), informational support, and instrumental support (money, labor, etc.). Taxonomies, or lists of components, of social support have also been developed by Caplan (1976, 1979), Caplan (1974), Cobb (1976), and Weiss (1974).

Drawing from these taxonomies, it is possible to identify several distinct types of support. One involves the expression of positive affect (Gottlieb, 1981; Weiss, 1974), which may include information that one is cared for, loved, or esteemed (Cobb, 1976). A second distinct type of support involves expressing agreement with or acknowledging the appropriateness of a person's beliefs, interpretations, or feelings (House, 1981; Kahn & Antonucci, 1980; Walker, MacBride, & Vachon, 1977). A third, closely related aspect of support involves encouraging the open expression of beliefs and feelings (Dunkel-Schetter, 1982; Wortman & Dunkel-Schetter, 1979). A fourth type is the offering of advice or information (Barrera, 1981; Caplan, 1974; House, 1981) or the access to new and diverse information (Mitchell & Trickett, 1980). A fifth type of support is

the provision of material aid (Caplan, 1974; House, 1981; Kahn & Antonucci, 1980). A sixth is instrumental assistance with tasks (House, 1981; Kahn & Antonucci, 1980). Finally, support may be conveyed by providing information that the person is part of a network (Barrera, 1981; Kahn & Antonucci, 1980; Walker, MacBride, & Vachon, 1977) or support system of mutual obligation or reciprocal help.

Although there is considerable overlap among the various taxonomies, there is some disagreement about the types of support that are most central to the construct. In fact, some investigators have been restrictive in delineating types of support. For example, Cobb (1976) has argued that tangible or material support should not be considered part of the social support construct. As House (1981) has noted, however, it seems inappropriate to decide in advance which elements truly represent social support. House maintains that each component should be considered potentially important and that its impact on health and well-being should be treated as an empirical question. Of course, it should be noted that these components may overlap considerably (House & Kahn, 1985); for example, the provision of aid may often be taken as a sign of love and affection. Perhaps, for this reason, some investigators have found that these components tend to be correlated with one another and are difficult to distinguish empirically (House & Kahn, 1985).

There are several reasons why it may be very desirable to assess distinct types of social support. Thoits (1982) has reviewed evidence suggesting that not all types of support are equally effective in reducing distress. There is some empirical evidence indicating that different types of support may have different effects on particular health outcomes. In one study of breast cancer patients, for example, financial support was positively associated with physical recovery, while other types of support were not. Furthermore, Cohen and McKay (1984) have suggested that all stress experiences can be categorized in terms of the coping requirements that they elicit for tangible support, appraisal, self-esteem support, or emotional support (or some combination of these). According to these investigators, only when relationships provide the appropriate forms of support will they operate to reduce distress and influence subsequent health outcomes.

In the cancer area, a number of investigators have discussed the different coping or adaptive tasks that confront most cancer patients (Mages & Mendelson, 1979; Meyerowitz, 1980; Weisman, 1979; see Dunkel-Schetter, 1982, for a review). It may be informative to ask respondents what types of support have been provided to deal with particular problems that they have faced. Because the major adaptive task required of the patient at diagnosis is to appraise symptoms and initiate treatment, the provision of information may be more stress-reducing than other types of support. Among patients who are hospitalized for long periods of time, tangible support may be particularly important. Such

patients may be particularly distressed about role requirements that they are unable to meet, and tangible help may be more comforting than reassurance or information.

Although it is desirable to assess many distinct types of social support, practical limitations may make it impossible to do so within a single investigation. Therefore, it is important to consider which types of support may be particularly important for the particular group under study. The adaptive tasks confronting a person with cancer, for example, may differ depending on the type of cancer or the stage in treatment. Similarly, Dunkel-Schetter (1982) found that better prognosis cancer patients were more troubled by uncertainty about their future, whereas poor prognosis patients were more concerned with suffering, pain, and discomfort. By a careful consideration of the adaptive tasks facing one's population, it may be possible to make some guesses regarding the type of support most likely to be beneficial.

Among patients who are very ill or who are experiencing physical changes, for example, emotional support may be especially important (Moos & Tsu, 1977). As Cohen and Wills (1985) have noted, stresses like cancer can deprive one of feelings of belonging, and emotional reassurance that one is loved may be especially important. In a study examining cancer patients' perceptions of various types of support (Dunkel-Schetter, 1982), emotional support was more likely than other kinds of support to be identified as most helpful. Over 90% of the sample mentioned some form of emotional support as one of the most helpful things that anyone had done, and this type of support was mentioned as helpful from everyone in the social network, including one's physician.

As indicated earlier in the discussion of the support problems of cancer patients, there is also evidence to suggest that the opportunity to discuss feelings, particularly negative ones, is a type of support that may be very important (see Dunkel-Schetter & Wortman, 1982; Silver & Wortman, 1980; and Wortman & Dunkel-Schetter, 1979 for reviews). In a study of patients undergoing radiation therapy, for example, Mitchell and Glicksman (1977) reported that 86% of the sample expressed regret that they were not able to "discuss the situation more fully" with someone. Verbalizing personal concerns during a time of stress can help to clarify feelings, to develop strategies for managing them more effectively, and to begin active problem solving (Dunkel-Schetter & Wortman, 1982; Wortman & Dunkel-Schetter, 1979).

In studies of social support received from health-care providers, it may be important to study the provision of information about one's disease or treatment as the primary component of support. In the previously mentioned study by Mitchell and Glicksman (1977), the majority of patients indicated that they had received no information whatsoever from the referring physician about the nature of the therapy they were to receive. These results were corroborated by Peck and Boland (1977), who also studied patients undergoing radiation therapy and who concluded that patients' beliefs regarding treatment were generally "inaccurate,

pessimistic, and alarming" (p. 181). Patients who had been informed about the possible negative side effects of radiation appreciated this and praised their physicians for providing it. And, patients who had not been warned about side effects that did occur expressed considerable anger and disappointment with their doctor. Similarly, in a study assessing physician behaviors perceived as most helpful and unhelpful by breast and colo-rectal cancer patients (Dunkel-Schetter, 1984), provision of information was mentioned as frequently as emotional support as being of particular value. It was reported as unhelpful when physicians provided too little information, yet providing too much information was never mentioned as unhelpful.

SOURCES OF SUPPORT

Should researchers assess social support by asking general questions about the support provided by those in the social network? Or should respondents be asked specifically about various people who may provide support, such as family members, friends, or medical personnel? Many investigators have emphasized the importance of assessing the support provided from different sources, and various categories of support providers can be found in the literature (DiMatteo & Hays, 1981; House, 1981). The most thorough of these has been developed by House (1981), who lists nine possible providers of support including one's spouse or partner, other relatives, friends, neighbors, one's work supervisor, coworkers, service or caregivers (e.g., child care or domestic workers), self-help groups or peer support, and health professionals.

In the case of cancer, it would seem to be advantageous to ask about different providers of support, since whether certain behaviors are perceived as supportive may well depend on who provides them. The comment, "I know how you feel," might be perceived as very supportive if made by a fellow cancer patient, but might be infuriating if made by a healthy friend or acquaintance. In fact, there is considerable evidence that particular types of support are regarded as more beneficial when received from some providers than from others (LaRocco, House, & French, 1980; Lieberman, 1982). Dunkel-Schetter (1984) found that advice was perceived as very helpful among patients with breast or colo-rectal malignancies when provided by physicians. However, it was generally regarded as unhelpful when offered by relatives or friends.

In many research studies, it may not be feasible for the investigator to assess the support provided by a large number of different sources. If the researcher is able to focus on only a few sources of support, which ones should be selected? In studying cancer, it would seem highly desirable to assess support provided by the spouse and immediate family, because there is considerable evidence that the family's reaction to the cancer patient can be a critical factor in adjustment (see Dunkel-Schetter, 1982; Dunkel-Schetter & Wortman, 1982; Lindsey et al.,

1981; Meyerowitz, 1980 for reviews.) The reaction of the husband appears to be particularly significant for female patients with breast cancer (Maguire, 1976; Meyerowitz, 1980). It may also be very important to assess the support provided by the physician (Dunkel-Schetter, 1982); in one study, the physician was ranked higher than family and friends as an important provider of support (Bloom, 1981). Finally, it may be worthwhile to examine patients' reactions to peer support, that is, support provided by other cancer patients or by self-help groups. There is accumulating evidence to suggest that when people are undergoing extreme distress, those who have had similar experiences may be in a unique position to provide effective support (Dunkel-Schetter & Wortman, 1982).

In assessing support from various sources, the investigator must decide whether to phrase questions generally, asking respondents about total support provided by groups of individuals such as one's children, relatives or friends, or to ask about support provided by specific individuals selected from these groups. In an interesting discussion of this issue, Hirsch (1981) has argued strongly for the latter approach. Hirsch maintains that categorizing relationships as being with family or friends is "by itself only an initial, rudimentary characterization" (p. 151). He argues that it is also important to differentiate relationships according to their content and process and that this can only be accomplished by identifying and studying specific network relationships.

There are many reasons why Hirsch's recommendation would seem desirable. If respondents are asked to assess support from various categories of people, such as "family," "friends," or "health-care providers," this task implicitly requires them to "average" the various interpersonal relationships that are part of that category. Such ratings may conceal important information about the support that is available. An elderly widow who has one very supportive child and one less supportive child would achieve the same score as a widow with two children who were somewhat supportive. Yet, the former woman may experience greater well-being and less distress, because she has access to at least one person on whom she can count (Lowenthal & Haven, 1978). For similar reasons, it may make little sense to ask respondents to average the support they receive from various health care providers, such as nurses, social workers, and surgeons, or from other groups such as friends or relatives.

Although it may be desirable to assess support from many specific individuals within each of several different groups, such a thorough approach may not be feasible in most studies. Particularly if the investigator is interested in assessing various types of support (e.g., emotional, tangible, information), it becomes time-consuming to question respondents about the extent to which a large number of people or even categories of people each provide several kinds of support. In cases where it is not possible to conduct such a thorough assessment of support, what approach should the investigator take? This question has been explored in some detail by Abbey, Abramis, and Caplan (1985). These investigators conducted a study in which the wording of the support questions was

experimentally varied, and the relationship between support and well-being was assessed. Some respondents were asked how much support they received overall from "the people in your life." Others were asked about the support provided by "the person closest to you." The remaining respondents were asked if "some one person" provided them with each of the basic elements of support. In each of these three conditions, subjects were also asked about social conflict. The results indicate that social support from "people in general" is most strongly related to well-being, whereas support from "some one person" was only weakly related to it. Interestingly, support from "the closest person" was not associated significantly with indices of well-being at all. In addition, social conflict with "some one person" was most strongly associated with well-being.

Based on these results, the authors conclude that each of these perspectives makes a special contribution to well-being. However, it should be noted that the "some one person" and "the closest person" wordings have the disadvantage of not identifying who the particular person is. Unless other questions are added, then, these approaches will not gather information on differences between sources or variations among respondents in levels of support. Asking about "people in general," on the other hand, requires respondents to average or calculate in a way that may vary among respondents and be less precise. Similarly, as Abbey, Abramis, and Caplan (1985) point out, this wording may reflect global feelings more than specific support transactions. For these reasons, we recommend the use of any of these three approaches only when the measurement of support is one of several goals in a time-restricted assessment. Otherwise, questions on more than one key, specific source of support are recommended. If only one of these wordings is possible, however, the results of Abbey and colleagues should be taken into consideration in deciding which one.

STRATEGIES IN THE MEASUREMENT OF SUPPORT

In determining how to measure social support, the researcher must tackle several issues in order to determine the particular strategies that best address one's particular research goals. The issues discussed are as follows: the use of structural versus functional measures; positive versus negative elements of relationships or interactions; provider versus recipient perspectives; availability versus activation versus adequacy of support; and general perceptions versus specific behaviors.

Structural Versus Functional Measures

In past empirical studies of the effect of social support on health or well-being, social support has been operationalized in one of three ways. There have been measures of social integration, of social network properties, and of social support

per se (House & Kahn, 1985; Turner, 1983). The first and second of these are often referred to as *structural* characteristics of support, whereas the third is thought of as *functional* characteristics. Each of these types of assessments is elaborated upon, and relevant research findings involving them are reviewed briefly.

Measures of social integration that have frequently been employed are marital status, participation in community organizations, living arrangements (e.g., living with others or living alone), or frequency of social contact (Berkman & Syme, 1979; Blazer, 1982; Eaton, 1978; Funch & Marshall, 1983; House et al., 1982; Lin et al., 1979). House and Kahn (1985) have emphasized that these measures are more accurately described as "social contacts and resources" or "existence or quantity of social relationships" than as social support. Nonetheless, these measures are relevant to the study of social support because, as Barrera (1981) has suggested, they "provide information concerning the extent to which individuals are linked to significant people and have opportunities to interact in ways that might foster the expression of support" (p. 71). The popularity of such measures probably stems from their relative objectivity, stability over time, ease of assessment, and independence from other variables, such as stress and mental health.

