

CHAPTER 5

Measures and Concepts of Social Support*

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Introduction

The study of social support emerged, seemingly out of nowhere, during the 1970