There is a great deal of evidence relating the existence or quantity of social relationships to health outcomes (see House & Kahn, 1985, for a review). As described earlier, for example, three different prospective studies of community samples have shown that people with few social relationships have at least twice the risk of mortality as people with many social relationships (Berkman & Syme, 1979; Blazer, 1982; House et al., 1982). In another study (Funch & Marshall, 1983), women with breast cancer were found to survive significantly longer if they had high levels of organizational involvement. As House and Kahn (1985) have concluded, "these findings are especially impressive because they consistently show effects of social relationships on health, including hard outcomes such as mortality in well-designed and well-controlled prospective studies" (p. 13). However, this research has been criticized because it provides little information about the process through which social ties affect health. As Schaefer, Coyne, and Lazarus (1982) have noted, such data fail to illuminate whether it is social support or some other effect of relationships which is beneficial. For example, in order to fulfill the responsibilities inherent in their relationships, people "might be motivated to manage their lives more effectively and to take explicit steps to protect their health" (1982, p. 3).

Another approach to examining the structural properties of relationships involves studying a person's social network, or the set of relationships among a particular group of people (Caplan, 1979; Carver & Gottlieb, 1979; Fischer, 1982; Hirsch, 1979, 1980, 1981; Israel, 1982; McCallister & Fischer, 1978; Mitchell & Trickett, 1980; Wellman, 1979; Wilcox, 1981). Social networks are commonly defined in terms of structural properties, such as size (the number of

individuals with whom the focal person has direct contact), network density (the extent to which members are in contact with one another), accessibility, stability over time, and reciprocity. With the exception of network size, which is really a measure of the quantity of social relationships, there is little consistent evidence that network characteristics are related to health outcomes (Israel, 1982). However, some recent applications of network analysis to the study of stress have produced intriguing results (Barrera, 1981; Hirsch, 1981; Wellman, 1979; Wilcox, 1981). For example, small networks characterized by close relationships have generally been regarded as the most supportive in times of crisis (Caplan, 1974). A number of investigators have hypothesized that under some circumstances, however, small, dense networks may entrap people by providing limited norms, information, and social contacts (Gordon et al., 1980). As Wellman (1979) has indicated, close friends tend to hear about the same things at the same time, while weaker ties are often the source of novel news. Consequently, such weak ties can be unique channels to new, diverse sources of information and may provide more useful information than strong ties in cases where obtaining new information is important. There is some empirical research (Hirsch, 1981; Thomas & Weiner, 1974; Wellman, 1979; Wilcox, 1981) that when a crisis necessitates obtaining new information or adopting new roles, low-density networks characterized by weak ties can aid adaptive striving more than high-density networks.

In conclusion, various structural characteristics of one's social network may indeed influence the nature and types of social support available (Wellman, 1979). Given the evidence concerning the relationship between the quantity of social relationships and subsequent health, it is probably wise to include an assessment of this construct (see House & Kahn, 1985, for a discussion of various assessment procedures). It is quite time-consuming, however, to collect the data necessary to characterize a person's entire social network (see Fischer, 1982; McCallister & Fischer, 1978, for a discussion about how to measure the structural properties of networks). For this reason, House and Kahn (1985) have recommended that investigators be quite selective in measuring and analyzing network properties.

The applications of networks to new areas of research, such as cancer, suggest a number of intriguing possibilities. For example, investigators could employ network analysis to determine the extent to which cancer or other crises alter network structure. In one study, many cancer patients expressed surprise at the rearrangements of their relationships—close friends often disappointed them, while marginal friends helped enormously (Peters-Golden, 1982). It would also be worthwhile to learn whether the social networks of victims of undesirable life events shrink (contract) over time as some investigators have suggested (Dunkel-Schetter & Wortman, 1982). In addition, it would be interesting to examine the impact of network density on the provision of effective support to specific populations, such as cancer patients. If the patient's primary support providers

are acquainted with one another (i.e., if the network is characterized by high density), they may be more capable of coordinating the support that is necessary to ensure that all of the patient's needs are met.

Although network measures may have greater objectivity than measures of perceived support, it is not advisable to measure social support exclusively in terms of structural variables. As House (1981) had indicated, measures of whether particular relationships exist provide little information about the nature, quality, or content of the relationships. Moreover, one should not assume that structural indicators such as the size of the network are equivalent to social support. Network members may make demands and exercise constraints over one's choices, in addition to providing support (Hirsch, 1981; Schaefer, Coyne, & Lazarus, 1982). Throughout this paper it is argued that social relationships are not always supportive, and in fact may constitute a major source of stress for many people.

In most empirical studies of the effect of social support on health or well-being, subjective measures of quality of support have been employed instead of structural indicators. Respondents are typically asked to assess the extent to which various relationships are supportive or to indicate how satisfactory the support is. There are many valid reasons for assessing social support from the respondent's point of view (DiMatteo & Hays, 1981). One problem with such subjective assessments, however, is that they make it difficult to interpret a significant association between perceived support and positive outcomes. As Gore (in press) has noted, correlations between perceived support and mental health outcomes are likely to be spuriously high, with each measuring a portion of the same variance—the variance in well-being. Individuals who have poor mental health or well-being may simply be more critical of their support network, and the measures may show substantial correlations with one another because they are redundant.

Some investigators have suggested that this difficulty can be resolved by supplementing respondents' subjective assessments of the adequacy of their support network with the assessments of others who may be more objective (Caplan, 1979; DiMatteo & Hays, 1981). For example, the support available to hospitalized patients may be assessed by asking nurses or social workers to make judgments regarding this issue. In fact, many studies of social support and coping with serious illness have relied on such so-called objective indicators (see DiMatteo & Hays, 1981, for a review).

Although perspectives of others besides the target person (or recipient) are worthwhile to assess, it is a fallacy to think of some of these as more "objective." Providers' judgments of how supportive they are, for example, are potentially just as biased as those of recipients. Thus, the most objective reports would be those by uninvolved persons such as observers, who themselves are not potential supporters. In general, measuring multiple perspectives is recommended if possible, including subjective ones by recipients and providers, and

more objective ones by observers. The provider versus recipient issues and the use of observational techniques are discussed further in subsequent sections.

In summary, measures of structural concepts, specifically social integration and social networks, can be useful because of their relative objectivity, stability, independence from outcome variables, and potential influence on the actual support available to individuals. Selectively measuring these concepts in research is advised, especially when it complements specific research objectives. The concept of social support, however, is best reserved to refer to the quality of relationships and social interactions, typically measured subjectively in the past. This should generally be assessed in studies. The many options for doing this are elaborated on in later sections of this chapter.

Positive Versus Negative Elements of Social Interaction

As noted earlier, most empirical studies have assessed support by questioning respondents about their perceptions of support. As Fiore, Becker, and Coppel (1983) have discussed, however, individuals' answers to such questions probably represent a summary of both positive and negative aspects of their social relationships. In most cases, only the positive component of support has been interpreted and discussed. Yet there is evidence that the problems generated from social relations comprise an important share of the stresses that people experience in their daily lives (Schaefer, Coyne, & Lazarus, 1982). It may be just as important to determine that an individual has some social relationships that are predominantly negative (i.e., characterized by tension, disputes, or interferences) as it is to learn about supportive ties. Similarly, within a given social tie, it may be worthwhile to assess the emotional pain or distress caused by the relationship as well as the support provided. In many social relationships, these positive and negative elements may well occur concurrently. For example, in a study of breast cancer patients, the physician was rated as the greatest source of stress as well as the most important source of support (Bloom, 1981). In fact, there is some evidence to suggest that the positive and negative aspects of social relationships are independent. Surprisingly, knowing that a person receives support from his or her relationships provides little information about the amount of distress that is experienced from them (Abbey, Abramis, & Caplan, 1985; Abbey & Rovine, 1985; Rook, 1984).

Regarding relationships to outcome variables, there is some empirical evidence showing a significant relationship between unpleasant social interactions and psychiatric morbidity (Fiore et al., 1983; Henderson, Byrne, & Duncan-Jones, 1978). In fact, there are four studies in which the impact of positive and negative elements of social interaction have been compared (Abbey et al., 1983; Abbey & Rovine, 1985; Fiore et al., 1983; Rook, 1984). In all of these studies,

negative elements of social relationships were more strongly and consistently related to mental health outcomes than positive elements of social relationships.

In studies on social support and cancer, there are several reasons why it may be especially important to assess the negative elements of social interaction as well as the supportive aspects. As discussed earlier, there is evidence that cancer patients experience stress and difficulty in their interpersonal relationships at times when support is most needed (Dunkel-Schetter, 1984; Dunkel-Schetter & Wortman, 1982; Krant & Johnston, 1977-1978). Cancer is unique in its ability to elicit negative feelings in others, and these negative feelings can lead others to behave toward cancer patients in ways that are unsupportive. In the study by Peters-Golden (1982) mentioned earlier, for example, a large percentage of breast cancer patients reported such negative reactions as being "misunderstood," "avoided," or "feared." Thus, it is important to assess the frequency of these experiences, as well as the frequency of instances of support.

Another reason to assess negative aspects of the social relations of cancer patients is that these assessments may be more accurate and contain more variance than reports of the positive aspects. It is common for support investigators to find respondents reporting uniformly strong support, even in the face of overwhelming suggestions to the contrary. A social desirability bias pervades this research topic, but specific questions about negative experiences in social relationships seem to be less susceptible to this problem. In our past work on cancer, for example, we found ceiling effects when patients were asked about support adequacy, but greater variability when we inquired about interpersonal problems and concerns (Dunkel-Schetter, 1982). How one combines these two sorts of information into a profile of the adequacy of support is an important theoretical and policy-relevant issue.

If one's relationships are characterized by stress, it might be possible to end them or to minimize interactions and to develop new relationships that provide more effective support. However, it is often one's closest and most important relationships that are sources of stress, and these typically have positive as well as negative elements (Shinn, Lehmann, & Wong, 1984). It should also be kept in mind that by the very nature of their illness, cancer patients are often thrust into relationships that are not chosen and that would not have been entered into had the person been well. Clearly, individuals receiving care at a particular medical setting have little choice about the nurses, radiation therapists, or "Reach to Recovery" volunteer with whom they interact. It may be difficult for the patient to end any professional relationships that are distressing. Moreover, because of the overwhelming demands placed on the patient by the illness, most patients may have little energy to devote to developing new personal or professional relationships that may be more rewarding or to improving their existing relationships.

For all of the aforementioned reasons, the negative aspects of the social relationships of cancer patients are as important to consider as the positive ones.

Many of these points are generalizable to the chronically ill or to an even wider segment of those who are under stress. As we have argued elsewhere, victims of misfortune are often subjected to negative social reactions that impair their ability to adjust (Coates & Wortman, 1980; Coates, Wortman, & Abbey, 1979; Dunkel-Schetter, Silver, & Wortman, 1986; Dunkel-Schetter & Wortman, 1981; Gottlieb, 1981). Hence, studying social support alone amounts to examining only a partial picture of the relationship of stress to social relationships and interactions. One particular type of negative interaction would be one in which a well-intentioned support attempt is unhelpful or even harmful. Because we believe that this occurs frequently, the next section is devoted to it.

Provider Intentions Versus Recipient Perceptions of Support Attempts

As Antonucci (1982) and others (Dunkel-Schetter, 1986; Shumaker & Brownell, 1984) have described, a supportive transaction involves the intent of a person to be supportive to another, a behavior that expresses that intent, and a supportive effect (that is, the other person feels supported). In most discussions of social support, it is generally assumed that supportive behaviors proffered by the provider will be valued and appreciated by the receiver. However, there is growing awareness that, in many cases, others' well-intentioned efforts to provide support may be regarded as unhelpful by the recipient, may result in negative consequences, or both (Davidowitz & Myrick, 1984; DiMatteo & Hayes, 1981; Dunkel-Schetter, 1982; Dunkel-Schetter & Wortman, 1982; House, 1981; Lehman, Ellard, & Wortman, 1986; Silver & Wortman, 1980; Thoits, 1982).

A number of empirical studies suggest that when people are experiencing a life crisis, others' helping attempts are often judged to be unsupportive (see Dunkel-Schetter & Wortman, 1982; Lehman et al., 1986; Silver & Wortman, 1980 for reviews). For example, Maddison and Walker (1967) asked widows to indicate how people had responded to them during the first few months after their loss and which particular reactions they found to be helpful. The results revealed that a number of responses frequently made to widows [e.g., being told "about the need to get out among people again and make new friends" or being told, "I must control myself and pull myself together" (p. 1066)] were actually regarded as unhelpful. Similarly, Helmrath and Steinitz (1978) have reported that many of the statements made to parents with the intention of comforting them upon losing an infant, such as "you can always have another one," or "it was only a baby whom you didn't know—it's worse to lose a child you know" (p. 788) only served to intensify their feelings of grief and sorrow.

In a recent study of helpful and unhelpful support attempts among the bereaved (Lehman et al., 1986), contact with similar others, opportunities to discuss feelings, and the mere presence of others ("being there") were frequently identified as among the most helpful things others had done. Giving advice,

encouraging a timely recovery, minimizing the problem, or identifying with feelings ("I know how you feel") were generally regarded as unhelpful. Interestingly, the majority of unhelpful support attempts were made by relatives and friends of the respondents rather than by acquaintances.

It has been suggested that these ill-fated support attempts stem from people's misconceptions about how those who have experienced a crisis should behave and how they should be treated by others (see Dunkel-Schetter & Wortman, 1982; Silver & Wortman, 1980 for a more detailed discussion). These misconceptions have been studied experimentally by Peters-Golden (1982), who examined perceptions about support in a population of 100 breast cancer patients and 100 disease-free individuals. Healthy individuals felt that it was important for cancer patients to remain as cheerful and optimistic as possible about their situation; 66% said they would "go out of their way" to cheer up a cancer patient. However, patients generally perceived others' attempts to cheer them up as unhelpful. Sixty percent of the cancer patients reported that they were made to feel separated and alone by "unrelenting optimism that seemed unauthentic" (p. 486). Other investigators have also found that cancer patients are disturbed by others' attempts to be cheerful and optimistic. In another study of social support among cancer patients, a behavior commonly reported as unhelpful was "being told not to worry because things would work out" (Dunkel-Schetter, 1982). Similarly, Friedman et al. (1963) have pointed out that the parents of the leukemic children they studied were often distressed by the optimistic statements of others [e.g., "the child could not possibly have leukemia as he looked too well" (p. 618)]. Such well-intentioned remarks placed parents "in the uncomfortable position of having to defend their child's diagnosis and prognosis, sometimes experiencing the feelings that others thought they were 'condemning' their own child" (p. 618).

A related misconception that seems to be quite prevalent is the belief that it is inappropriate or unhelpful for cancer patients to discuss their feelings about the disease. Because of this belief, others often make attempts to prevent the patient from discussing his or her disease or its implications (Dunkel-Schetter, 1982; Dunkel-Schetter & Wortman, 1982; Lehman et al., 1986; Silver & Wortman, 1980). Peters-Golden (1982) reports that the healthy population in her study assumed that such discussions would be harmful to the patient and regarded those patients who wanted to discuss their illness as less adjusted to their situation. However, the cancer patients in this sample reported being "disturbed by this ban on communication and confused by the assumption that avoiding the subject would actually be better for them." In fact, one reason why patients reported disliking the forced cheerfulness of others was because such cheerfulness frequently "eclipsed the opportunity to reveal and discuss their true feelings." Similar results were obtained by Dunkel-Schetter (1982), who found that "minimizing the patient's problems and feelings about cancer" was commonly reported as unhelpful by the cancer patients that she interviewed.

Another factor that may undermine recipients' appreciation for others' help concerns the roles in which providers and recipients of help invariably find themselves. Brickman and his associates (1982) have pointed out that help often carries with it the implicit assumption that people are incapable of solving their own problems (see also Nadler & Fisher, in press). As DiMatteo and Hays (1981) and others (Nadler & Fisher, in press) have discussed, social support can undermine the patient's self-esteem to the extent that it reflects his or her status as an "impaired person" (p. 141). In the previously discussed study by Peters-Golden (1982), many patients reported that they were made to feel incompetent to perform ordinary tasks by the oversolicitous attitude of others. Patients reported that others often attempted to "foist incapacitation upon them" by preventing them from carrying out their usual chores, and they resented "being babied" in this way.

In short, there is considerable evidence that behaviors intended to be supportive are often not perceived as such by the recipient and may, in fact, be perceived as unhelpful. This difficulty in knowing what will be helpful may hold true not only for members of the support network, but also for those who are developing supportive interventions. Therefore, a great deal of useful information could be obtained by asking both providers and recipients to make judgments regarding the perceived helpfulness of various behavioral exchanges and comparing their answers. Of course, it should not be assumed that the recipient is always correct in judging how helpful or supportive particular transactions are; whether the provider's or the recipient's judgments are more strongly associated with positive outcome variables is an empirical question. It seems unlikely that behaviors such as forced cheerfulness, which make target persons feel misunderstood, isolated, and alone (Peters-Golden, 1982), will result in beneficial outcomes. Nonetheless, it is certainly possible to imagine some conditions under which a person may erroneously conclude that a particular transaction is unhelpful. As House (1981) has discussed, honest feedback is sometimes painful and therefore may be judged as unsupportive, but may be beneficial in the long run. Of course, the reverse may also be true—individuals may appreciate and value others' responses quite highly, although those responses have maladaptive consequences for physical or mental health. A number of investigators have noted that others' attempts to encourage false hopes or maladaptive denial may be regarded as very supportive. However, such behaviors may make it more difficult for persons to accept the reality of their situation and thereby impede effective adjustment (Caplan, 1960; Visotsky, Hamburg, Goss, & Lebovits, 1961).

In conclusion, a task for future social support research is to consider the different bases by which support can be judged effective or ineffective. Provider intentions and perceptions of their own success are one basis, and recipient perceptions are another. Both of these perspectives provide important information. A third set of standards for evaluating the effectiveness of support is the

relationships to health and adaptation measures such as symptoms, affect, and self-esteem. The effects of particular interpersonal transactions may vary depending on the criterion used, but the use of several concurrent bases to evaluate support can highlight meaningful discrepancies and general patterns. For example, a particular type of exchange between two persons might be judged helpful by the provider, unhelpful by the recipient, and it might result in immediate mood disruption, but more effective coping over time.

Availability Versus Activation Versus Adequacy of Support

Most of the previous research on social support has dealt with its *availability* (i.e., the extent to which a person perceives that those in his or her network can be counted on in a crisis) or on its *adequacy* (i.e., how satisfied one is with support received). A third area beginning to receive attention concerns the *activation* of support, or the extent to which support is needed, desired, sought, or received in specific circumstances (Dunkel-Schetter, Folkman, & Lazarus, 1984). The terms "utilization" and "mobilization" are sometimes used to refer to whether available support is activated in times of need.

In determining how to design questions to measure social support, each of these three aspects (availability, activation, and adequacy) of support must be considered. Which aspects are selected depend on one's hypotheses and research goals. Leiberman (1982) has suggested that the perceived availability or dependency of one's network may be important. In summarizing data from a large study of people's attempts to cope with a wide range of problems, Leiberman concluded that "the most cogent relationship between social support and stress mitigation can be found in the perception by individuals that they have a reliable and accessible social network—regardless of whether this network is used" (p. 780). In a life crisis situation like cancer, however, it is not clear whether the perceived availability of support, in itself, will be beneficial. Cancer patients' prior assumptions about support availability may not be proven accurate after being diagnosed with a stigmatizing disease (Peters-Golden, 1982). Available evidence suggests that the disease may influence the size of one's social network and its responsiveness, particularly when the disease is advanced and prolonged (Dunkel-Schetter, 1984). For these reasons, it may be important for cancer researchers to examine support activation, as well as the perceived availability and reliability of the network.

However, a number of complex issues surround the investigation of support activation. For example, the benefits of support received may depend on whether the support was freely offered by the provider, or whether it was actively sought by the recipient. Some investigators (e.g., Pearlin & Schooler, 1978) have suggested that support seeking may be indicative of weakness in the support system. Their reasoning seems to be that if you are really supported, your needs are met without your having to ask. Alternatively, support seeking has been

conceptualized as an adaptive coping behavior (Heller & Swindle, 1983). Indeed, some investigators have maintained that the ability to mobilize one's network may be a critical factor in whether the network will protect a person from the deleterious effects of stress (Hirsch, 1981).

For these reasons, the study of support activation would seem to require a careful examination of support seeking and its determinants, as well as how this coping response relates to other coping skills and attempts. Clearly, some individuals are skilled in mobilizing their support network or in utilizing it effectively in times of crisis. In contrast, others may turn to their support network prematurely because they are unable to solve their own problems, or may fail to turn to others when it would be beneficial to do so. Or they may rely too much on certain supporters who eventually "burn out," instead of alternating between sources of support or spreading the burden. Finally, they may seek support in ways that are inappropriate, leading them to drive away or alienate members of their support network (Coates & Wortman, 1980). Hopefully, subsequent investigations will make it possible to differentiate among these patterns of support utilization and to delineate the conditions under which effective and skillful support seeking is most likely to occur.

Clearly the receipt of support is likely to be influenced not only by the respondent's skill in eliciting support and the adequacy of the support network, but by factors such as the respondent's level of distress or prognosis (Gore, in press). For example, in a community sample of middle-aged adults, the stressfulness of specific person-environment transactions or episodes was a strong predictor of support received; the greater the stress, the more support and the more providers of it (Dunkel-Schetter, Folkman, & Lazarus, in press). This relationship may help to account for the paradoxical finding, noted by some investigators, of a strong positive association between support and stress (Barrera, 1981; Carver & Gottlieb, 1979; Dunkel-Schetter, 1984; Revenson et al., 1983). As is discussed in the section to follow on mechanisms underlying support, some investigators have interpreted such a relationship as evidence that support is harmful, overlooking the more likely possibility that support is often elicited by stress.

General Measures Versus Measures of Specific Behaviors

In developing measures to assess the receipt of social support, one question facing the investigator is whether to focus generally on perceptions of support received or to focus on specific behaviors. In the vast majority of prior studies, investigators have relied on general measures, or measures that probe whether support is provided in the abstract. For example, respondents may be asked to indicate whether they feel loved or whether they believe that others understand them. An alternative approach is to assess specific behaviors that are involved in the expression of assistance, or "natural helping behaviors" as Barrera (1981) has called them. In an excellent discussion of this issue, Barrera has noted that

there are relatively few studies of specific helping behaviors.

Over the past few years, investigators have begun to examine the specific support behaviors extended to people experiencing problems (Dunkel-Schetter, 1984; Gottlieb, 1978; Lehman et al., 1986). A pioneering study conducted by Gottlieb (1978) focused on the natural supportive behaviors extended to single mothers. The women were asked to identify problems they were having and the persons who had been helpful in dealing with these problems. They were then asked to indicate specifically what the person had done, or how he or she had behaved. Gottlieb then performed content analysis on the women's responses and developed a scheme for classifying the natural helping behaviors that were mentioned. The range of specific behaviors identified by respondents provides a great deal of insight into the process through which support is offered. In describing various kinds of emotional support, for example, respondents not only mentioned those types of support frequently included in taxonomies of support, such as listening or providing reassurance; other ways of providing emotional support were also mentioned, such as accompanying the respondent in stressful situations. For example, one respondent pointed out that "she took the time to be there with me so that I didn't have to face it alone." Similarly, in describing various types of help offered for particular problems, respondents not only mentioned such commonly assessed types of support as tangible assistance or the provision of information; they also mentioned that others had been supportive by modeling appropriate behavior or providing testimony from their own experience. As one respondent expressed it, "Just watching her and how confident she seems has taught me something."

In a later study, Dunkel-Schetter (1984) interviewed 79 cancer patients regarding behaviors seen as most helpful and most unhelpful in managing the illness. The helpful reports were then coded into categories derived from prior taxonomies. The most common type of support mentioned was emotional support, which included statements of love, concern, encouragement, reassurance, and understanding; whereas instrumental aid was mentioned infrequently as helpful. In addition, information or advice was shown to be helpful if provided by medical staff, but unhelpful if provided by family and friends. Lack of emotional support on the part of medical care providers (i.e., insensitivity, abruptness, and a cold or clinical bedside manner) was also found to be particularly unhelpful.

Studies of supportive behavior such as Gottlieb's (1978) and Dunkel-Schetter's (1984, see also Lehman et al., 1986, discussed earlier) provide many benefits not gained in general assessments of support. First, they enhance our understanding of the meaning of the concept, that is, what it is about particular persons or interactions that conveys a sense of supportedness. Second, these studies can help to specify the conditions under which particular acts are effectively supportive, benign, or harmful. Third, such information may shed light on the process through which support influences health. Finally, this research can assist in developing interventions for the provision of support to distressed indi-

viduals. For example, family members of cancer patients might be encouraged to adopt specific behaviors identified as supportive, such as listening attentively to the patient's worries or concerns. This approach seems more feasible and useful than simply exhorting the family to be more supportive or loving in general.

Although providing potential supporters with concrete information about what is beneficial should enhance the likelihood that effective support will be provided, it may not be sufficient. The results of one recent study suggest that even when people know what to do, they may be unable to carry it out effectively. Lehman et al. (1986) have argued that the tension and anxiety inherent in face-to-face encounters with distressed people may impede the delivery of effective support. Individuals may intend to encourage the recipient to express feelings. Once in this situation, however, their desire to control their own anxiety may lead them to minimize the problem, block expressions of feelings, or offer platitudes such as "I know how you feel." In subsequent research, it would be worthwhile to examine support providers' intentions regarding particular interaction and to identify the conditions under which they are able to carry out their intentions as planned.

For all of the previously stated reasons, greater emphasis on support behaviors is recommended. This can be done in several ways. As in the studies just reviewed, a more qualitative and exploratory approach to the measurement of support may be used in which recipients of support report the behaviors they found helpful, which are later coded into consensually derived categories, such as instrumental, informational, or emotional support. Alternatively, observational research might be conducted to assess what actually happens in interactions between stressed persons and their social networks. Although survey research methods such as interviews and questionnaires are valuable, these have been used too exclusively in the study of support. Growing consensus that support is best defined as interactions, transactions, or exchanges (Antonucci, 1985; Shumaker & Brownell, 1984) suggests that it is worthwhile to undertake more observational work through the use of videotapes or audiotapes or hidden observers. Finally, in surveys where self-report measures of support are used, it is suggested that researchers consider measuring specific behaviors within specific time frames (Dunkel-Schetter et al., in press) instead of general or global assessments in order to increase the precision of the assessments.

THE USE OF STANDARDIZED SCALES TO MEASURE SOCIAL SUPPORT

In recent years, investigators have begun to realize the importance of employing sound measurement techniques to assess social support, and several self-report measures of social support have appeared in the literature (Barrera, 1981; Brandt & Weinert, 1981; Cohen & Hoberman, 1983; Cronewett, 1983; Henderson, Duncan-Jones, Byrne, & Scott, 1980; Holahan & Moos, 1980b; Lowenthal &

Haven, 1968; McFarlane, Norman, & Streiner, 1983; Norbeck, Lindsey, & Carrieri, 1980; Pearlman, Lieberman, Menaghan, & Mullen, 1981; Procidano & Heller, 1983; Sarason, Levine, Basham, & Sarason, 1983; Schaefer et al., 1982; Turner & Noh, 1983), as have several reviews of these measures (Bruhn & Philips, 1984; Heitzmann & Kaplan, 1983; House & Kahn, 1985; Tardy, 1985). For the most part, these scales have been designed for general use, although some have been developed and validated, primarily with college student populations (Cohen & Hoberman, 1983; Procidano & Heller, 1983; Sarason et al., 1983). A few of these instruments have been carefully validated on general populations (Henderson et al., 1980; Holahan & Moos, 1980b). Unfortunately some of the most well-conceptualized measures of social support have been developed for use in only a single study (e.g., Brandt & Weinert, 1981; Cronenwett, 1983). Although such scales appear to be promising, their reliability and validity for general use have yet to be established.

Investigators who plan to study social support must decide whether to employ an existing scale, to modify or augment such a scale to make it more appropriate for their own use, or to develop and validate new measures of social support specifically for their purposes. In this section of the chapter, an attempt is made to describe the issues faced in making this decision and the strengths and weaknesses of different choices. Needless to say, a full description and discussion of each social support scale is clearly beyond the scope of this chapter. Readers interested in a more detailed consideration of this issue are referred to the reviews just cited.

As discussed, a good case can be made for assessing both the existence or quantity of social relationships as well as their supportive content or quality. There is considerable evidence that social ties or resources are related to health outcomes. For this reason, we agree with House and Kahn (1985) that such measures should be a standard part of studies of social support, if possible. A number of brief scales have been developed to assess number and frequency of contacts with friends and relatives, and participation in voluntary organizations (Berkman & Syme, 1979; Donald & Ware, 1982; Donald, Ware, Brook, & Davies-Avery, 1978; Holahan & Moos, 1980a; House et al., 1982; Renne, 1974). For example, the Social Health items developed as part of the Rand Health Insurance Study (Donald & Ware, 1982) focus on interpersonal interactions and activities indicative of social participation. Similarly, the Traditional Social Support Index developed by Holahan and Moos (1980a) provides a quantitative index of social resources in the areas of family, relatives, friends, job, and community involvement. For a thorough discussion of the conceptualization and measurement of social contacts and resources, the reader is referred to the comprehensive review by Donald et al. (1978). (For a full discussion of how to measure properties of social networks, the reader is referred to Fischer, 1982; McCallister & Fischer, 1978; Mitchell & Trickett, 1980).

As just noted, however, it is extremely time-consuming to provide a full

assessment of a person's social network and its defining characteristics. Given the conflicting evidence regarding the association between network structure and well-being, a detailed analysis of the entire network may be unwarranted (Israel, 1982). House and Kahn (1985) have suggested that network analysis be used selectively. For example, density of network (or the extent to which members know each other) may be important in understanding support provision. Friends of a cancer patient may be able to help more effectively if they can coordinate their efforts. House and Kahn (1985) further suggest that network analysis be limited to between 5 and 10 individuals that the individual has identified as close or important to him or her.

Although measures of the existence, quantity, or structure of social relationships are important, they are no substitute for measures of the content and quality of social relationships. In recent years, a large number of scales have been developed to assess perceived social support or the quality of social relationships. These scales differ considerably in format; most (Brandt & Weinert, 1981; Cohen & Hoberman, 1983; Cronenwett, 1983; Holahan & Moos, 1980b; Norbeck et al., 1980; Procidano & Heller, 1983; Sarason et al., 1983) are relatively brief, self-administered instruments containing 20-40 items; one (Barrera, 1981; Barrera & Ainlay, 1983) involves a relatively brief personal interview; one (Turner & Noh, 1983) assesses social support through the use of vignettes or stories; and one (Henderson et al., 1980) involves a structured interview lasting approximately 45 minutes. Some of these scales focus solely on the perceived adequacy or satisfaction with those in the support system (e.g., Cohen & Hoberman, 1983; Holahan & Moos, 1980b, 1981; Procidano & Heller, 1983). For example, Procidano and Heller (1983) have developed an instrument to assess the extent to which people perceive that their needs for support are fulfilled. Other scales provide some information about the person's relationships in addition to information about the support provided (Barrera, 1981; Brandt & Weinert, 1981; Cronenwett, 1983; Norbeck et al., 1980; Renne, 1974; Sarason et al., 1983). For example, Cronenwett (1983) defines several different types of support and asks respondents to indicate who provides each type.

Most of these scales include items that focus on several different kinds of support, such as emotional support, appraisal support or advice, and tangible support. In many cases, however, the scales have been designed to provide only a global score concerning the amount of support available (e.g., Henderson et al., 1980; Procidano & Heller, 1983; Sarason et al., 1983; Turner & Noh, 1983). Earlier, it was argued that it may be very valuable to use a measuring approach that enables one to assess different types of support. In recent years, a number of such scales have been developed (e.g., Brandt & Weinert, 1981; Cohen & Hoberman, 1983; Cronenwett, 1983; Henderson et al., 1980; Holahan & Moos, 1980a, 1980b; Norbeck et al., 1980). For example, the instrument by Cohen and Hoberman (1983) contains four separate subscales and, thus, provides separate measures of appraisal support (e.g., "There is someone I could turn to for advice

about changing my job'), feelings of belonging (e.g., 'I do not often get invited to do things with others'), tangible support, and esteem support (e.g., 'Most people I know think highly of me').

A few scales have focused more narrowly on a single type of social support. For example, Miller and Lefcourt (1983) have developed a scale to measure emotional closeness or intimacy. The items are designed so that they can be used to assess intimate feelings for a friend or for a spouse. Items focus on such issues as how close the respondent feels to the target person and how affectionate he/she feels toward the target. Schaefer and Olson (1981) have also developed a scale that focuses on intimacy. Respondents are asked to judge the extent to which a particular relationship is characterized by each of several types of intimacy, including emotional, social, and sexual intimacy.

Because the value of a particular type of support may well depend on who provides it, it is important to assess different kinds of support from different sources. Most of the scales that permit an assessment of different types of support ask about particular kinds of support from the network as a whole (e.g., Brandt & Weinert, 1981; Cohen & Hoberman, 1983). However, there are a few instruments that enable the investigator to measure different types of support provided by the different sources (e.g., Cronenwett, 1983; Holahan & Moos, 1980a; Norbeck et al., 1980). The best of these is the scale developed by Kahn and Antonucci (described in House & Kahn, 1985). In this scale, respondents are asked to identify the people "who are important to you or to whom you are important" in each of six categories: spouse and partner, family member or relative, co-workers, supervisor, professional (e.g., doctor, clergy member), and friends. Respondents are then asked to indicate the extent to which the network as a whole and the most important member in each of these six categories provides three different types of social support. Although this scale provides a more complete assessment of support than some investigators may desire, it could be adapted by many researchers interested in assessing both types and sources of support.

A limitation in this approach and others (Barrera, 1981; Brandt & Weinert, 1981; Holahan & Moos, 1980b) is pointed out by House and Kahn (1985). If subjects each generate their own specific sources of support to be rated, the sources are not comparable across subjects. Furthermore, if the number of sources mentioned is allowed to vary, indices of number of sources of support and amount of support are confounded (Holahan & Moos, 1980b; Procidano & Heller, 1983). An approach wherein standard sources of potential support are specified is preferable if one wishes to avoid this problem. Each subject then rates each source on each type of support.

As mentioned earlier, it may be particularly important to assess negative as well as positive elements of the respondents' social relationships. Unfortunately, very few scales include this. The scale developed by Barrera (Barrera, 1981; Barrera & Ainlay, 1983) asks respondents to identify those people with whom

they anticipate or have actually had unpleasant interactions. The Conflict subscale of Moos's Family Environment Scale (Holahan & Moos, 1980a, 1980b) could also be conceptualized as a measure of negative social interaction. Finally, Fiore et al. (1983) asked respondents to indicate how helpful, as well as how upsetting, each network member was to them (see also Abbey & Rovine, 1985; Rook, 1984).

All of the previously mentioned scales have included items that focus generally on the support available to the recipient. As discussed earlier, it would also be valuable to assess specific behaviors that are performed and to question both providers and recipients of support about the perceived helpfulness of these behaviors. Barrera and his associates (Barrera, 1981; Barrera & Ainlay, 1983) are the only researchers to have published a scale that assesses the frequency with which people are the recipients of particular supportive actions. For example, respondents are asked to indicate how often, during the past four weeks, other people provided them with transportation, listened to them talk about private feelings, or taught them how to do something. Because the scale was designed for general use, however, many of the specific actions listed are not highly relevant to the cancer patient's situation (e.g., 'loaned you \$25').

Investigators can learn a great deal about the measurement of social support by examining some of the available scales. Without some modification, however, most scales are not suited to assessing support in just any population. In most cases, the content of the items does not focus on the problems that are prevalent in a particular population under study. In the Tangible Support subscale of Cohen and Hoberman's (1983) instrument, for example, respondents are asked if there is someone they could call to bail them out of jail or to borrow a car. These items may be applicable to community samples but would appear to have little relevance to the chronically ill. Thus, it may be necessary to ask more specifically about those types of support that are most needed by the population in question.

If time is limited, one could simply word the items to indicate whether particular types of support are provided by any one person in the person's social network (see Abbey et al., 1985). As mentioned earlier, however, one would attempt ideally to assess the extent to which these types of support were provided by various sources. The number of sources might be limited to two or three that are most important to the population under study. The most important sources for most cancer patients, for example, are their spouses and their physicians. Time permitting, other role relationships such as friends, family members, or other health care professionals might be added. Respondents might be asked to name the most important person in each of these categories and then questioned regarding the extent to which that person provides various kinds of support.

It may be useful to supplement the above measures with questions about the extent to which interactions with important people in the social network are negative rather than positive. For example, a person might be asked to indicate the extent to which he or she feels misunderstood by particular sources of

support. As time permits, the above measures might also be supplemented by asking respondents to identify specific behaviors that others have directed toward them and to ask both respondents and providers to indicate the extent to which particular behaviors were helpful or unhelpful. For example, how often do others tend to change the subject when the person's problem is being discussed? How are these and other kinds of support attempts perceived by the provider and the recipient?

UNDERLYING CAUSAL MECHANISMS

Many of the early studies on social support were concerned primarily with documenting a relationship between support and various outcome variables. As other investigators have noted, however, the early studies provide very little information regarding the process through which support may influence health outcomes (Caplan, 1979; Cohen & Wills, 1985; DiMatteo & Hays, 1981; Lieberman, 1982; Mitchell & Trickett, 1980; Thoits, 1982). To date, most discussions of the mechanisms through which support influences health outcomes have focused on the following issue: Does the presence or absence of support contribute to poor health outcomes independently of other stressors or does support interact with other stressors in producing poor health outcomes? Many investigators have suggested that social support may not contribute directly to disorder, but may "buffer" or protect people from the deleterious effects of other stressors. A great deal of theoretical and empirical work has focused on this so-called "buffering hypothesis" (see Cohen & Wills, 1985; Hefler & Swindle, 1983; Mitchell, 1984; Thoits, 1982; for recent reviews). Considerably less attention has been paid to identifying precisely how social support protects people from distress—that is, whether it operates through other intervening processes such as influencing an individual's initial appraisal of the stressor, coping strategies, or self-esteem (see Caplan, 1979; Cohen & Wills, 1985; House, 1981; Lieberman, 1982, for excellent discussions of alternative mechanisms).

Many investigators have argued that identifying the precise mechanisms through which support operates should be a major objective in subsequent empirical work (Caplan, 1979; Cohen & Wills, 1985; DiMatteo & Hays, 1981; Lieberman, 1982; Mitchell & Trickett, 1980). In addition to enhancing theoretical understanding and development, such information is likely to be critical in the development of effective interventions to promote support. The possible pathways through which support may influence health include affecting the occurrence of stress, appraisals, coping, motivation, self-esteem, or mood. Each of these pathways is now discussed briefly.

In some cases, social support might influence the occurrence of the stressful

event that is being studied. Of course, there are many stressful events that may occur independently of the person's behavior, and this may be the case for most types of cancer. As Lieberman (1982) has noted, however, those who have adequate support may be more likely to engage in health-promoting behaviors and may thus be less likely to develop some types of health problems. If health problems do arise, those with support may be more likely to seek medical care before the problem becomes more serious. Alternatively, those with adequate support may be protected from the deleterious effects of stress and may thus be less likely to develop health problems that are related to stress.

Once a stressful event such as the diagnosis of cancer has occurred, social support may influence subsequent outcomes through the way this event is initially appraised (Cohen & Wills, 1985; House, 1981). As Cohen and Wills (1985) have described, others can influence the extent to which a situation is viewed as threatening by providing information about the situation itself or about resources available to the individual to cope with the threat. Of course, such information might also lead an individual to modify his or her initial appraisal once it has occurred (House, 1981).

Another way that social support might influence health outcomes is by altering the coping mechanisms that are employed to deal with the stressful event. As Caplan (1979) has pointed out, social support might result in improved coping by providing information that increases the accuracy of one's self-perception or one's perception of the environment. Others may also suggest new coping strategies that had not occurred to the individual.

In addition to enhancing coping by providing coping strategies or access to information, social support could facilitate effective coping by enhancing motivation to engage in adaptive behaviors. Support from others might serve to encourage a person to sustain or redouble coping efforts when the going gets rough (Schaefer et al., 1982). This may be particularly important for seriously ill populations who face a long and difficult course of rehabilitation and treatment. Social support might also provide the necessary motivation to maintain such health-promoting behaviors as exercise or proper nutrition (House, 1981). Cobb (1979) has pointed out that feelings of obligation to one's loved ones, in addition to the support provided by them, might enhance motivation to adhere to difficult treatment regimens or to function at one's capacity in parental or work roles.

A few investigators have maintained that social support might influence coping indirectly by enhancing the recipient's self-esteem. For example, Caplan (1979) has suggested that by increasing a person's feelings of security, social support can reduce the need to defend oneself from harm and thereby lower the likelihood of defensive, counterproductive coping strategies. Cobb (1979) has argued that individuals who receive support will develop greater self-confidence and feelings of autonomy and are therefore more likely to make attempts to control and modify their environment. Finally, Pearlin et al. (1981) have found

evidence that support helps people in crisis to resist adopting a diminished view of themselves and thereby protects them from the depression that would otherwise occur.

Social support might also protect people from the deleterious effects of stress by altering their mood. DiMatteo and Hays (1981) have suggested that if others are calm and reassuring, this may moderate the patient's emotional arousal and keep it within manageable limits. Enhanced mood, in turn, can contribute to positive outcomes in many different ways, such as by influencing neuroendocrine pathways (Lazarus, Cohen, Folkman, Kanner, & Schaefer, 1980) or by facilitating constructive coping efforts.

In summary, a large number of different explanatory mechanisms have been proposed to account for the relationship between social support and health outcomes. Some of these explanations are relatively simple and involve few other constructs; others propose complex causal relationships among social support and mood, self-esteem, motivation, and coping strategies. It should be noted that in addition to influencing certain variables directly, social support may interact with other variables in influencing health outcomes (Thoits, 1982). For example, available social support may protect individuals from deleterious outcomes only if they have the social skills to mobilize help from those in their support network (Dunkel-Schetter et al., in press; Hirsch, 1981; Mitchell & Trickett, 1980).

In this chapter we have focused on individual-level psychological factors and mechanisms. However, sociostructural factors such as social roles (Thoits, 1985) and physiological or biochemical processes (House, 1981; Lynch, 1985) must be considered in modeling the mechanisms by which support influences health. Although discussion of these is beyond the scope of this chapter, advances in this area require a conceptual integration of individual, social, and physiological levels of analysis (Lazarus & Folkman, 1984). This task is a pressing one for future research.

In designing research to clarify the mechanisms that underlie positive support effects, it is important to be specific about the outcome variable that is likely to be affected. Some of the processes described previously may influence psychological well-being; others may have an impact on physical health; and still others may alter social functioning. Dunkel-Schetter (1984), for example, found different relationships of support to psychological well-being and to physical health outcomes. A particular mechanism may initially influence mood and psychological well-being, which, in turn, lead to enhanced motivation to comply with treatment regimens and better physical health. Unfortunately, the majority of social support studies have focused only on a single outcome variable at single time points and, hence, do not permit the investigator to assess the impact of different underlying mechanisms on different outcomes at different times (DiMatteo & Hays, 1981).

In addition to its theoretical significance, information regarding the processes through which support improves health should be invaluable in the development

of interventions to enhance effective utilization of support. Suppose, for example, that social support is found to produce beneficial effects on health outcomes primarily by interacting with other variables, such as social skills or coping resources. Heller (1979) has emphasized that if this is the case, there is little point in developing interventions that merely increase people's contact with supportive others. Instead, it would be necessary to teach people how to mobilize social support or to help them to develop the coping resources to utilize support more effectively.

ALTERNATIVE EXPLANATIONS FOR THE RELATIONSHIP BETWEEN SUPPORT AND HEALTH OUTCOMES

For the most part, early studies showing a correlation between social support and health outcomes have been interpreted as evidence for a causal relationship between these variables, with social support facilitating physical or mental health. As many investigators have discussed, however, there are numerous alternative explanations that may account for these findings. In designing research on social support, it is not only important to focus on the underlying mechanisms for the effect, but to rule out competing hypotheses.

Because there are numerous discussions of these competing hypotheses and various strategies for eliminating them (DiMatteo & Hays, 1981; Eckenrode & Gore, 1981; Gore, in press; Heller, 1979; Heller & Swindt, 1983; Holahan & Moos, 1980a, 1981; Silver & Wortman, 1980; Thoits, 1982), these hypotheses are given brief consideration here. One highly plausible alternative explanation for a positive association between support and health outcomes is that these variables are causally related in the reverse direction, that is, that one's prognosis, coping, or prior adjustment influences the amount of support available. There are many reasons why others may be unable to unwilling to provide support for people who are maladjusted, extremely ill, or coping poorly (Coates et al., 1979). As discussed earlier, such individuals may unwittingly create discomfort in others by making them feel vulnerable to a similar fate. Interacting with people who are suffering can also result in feelings of awkwardness and inadequacy because there may be little that one can say or do to help (Cobb & Erbe, 1978; Dunkel-Schetter & Wortman, 1982). Factors such as poor prognosis or adjustment may also influence the potential recipient's interest in seeking support or socializing with others, as well as his or her social attractiveness (Holahan & Moos, 1980a).

There are other variables that may influence an individual's social support as well as his or her health outcomes, and thus account for a strong positive association between support and health. For example, Heller (1979) has noted that the poorly adjusted may lack social competence, and therefore drive away

others by engaging in socially inappropriate behaviors. He has maintained that deficits in social competence may "produce the poorer levels of adjustment reported for unsupported individuals, as well as [account] for the lower levels of support they receive" (p. 375). Both social support and positive outcomes could also be influenced by such factors as dispositional optimism (DiMatteo & Hays, 1981) or by demographic factors such as social class (Liem & Liem, 1978). Finally, in studies showing a relationship between subjective assessments of support and well-being, it is possible that those who are poorly adjusted underestimate the support available to them (Heller, 1979; Thoits, 1982).

To date, most of the empirical studies have found a positive relationship between support and well-being, but a few investigators have reported a negative association among these variables (see, e.g., Dunkel-Schetter & Wortman, 1982; Heller & Swindle, 1983). Such a relationship has occasionally been interpreted to suggest that perceived support may have detrimental consequences. However, investigators should not blithely interpret such negative correlations as evidence of a "negative support effect." A plausible alternative explanation is that those with poor prognoses or numerous health problems may make more demands for support than those with better health and may thus elicit more support of some kinds (Dunkel-Schetter, 1984).

Many of these problems in interpretation could be resolved by longitudinal research that assesses available social support at one point in time and examines its ability to predict distress or physical deterioration at a later point. In such studies, it is important to obtain assessments of variables such as social competence, optimism, or social class that may be causally related to both the availability and perception of support and to adaptation to the outcome in question. Through the use of statistical procedures such as structural equation modeling techniques, such studies enable the investigator to examine the causal impact of support on subsequent well-being, while controlling for potential confounding variables (Rogosa, 1978). However, the precise timing of assessments is critical if strong causal inferences about social support are to be possible (Dunkel-Schetter, 1984).

A causal relationship between support and positive outcomes could also be established by experimental interventions in which participants are randomly assigned to treatments that supplement the support available to them or to control groups. To date, positive effects have been obtained with such interventions (see Broadhead et al., 1983; Kessler, Price, & Wortman, 1985; Leavy, 1983; Levy, 1983; Mumford, Schlesinger, & Glass, 1982; Wallston et al., 1983; Wortman & Conway, 1985). As mentioned earlier, however, most of these interventions have been multifaceted, sometimes including psychotherapy and factual information, as well as emotional support. Studies employing such experimental designs are useful in ruling out alternative causal factors (e.g., that those who are well-adjusted receive more support). Because of their multifaceted nature, however, they provide little evidence regarding the mechanisms that may underlie support effects.

NEW DIRECTIONS IN SUPPORT RESEARCH

Thus far, this chapter has focused primarily on the methodological and conceptual issues that confront researchers interested in conducting research on support. Drawing from the cancer area, specific recommendations have been offered regarding the aspects of support that may be most appropriate to study. An effort has also been made to identify conceptual issues that may be especially important in research on support, such as negative elements of social interaction or provider-recipient differences in perceptions of what is supportive. In this concluding section, we move to a brief discussion of substantive areas of support research that have thus far received relatively little attention. The areas discussed include determinants of social support and the costs or consequences of providing support.

Determinants of Support Provision

To date, the majority of empirical studies on social support have focused on the consequences of receiving social support (Dunkel-Schetter et al., in press). Researchers have shown considerably less interest in identifying the causes or determinants of support. Yet as House (1981) has emphasized, information about the determinants of social support may be critical in developing effective interventions to enhance support. Of course, there are many different factors that may determine whether social support will be available, offered, or utilized effectively. These include characteristics of the recipient, such as prognosis; characteristics of the provider; and structural, environmental, or cultural factors that may influence both parties. A few of these factors are selected for discussion.

One characteristic of the recipient that may be an important determinant of support provision concerns his or her predilections to seek support. As Eckenrode and Gore (1981) have noted, individuals differ substantially in their values and beliefs regarding when others should be called upon for help. Mitchell and Trickett (1980) have discussed the different "orientations" that people have toward social support and toward mobilizing their support network. These investigators have emphasized that there has been a surprising lack of discussion of the role people play in influencing the quality of their support networks and in mobilizing support in specific instances. In a recent article, Eckenrode (1983) describes a scale that he and his associates have developed to measure dispositional beliefs in the efficacy of help-seeking. The scale contains items such as "Accepting help from others makes you feel like you owe them something in return" (see also Brandt & Weinert, 1981). Eckenrode (1983) found a significant relationship between positive beliefs about help-seeking and support mobilization.

The recipient's skills in eliciting support from others may also be an important determinant of whether support is provided. In an excellent discussion of this issue, Heller and Swindle (1983) have identified a broad class of abilities that

may be directly relevant to obtaining social support. These include sociability, assertiveness, comfort with intimacy, lack of social anxiety, ability to empathize with others, and social problem-solving skills. These investigators have emphasized that mobilizing effective support may depend not only on these and other specific abilities, but also on skills that allow a person to regulate his or her behavior according to the social cues provided by others.

Still other factors determining whether support is received might be personality disposition and coping styles or behavior. Although there has been little investigation of this to date, two studies are pertinent. Eckenrode (1983) found a positive relationship between belief that health outcomes are internally caused and support for the most stressful event experienced during the past year. And Billings and Moos (1981) found that people who use avoidance as a coping strategy also reported fewer social resources. A third set of findings reported by Dunkel-Schetter et al. (in press) focuses directly on the determinants of support received, comparing personality variables, appraisal of stress, and coping as predictors of support received by middle-aged persons in stressful episodes. They found that coping behavior was most strongly associated with both number of supporters and types of support provided. There is also some evidence to suggest that the recipient's ability to cope successfully with the crisis can be a powerful determinant of support. Wortman and her associates (Coates et al., 1979) have found that those who indicate that they are coping well with undesirable life events are more likely to be regarded as attractive by others and less likely to be avoided than those who indicate that they are having some difficulties in coping. The implications of these results are depressing, because they suggest that those in greatest need of social support may be least likely to get it (Dunkel-Schetter & Wortman, 1982).

Although the characteristics of providers may also play an important role in whether support is received, these characteristics have received almost no discussion in the literature. Caplan (1979) has emphasized that it would be very worthwhile to study the conditions that promote or hinder the ability to meet the demands of others for support. This issue has received some attention in the literature on burnout (Cherniss, 1980; Pines & Aronson, 1981). Although that evidence is too complex to review here, there is some indication that qualities such as empathy and understanding may not be associated with support provision in predictable ways. In fact, it has been suggested that those who are the most empathic and caring may have the greatest difficulty in sustaining effective interactions with people who are experiencing intense pain or psychological distress (Coates et al., 1979).

Costs and Consequences of Support Provision

At present, most of the available research has focused on the consequences of receiving support; considerably less attention has been paid to the consequences of providing it. But as some investigators have discussed (Belle, 1982; Dunkel-

Schetter & Wortman, 1982; Kessler, McLeod, & Wethington, 1985), the provision of support often entails certain costs. In an interesting discussion of this issue, Belle (1982) has suggested that there are many situations in which one party may give far more support than he or she receives (termed the "support gap" by Belle). The long-term provision of social support, particularly if the recipient is unable or unwilling to reciprocate, may have deleterious consequences for the provider's mental and physical health.

A lack of reciprocity in giving and receiving support is likely to characterize many relationships in which one party is seriously ill. Because family members have the most sustained contact with the patient, they generally bear the largest share of support provision (Dunkel-Schetter, 1982) over time. Family members may become emotionally drained from trying to keep pace with rapid fluctuations in the patient's physical condition, reactions, and mood. Furthermore, great frustration can result from efforts to help the patient that have little impact on the course of a progressive disease. Finally, family members' own needs may be forced into the background as they struggle to stay on top of a demanding situation. As DiMatteo and Hays (1981) have noted, the extent to which family members support the patient may depend in part on the degree of support that they themselves receive. In subsequent research, it would be worthwhile to study such issues as what behaviors from the patient are most sustaining to family members, how family members support each other, and what other sources of support are particularly effective in alleviating family members' distress. Emerging interest in the issue of who supports the support provider (e.g., those who care for an elderly parent) is addressing these and other issues.

There is also evidence that health care professionals who care for the seriously ill may experience considerable stress. In one study, nurses who worked on a new cancer care unit had only slightly lower levels of stress, as measured on the Goldberg General Health Questionnaire, than did new widows and considerably higher stress than breast cancer patients beginning radiation treatment (Vachon, Lyall, & Freeman, 1978). The provision of support for health professionals may be important in preventing the deleterious effects that may result from such stress and in enabling them to deliver more effective support (DiMatteo & Hays, 1981).

SUMMARY AND CONCLUSIONS

In this chapter an attempt has been made to provide an overview of the major issues facing researchers who are interested in the conceptualization and measurement of social support, with illustrations from the cancer area. Taken as a whole, the literature reflects a growing appreciation for the complexity of the social support construct and a need for greater conceptual and research specificity. The following issues were discussed: (a) the importance of measuring support in a way that will permit assessment of distinct types of support (e.g., emotional

support, advice) by distinct providers (e.g., spouse, physician), since available evidence suggests that the impact of support is strongly affected by these factors; (b) the importance of using a multimethod approach to support measurement, which includes both structural aspects and subjective assessments of the adequacy of the support network, and the problems inherent in assuming that structural variables alone are an indication of the adequacy of support; (c) the importance of considering negative as well as positive support, since there is evidence suggesting that such behaviors may be very prevalent in the interactions between stressed persons and those in their support network, and that they may have a strong influence on subsequent health outcomes; (d) the need to consider the perspective of the provider as well as the recipient in obtaining judgments of the effectiveness of particular kinds of support, given the evidence that providers sometimes make attempts to be supportive that are regarded as unhelpful; (e) the importance of focusing on activation as well as availability and adequacy of support because an understanding of how people mobilize their support networks has important theoretical and practical implications; and (f) the importance of studying more explicit, specific behaviors that occur between individuals and those in their support network, as well as more general judgments regarding whether support is adequate.

Investigators in the social support area agree that it is time to move beyond demonstrations of a relationship between support and health outcomes to a more careful explication of the processes underlying support. This review highlights the importance of designing research that will shed light on the precise mechanisms through which support influences health outcomes. Hopefully, such research will clarify how social support interacts with other important psychosocial variables such as coping strategies and self-esteem. The importance of utilizing research designs that rule out alternative explanations was also emphasized. Some possible new directions for research on social support were also discussed briefly. It was argued that considerably more attention should be given to identifying the determinants of support, since such information is likely to be critical in the design of effective interventions. Finally, the importance of studying the costs and consequences of providing support was emphasized. It is hoped that the foregoing provides illustration of the difficulties involved in investigating social support, as well as some of the research strategies that may be implemented when investigating social support in any population.

REFERENCES

- Abbey, A., Abramis, D. J., & Caplan, R. D. (1985). Effects of different sources of social support and social conflict on emotional well-being. *Basic and Applied Social Psychology*, 6, 111-129.
- Abbey, A., & Rovine, M. (1985). *Social conflict: The negative aspects of social relations*. Paper presented at the annual meeting of the American Psychological Association, Los Angeles.
- Abrams, R. (1966). The patient with cancer: His changing pattern of communication. *New England Journal of Medicine*, 274, 317-322.
- Antonucci, T. (1985). Personal characteristics, social networks and social behavior. In E. Shanas & R. H. Binstock (Eds.), *Handbook of aging and the social sciences* (2nd ed., pp. 94-128). New York: VanNostrand & Reinhold.
- Barrera, M. (1981). Social support in the adjustment of pregnant adolescents: Assessment issues. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 69-96). Beverly Hills, CA: Sage Publications.
- Barrera, M., Jr., & Ainlay, S. L. (1983). The structure of social support: A conceptual and empirical analysis. *Journal of Community Psychology*, 11, 133-143.
- Bean, G., Cooper, S., Alpert, R., & Kipnis, D. (1980). Coping mechanisms of cancer patients: A study of 33 patients receiving chemotherapy. *CA—A Cancer Journal for Clinicians*, 30, 256-259.
- Belle, D. (1982). The stress of caring: Women as providers of social support. In L. Goldberg & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (pp. 496-505). New York: The Free Press.
- Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: A nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, 109, 186-204.
- Billings, A. G., & Moos, R. H. (1981). The role of coping resources in attenuating the stress of life events. *Journal of Behavioral Medicine*, 7, 139-157.
- Blazer, D. G. (1982). Social support and mortality in an elderly community population. *American Journal of Epidemiology*, 115, 684-694.
- Bloom, J. (1981). Cancer-care providers and the medical care system: Facilitators or inhibitors of patient coping responses. In E. Eisenler (Ed.), *Coping with cancer*. New York: North Holland Press.
- Bloom, J. R. (1982). Social support, accommodation to stress and adjustment to breast cancer. *Social Science and Medicine*, 16, 1329-1338.
- Bloom, J., Ross, R., & Burnell, G. (1978). The effect of social support on patient adjustment after breast surgery. *Patient Counseling and Health Education*, 1(2), 50-59.
- Brandt, P. A., & Weinert, C. (1981). The PRQ—a social support measure. *Nursing Research*, 30, 277-280.
- Brickman, P., Rabinowitz, B. C., Karuza, J., Jr., Cohn, E., & Kidder, L. (1982). Models of helping and coping. *American Psychologist*, 37, 368-384.
- Broadhead, W. E., Kaplan, B. H., James, S. A., Wagner, E. H., Schoenbach, V. J., Grimson, R., Heyden, S., Tibblin, G., & Gehlbach, S. H. (1983). The epidemiologic evidence for a relationship between social support and health. *American Journal of Epidemiology*, 117, 521-537.
- Brubn, J. G., & Phillips, B. U. (1984). Measuring social support: A synthesis of current approaches. *Journal of Behavioral Medicine*, 7, 151-169.
- Caplan, G. (1960). Patterns of parental response to the crisis of premature birth: A preliminary approach to modifying the mental health outcome. *Psychiatry*, 23, 365-374.
- Caplan, G. (1974). *Support systems and community mental health*. New York: Behavioral Publications.
- Caplan, R. D. (1979). Social support, person-environment fit and loving. In L. A. Ferman & J. P. Gordus (Eds.), *Mental health and the economy* (pp. 89-137). Kalamazoo, MI: Upjohn Institute.
- Caplan, R. D., Robinson, E. A. R., French, J. R. P., Jr., Caldwell, J. R., & Shinn, M. (1976). *Adhering to medical regimens: Pilot experiments in patient education and social support*. Ann Arbor: University of Michigan.
- Carey, R. (1974). Emotional adjustment in terminal patients: A quantitative approach. *Journal of Counseling Psychology*, 21, 433-439.
- Carver, W. B., & Gottlieb, B. H. (1979). The measurement of social support and its relation to stress. *Canadian Journal of Behavioral Science*, 11(3), 179-188.
- Cassel, J. (1974). Psychosocial processes and "stress": Theoretical formulations. *International Journal of Health Services*, 4, 471-482.

- Cassel, J. (1976). The contribution of the social environment to host resistance. *American Journal of Epidemiology*, 104, 107-123.
- Cherniss, C. (1980). *Staff burnout*. Beverly Hills, CA: Sage Publications.
- Coates, D., & Wortman, C. B. (1980). Depression maintenance and interpersonal control. In A. Baum & J. E. Singer (Eds.), *Advances in environmental psychology* (Vol. 2, pp. 149-181). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Coates, D., Wortman, C. B., & Abbey, A. (1979). Reactions to victims. In I. H. Frieze, D. Bar-tal, & J. S. Carroll (Eds.), *New approaches to social problems* (pp. 21-52). San Francisco: Jossey-Bass.
- Cobb, B. (1956). Nurse-patient relationships. *Journal of the American Geriatric Society*, 4, 690-698.
- Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, 38, 300-314.
- Cobb, S. (1979). Social support and health through the life course. In M. W. Riley (Ed.), *Aging from birth to death: Interdisciplinary perspectives* (pp. 164-185). Boulder, CO: Westview Press.
- Cobb, S., & Erbe, C. (1978). Social support for the cancer patient. *Forum on Medicine*, 1(8), 24-29.
- Coblener, W. (1977). Psychosocial factors in gynecological or breast malignancies. *Hospital Physician*, 13, 38-40.
- Cohen, P., Dizenhuz, I., & Winget, C. (1977). Family adaptation to terminal illness and death of a parent. *Social Casework*, 58, 223-228.
- Cohen, S., & Hoberman, H. M. (1983). Positive events and social support as buffers of life change stress. *Journal of Applied Social Psychology*, 52, 281-302.
- Cohen, S., & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. In A. Baum, J. E. Singer, & S. E. Taylor (Eds.), *Handbook of psychology and health* (Vol. 4, pp. 253-263). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cohen, S., & Syme, S. L. (Eds.). (1985). *Social support and health*. New York: Academic Press.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357.
- Conter, K., Hatch, D., & D'Augelli, A. (1980). Enhancing the skills of Cub Scout den leaders. *American Journal of Community Psychology*, 8, 77-85.
- Cowen, E., Gesten, E., Boike, M., Norton, P., Wilson, A., & Siefano, M. (1979). Hairdressers as caregivers: A descriptive profile of interpersonal helping involvements. *American Journal of Community Psychology*, 7, 633-648.
- Cronawett, L. (1983). *Relationships among social network structure, perceived social support, and psychological outcomes of pregnancy*. Unpublished dissertation, University of Michigan, Ann Arbor.
- Davidowitz, M., & Myrick, R. D. (1984). Responding to the bereaved: An analysis of "helping" statements. *Research Record*, 1, 35-42.
- Dean, A., & Lin, N. (1977). The stress-buffering role of social support: Problems and prospects for systematic investigation. *Journal of Nervous and Mental Disease*, 165, 403-417.
- DiMatteo, M., & Hays, R. (1981). Social support and serious illness. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 117-148). Beverly Hills, CA: Sage Publications.
- Donald, C. A., & Ware, J. E., Jr. (1982). *The quantification of social contracts and resources*. Santa Monica, CA: The Rand Corporation.
- Donald, C. A., Ware, J. E., Jr., Brook, R. H., & Davies-Avery, A. (1978). Conceptualization and measurement of health for adults in the health insurance study. *Social Health*, 4, The Rand Corporation (R-1987/4-HEW).
- Dunkel-Schetter, C. (1982). *Social support and coping with cancer*. Unpublished doctoral dissertation, Northwestern University, Evanston, IL.
- Dunkel-Schetter, C. (1984). Social support and cancer: Findings based on patient interviews and their implications. *Journal of Social Issues*, 40(4), 77-98.
- Dunkel-Schetter, C., & Wortman, C. B. (1981). Dilemmas of social support: Parallels between victimization and aging. In S. B. Kiesler, J. N. Morgan, & V. K. Oppenheimer (Eds.), *Aging: Social change* (pp. 349-381). New York: Academic Press.
- Dunkel-Schetter, C., & Wortman, C. B. (1982). The interpersonal dynamics of cancer: Problems in social relationships and their impact on the patient. In H. S. Friedman & M. R. Dimatteo (Eds.), *Interpersonal issues in health care* (pp. 69-100). New York: Academic Press.
- Dunkel-Schetter, C., Folkman, S., & Lazarus, R. (1984). *A contextual and multidimensional view of support received in stressful episodes*. Paper presented at the annual meeting of the American Psychological Association, Toronto.
- Dunkel-Schetter, C., Folkman, S., & Lazarus, R. (in press). Correlates of social support receipt. *Journal of Personality and Social Psychology*.
- Dunkel-Schetter, C., Silver, R., & Wortman, C. B. (1986). *Self-perceptions and negative reactions following interactions between depressed and nondepressed college students*. Unpublished manuscript, University of California, Los Angeles.
- Eaton, W. (1978). Life events, social supports, and psychiatric symptoms: A re-analysis of the New Haven data. *Journal of Health and Social Behavior*, 19, 230-234.
- Eckenrode, J. (1983). The mobilization of social supports: Some individual constraints. *American Journal of Community Psychology*, 2, 509-528.
- Eckenrode, J., & Gore, S. (1981). Stressful events and social support; the significance of context. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 43-68). Beverly Hills, CA: Sage Publications.
- Fertic, M., Goldman, A., & Kennedy, B. (1979). Group counseling in adult patients with advanced cancer. *Cancer*, 43, 760-766.
- Fiore, J., Becker, J., & Coppel, D. B. (1983). Social network interactions: A buffer or a stress. *American Journal of Community Psychology*, 11, 423-439.
- Fischer, C. (1982). *To dwell among friends*. Chicago: University of Chicago Press.
- Friedman, S. B., Chodoff, P., Mason, J. W., & Hamburg, D. A. (1963). Behavioral observations on parents anticipating the death of a child. *Pediatrics*, 32, 610-625.
- Froland, C., Pancoust, D., Chapman, N., & Kimboko, P. (1981). Linking formal and informal support systems. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 259-276). Beverly Hills, CA: Sage Publications.
- Funch, D. P., & Marshall, J. (1983). The role of stress, social support and age in survival from breast cancer. *Journal of Psychosomatic Research*, 27, 77-83.
- Funch, D. P., & Mettlin, C. (1982). The role of support in relation to recovery from breast surgery. *Social Science and Medicine*, 16, 91-98.
- Gordon, W. A., Freidenbergs, I., Diller, L., Hibbard, M., Wolf, C., Levine, L., Lipkins, R., Ezrachi, O., & Lucido, D. (1980). Efficacy of psychosocial intervention with cancer patients. *Journal of Consulting and Clinical Psychology*, 48, 743-759.
- Gottlieb, B. H. (1978). Development and application of a classification scheme of informal helping behavior. *Canadian Journal of Behavioral Science*, 10, 105-115.
- Gottlieb, B. H. (1981). Social networks and social support in community mental health. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 11-42). Beverly Hills, CA: Sage Publications.
- Gottlieb, B. H. (Ed.). (1981). *Social networks and social support*. Beverly Hills, CA: Sage Publications.
- Gottlieb, B. H. (1981). Preventive interventions involving social networks and social support. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 201-232). Beverly Hills, CA: Sage Publications.
- Greenleigh and Associates. (1979, May). *Report on the social, economic and psychological needs of cancer patients in California*. American Cancer Society, California Division, San Francisco.
- Gruen, W. (1975). Effects of brief psychotherapy during the hospitalization period on the recovery process in heart attacks. *Journal of Consulting and Clinical Psychology*, 43, 223-232.

- Harker, B. (1972). Cancer and communication problems: A personal experience. *Psychiatry in Medicine*, 3, 163-171.
- Heitzmann, C. A., & Kaplan, R. M. (1983). *Assessment of methods of measuring social support*. Paper presented at the annual meeting of the American Psychological Association, Anaheim, CA.
- Heller, K. (1979). The effects of social support: Prevention and treatment implications. In A. P. Goldstein & F. H. Kanfer (Eds.), *Maximizing treatment gains: Transfer enhancement in psychotherapy* (pp. 353-382). New York: Academic Press.
- Heller, K., & Swindle, R. W. (1983). Social networks, perceived social support and coping with stress. In R. D. Felner, L. A. Jason, J. Morisano, & S. S. Farber (Eds.), *Prevention psychology: Theory, research and practice in community intervention* (pp. 87-103). New York: Pergamon Press.
- Helmreich, T. H., & Steinitz, E. M. (1978). Death of an infant: Parental grieving and the failure of social support. *The Journal of Family Practice*, 6, 785-790.
- Henderson, S., Byrne, D. G., & Duncan-Jones, P. (1981). *Neurosis and the social environment*. Sydney, Australia: Academic Press.
- Henderson, S., Byrne, D. G., Duncan-Jones, P., Adcock, S., Scott, R., & Steele, G. P. (1978). Social bonds in the epidemiology of neurosis: A preliminary communication. *British Journal of Psychiatry*, 132, 463-466.
- Henderson, S., Duncan-Jones, P., Byrne, D. G., & Scott, R. (1980). Measuring social relationships: The interview schedule for social interaction. *Psychological Medicine*, 10, 723-734.
- Hirsch, B. J. (1979). Psychological dimensions of social networks: A multi-method analysis. *American Journal of Community Psychology*, 1, 263-277.
- Hirsch, B. J. (1980). Natural support systems and coping with major life changes. *American Journal of Community Psychology*, 8, 159-179.
- Hirsch, B. (1981). Social networks and the coping process. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 149-170). Beverly Hills, CA: Sage Publications.
- Holahan, C. J., & Moos, R. H. (1980a). *Social support and adjustment: Predictive benefits of social climate indices*. Unpublished manuscript, Stanford University School of Medicine, Social Ecology Laboratory, Stanford, CA.
- Holahan, C. J., & Moos, R. H. (1980b). *Development and validation of qualitative indices of social support*. Unpublished manuscript, Stanford University and VA Medical Centers, Social Ecology Laboratory.
- Holahan, C. J., & Moos, R. H. (1981). Social support and psychological distress: A longitudinal analysis. *Journal of Abnormal Psychology*, 90, 365-370.
- House, J. S. (1981). *Work, stress and social support*. Reading, MA: Addison Wesley.
- House, J. S., & Kahn, R. (1985). Measuring social support. In S. Cohen & L. Syme (Eds.), *Social support and health* (pp. 83-108). New York: Academic Press.
- House, J. S., Robbins, C., & Metzner, H. L. (1982). The association of social relationships and activities with mortality. *American Journal of Epidemiology*, 116, 123-140.
- Israel, B. A. (1982). Social networks and health status: Linking theory, research and practice. *Patient Counseling and Health Education*, 4, 65-79.
- Jamison, K., Wellisch, D., & Pasnau, R. (1978). Psychosocial aspects of mastectomy: The woman's perspective. *American Journal of Psychiatry*, 134, 432-436.
- Kahn, R. L., & Antonucci, T. (1980). Convoys over the life course: Attachment, roles and social support. In P. B. Baltes & O. Brim (Eds.), *Life-span development and behavior* (Vol. 3, pp. 254-286). Boston: Lexington Press.
- Kaplan, B. H. (1975). An epilogue: Toward further research on family and health. In B. H. Kaplan & J. C. Cassel (Eds.), *Family and health: An epidemiological approach* (pp. 89-106). Chapel Hill: University of North Carolina Press.
- Kaplan, B. H., Cassel, J. C., & Gore, S. (1977). Social support and health. *Medical Care*, 15(5), 47-57.
- Kellerman, J., Rigler, D., Siegel, S., & Katz, E. (1977). Disease-related communication and depression in pediatric cancer patients. *Journal of Pediatric Psychology*, 2(2), 52-53.
- Kessler, R. C., McLeod, J. D., & Wethington, E. (1985). The costs of caring. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: Theory, research and application* (pp. 491-506). Dordrecht, The Netherlands: Martinus Nijhoff.
- Kessler, R. C., Price, R. H., & Wortman, C. B. (1985). Social factors in psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology*, 36, 531-572.
- Klagsburn, S. (1971). Communications in the treatment of cancer. *American Journal of Nursing*, 71, 944-948.
- Krant, M., Beiser, M., Adler, G., & Johnston, L. (1976). The role of a hospital-based psychosocial unit in terminal cancer illness and bereavement. *Journal of Chronic Disease*, 29, 115-127.
- Krant, M. J., & Johnston, L. (1977-1978). Family members' perceptions of communication in late stage cancer. *International Journal of Psychiatry in Medicine*, 8(2), 203-216.
- LaRocco, J. M., House, J. S., & French, J. R. P. (1980). Social support, occupational stress and health. *Journal of Health and Social Behavior*, 21, 202-218.
- Lazarus, R. S., Cohen, J. B., Folkman, S., Kanner, A., & Schaefer, C. (1980). Psychological stress and adaptation: Some unresolved issues. In H. Selye (Ed.), *Selye's guide to stress research* (Vol. 1, pp. 90-117). New York: Van Nostrand Reinhold Co.
- Lazarus, R., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer Publishing Co.
- Leavy, R. L. (1983). Social support and psychological disorder: A review. *Journal of Community Psychology*, 11, 3-21.
- Lee, E., & Maguire, G. (1975). Emotional distress in patients attending a breast clinic. *British Journal of Surgery*, 62(1), 162.
- Lehman, D. R., Ellard, J. H., & Wortman, C. B. (1986). Social support for the bereaved: Recipients' and providers' perspectives on what is helpful. *Journal of Consulting and Clinical Psychology*, 54(4), 438-446.
- Lentz, W. (1976). The informal community caregiver: A link between the health care system and local residents. *American Journal of Orthopsychiatry*, 46, 678-688.
- Levy, R. L. (1983). Social support and compliance: A selective review and critique of treatment integrity and outcome measurement. *Social Science and Medicine*, 18, 1329-1338.
- Lewis, F., & Bloom, J. (1978-1979). Psychosocial adjustment to breast cancer: A review of selected literature. *International Journal of Psychiatry in Medicine*, 9(1), 1-17.
- Lichtman, R. R., & Taylor, S. E. (in press). Close relationships and the female cancer patient. In B. L. Anderson (Ed.), *Women with cancer: Psychological perspectives*. New York: Springer-Verlag.
- Lichtman, R., Wood, J., & Taylor, S. (1982). *Close relationships after breast surgery*. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C.
- Lieberman, M. (1982). The effects of social supports on responses to stress. In L. Goldberg & S. Breznitz (Eds.), *Handbook of stress* (pp. 764-783). New York: The Free Press.
- Liem, R., & Liem, J. (1978). Social class and mental illness reconsidered: The role of economic stress and social support. *Journal of Health and Social Behavior*, 19, 139-156.
- Lin, N., Simeone, R., Ensel, W., & Kuo, W. (1979). Social support, stressful life events and illness: A model and an empirical test. *Journal of Health and Social Behavior*, 20, 108-119.
- Lindsey, A. M., Norbeck, J. S., Carrieni, V. L., & Perry, E. (1981). Social support and health outcomes in post-mastectomy women: A review. *Cancer Nursing*, 3, 377-384.
- Lowenthal, M. F., & Haven, C. (1968). Interaction and adaptation: Intimacy as a critical variable. *American Sociological Review*, 33, 20-31.
- Lowenthal, M., & Haven, C. (1978). Interaction and adaptation: Intimacy as a critical variable. *American Sociological Review*, 33, 20-30.
- Lynch, J. J. (1985). *The language of the heart*. New York: Basic Books, Inc.
- McCallister, L., & Fischer, C. S. (1978). A procedure for surveying personal networks. *Sociological Methods and Research*, 7, 131-148.
- McFarlane, A. H., Norman, G. R., & Steiner, D. L. (1983). The process of social stress: Stable, reciprocal, and mediating relationships. *Journal of Health and Social Behavior*, 24, 160-173.

- Maddison, D., & Walker, W. L. (1967). Factors affecting the outcome of conjugal bereavement. *British Journal of Psychiatry*, *113*, 1057-1067.
- Mages, N., & Mendelsohn, G. (1979). Effects of cancer on patients' lives: A personological approach. In G. C. Stone, F. Cohen, & N. E. Adler (Eds.), *Health psychology: A handbook* (pp. 255-284). San Francisco: Jossey-Bass.
- Maguire, P. (1976). The psychological and social sequelae of mastectomy. In J. G. Howells (Ed.), *Modern perspectives in the psychiatric aspects of surgery*. New York: Brunner/Mazel.
- Meyerowitz, B. (1980). Psychosocial correlates of breast cancer and its treatment. *Psychological Bulletin*, *87*, 108-131.
- Meyerowitz, B., Sparks, F., & Spears, I. (1979). Adjuvant chemotherapy for breast carcinoma. *Cancer*, *43*, 1613-1618.
- Miller, R. S., & Lefcourt, H. M. (1983). Social intimacy: An important moderator of stressful life events. *American Journal of Community Psychology*, *11*, 127-139.
- Mitchell, G., & Glicksman, A. (1977). Cancer patients: Knowledge and attitudes. *Cancer*, *40*, 61-66.
- Mitchell, R. (1984). *Stress, social support and functioning: Beyond the stress buffering effect*. Paper presented at the annual meeting of the American Psychological Association, Toronto.
- Mitchell, R. E., & Hurley, D. J., Jr. (1981). Collaboration with natural helping networks. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 277-298). Beverly Hills, CA: Sage Publications.
- Mitchell, R. E., & Trickett, E. J. (1980). Task force report: Social networks as mediators of social support. *Community Mental Health Journal*, *16*(1), 27-44.
- Moos, R. H., & Tsu, V. D. (1977). The crisis of physical illness: An overview. In R. H. Moos (Ed.), *Coping with physical illness*. New York: Plenum.
- Mumford, E., Schlesinger, H. J., & Glass, G. V. (1982). The effects of psychological intervention on recovery from surgery and heart attacks: An analysis of the literature. *American Journal of Public Health*, *72*, 141-151.
- Nadler, A., & Fisher, J. D. (in press). The role of threat to self-esteem and perceived control in recipient reactions to help: Theory development and empirical validation. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. XVII). New York: Academic Press.
- National Commission on Neighborhoods (NCN). (1979). *People building neighborhoods*. Washington, D.C.: U.S. Government Printing Office.
- Norbeck, J. S., Lindsey, A. M., & Carrieri, V. L. (1980). The development of an instrument to measure social support. *Nursing Research*, *30*, 264-269.
- O'Malley, J., Koocher, G., Foster, D., & Slavin, L. (1979). Psychiatric sequelae of surviving childhood cancer. *American Journal of Orthopsychiatry*, *49*, 608-616.
- Parkes, C. M. (1974). Comment: Communication and cancer—a social psychiatrist's view. *Social Science and Medicine*, *8*, 189-190.
- Pearlin, L. I. (1982). The social contexts of stress. In L. Goldberg & S. Breznitz (Eds.), *Handbook of stress* (pp. 367-379). New York: The Free Press.
- Pearlin, L. I., Lieberman, M. A., Menaghan, E. G., & Mullen, J. T. (1981). The stress process. *Journal of Health and Social Behavior*, *22*, 337-356.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, *19*, 2-21.
- Peck, A., & Boland, J. (1977). Emotional reactions to radiation treatment. *Cancer*, *40*, 180-184.
- Peters-Golden, H. (1982). Breast cancer: Varied perceptions of social support in the illness experience. *Social Science and Medicine*, *16*, 483-491.
- Pines, A., & Aronson, E. (1981). *Burnout: From tedium to personal growth*. New York: The Free Press.
- Porrit, D. (1979). Social support in crisis: Quantity or quality? *Social Science and Medicine*, *13*(A), 715-721.
- President's Commission on Mental Health (PCMH). (1978). *Task force report on community support systems* (Vol. II, Appendix). Washington, D.C.: U.S. Government Printing Office.
- Procianno, M. E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology*, *11*, 1-24.
- Raphael, B. (1977). Preventive intervention with the recently bereaved. *Archives of General Psychiatry*, *34*, 1450-1454.
- Renne, K. S. (1974). Measurement of social health in a general population survey. *Social Science Research*, *3*, 25-44.
- Revenson, T. A., Wollman, C. A., & Felton, B. J. (1983). Social supports as stress buffers for adult cancer patients. *Psychosomatic Medicine*, *45*, 321-331.
- Rogosa, D. (1978). Causal models in longitudinal research: Rationale formulation and interpretation. In J. R. Nesselroade & P. B. Baltes (Eds.), *Longitudinal research in human development: Design and analysis*. New York: Academic Press.
- Rook, K. S. (1984). The negative side of social interaction: Impact on psychological well-being. *Journal of Personality and Social Psychology*, *46*(5), 1097-1108.
- Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The social support questionnaire. *Journal of Personality and Social Psychology*, *44*, 127-139.
- Schaefer, C., Coyne, J., & Lazarus, R. S. (1982). The health related functions of social support. *Journal of Behavioral Medicine*, *4*, 381-406.
- Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The pair inventory. *Journal of Marital and Family Therapy*, *7*(1), 47-60.
- Sheldon, A., Ryser, C., & Krant, M. (1970). An integrated family oriented cancer care program: The report of a pilot project in the socioemotional management of chronic diseases. *Journal of Chronic Diseases*, *22*, 743-755.
- Shinn, M., Lehmann, S., & Wong, N. W. (1984). Social interaction and social support. *Journal of Social Issues*, *40*(4), 55-76.
- Shumaker, S. A., & Brownell, A. (1984). Toward a theory of social support: Closing conceptual gaps. *Journal of Social Issues*, *40*(4), 11-36.
- Silberfarb, P. M., Maurer, L. H., & Croutham, C. (1980). Psychological aspects of neoplastic disease: I. Functional status of breast cancer patients during different treatment regimens. *American Journal of Psychiatry*, *137*, 450-455.
- Silver, R. L., & Wortman, C. B. (1980). Coping with undesirable life events. In J. Garber & M. E. P. Seligman (Eds.), *Human helplessness: Theory and applications* (pp. 279-375). New York: Academic Press.
- Sosa, R., Kennell, J., Klaus, M., Robertson, S., & Urrutia, J. (1980). The effect of a supportive companion on perinatal problems, length of labor, and mother-infant interaction. *New England Journal of Medicine*, *303*, 596-600.
- Spiegel, D. (1979). Psychological support for women with metastatic carcinoma. *Psychosomatics*, *20*, 780-787.
- Spinetta, J., & Maloney, L. (1978). The child with cancer: Patterns of communication and detail. *Journal of Consulting and Clinical Psychology*, *46*, 1540-1541.
- Sutherland, A., Orbach, C., Dyk, R., & Bard, M. (1952). The psychological impact of cancer and cancer surgery. I. Adaptation to the dry colostomy: Preliminary report and summary of findings. *Cancer*, *5*, 857-872.
- Tardy, C. H. (1985). Social support measurement. *American Journal of Community Psychology*, *13*, 187-202.
- Thoits, P. (1982). Conceptual, methodological and theoretical problems in studying social support as a buffer against life stress. *Journal of Health and Social Behavior*, *23*, 145-159.
- Thoits, P. A. (1985). Social support processes and psychological well-being: Theoretical possibilities. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: Theory, research and applications* (pp. 51-72). Dordrecht, The Netherlands: Martinus Nijhoff.

- Thomas, J., & Weiner, E. A. (1974). Psychological differences among groups of critically ill hospitalized patients, noncritically ill hospitalized patients, and well controls. *Journal of Clinical Psychology*, 42, 274-279.
- Turner, R. J. (1983). Direct, indirect and moderating effects of social support upon psychological distress and associated conditions. In H. B. Kaplan (Ed.), *Psychosocial stress: Trends in theory and research* (pp. 105-155). New York: Academic Press.
- Turner, R. J., & Noh, S. (1983). Class and psychological vulnerability among women: The significance of social support and personal control. *Journal of Health and Social Behavior*, 24, 2-15.
- Vachon, M. L. S. (1979, September). *The importance of social support in the longitudinal adaptation to bereavement and breast cancer*. Paper presented at the annual American Psychological Association meeting, New York.
- Vachon, M. L. S., Lyall, W. A. L., & Freeman, S. J. J. (1978). Measurement and management of stress in health professionals working with advanced cancer patients. *Death Education*, 1, 365-375.
- Visotsky, H. M., Hamburg, D. A., Goss, M. E., & Lebovitz, B. Z. (1961). Coping behavior under extreme stress. *Archives of General Psychiatry*, 5, 423-448.
- Walker, K., MacBride, A., & Vachon, M. (1977). Social support networks and the crisis of bereavement. *Social Science and Medicine*, 11, 35-41.
- Wallston, B. S., Alagna, S. W., DeVellis, B. M., & DeVillis, R. F. (1983). Social support and physical health. *Health Psychology*, 2, 367-391.
- Weidman-Gibbs, H., & Achterberg-Lawlis, J. (1978). Spiritual values and death anxiety: Implications for counseling with terminal cancer patients. *Journal of Counseling Psychology*, 25, 563-569.
- Weisenfeld, A. R., & Weis, H. M. (1979). Hairdressers and helping: Influencing the behavior of informal caregivers. *Professional Psychology*, 7, 786-792.
- Weisman, A. (1979). *Coping with cancer*. New York: McGraw-Hill.
- Weisman, A. D., & Worden, J. W. (1975). Psychosocial analysis of cancer deaths. *Omega*, 6(1), 61-75.
- Weisman, A., & Worden, J. (1976-1977). The existential plight in cancer: Significance of the first 100 days. *International Journal of Psychiatry in Medicine*, 7(1), 1-15.
- Weiss, R. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others* (pp. 174-205). Englewood Cliffs, NJ: Prentice Hall.
- Wellisch, D., Mosher, M., & VanScoy, C. (1978). Management of family emotion and stress: Family group therapy in a private oncology practice. *International Journal of Group Psychotherapy*, 28, 225-231.
- Wellman, B. (1979). The community question: The intimate networks of East Yorkers. *American Journal of Sociology*, 84, 1202-1231.
- Wilcox, B. L. (1981). Social support in adjusting to marital disruption. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 97-115). Beverly Hills, CA: Sage Publications.
- Winder, A. (1978). Family therapy: A necessary part of the cancer patient's care: A multidisciplinary treatment concept. *Family Therapy*, 5, 151-161.
- Wortman, C. B., & Conway, T. L. (1985). The role of social support in adaptation and recovery from physical illness. In S. Cohen & L. Syme (Eds.), *Social support and health* (pp. 281-302). New York: Academic Press.
- Wortman, C. B., & Dunkel-Schetter, C. (1979). Interpersonal relationships and cancer: A theoretical analysis. *Journal of Social Issues*, 35(1), 120-155.
- Wortman, C. B., & Lehman, D. R. (1985). Reactions to victims of life crises: Support attempts that fail. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: Theory, research, and applications* (pp. 463-489). Dordrecht, The Netherlands: Martinus Nijhoff.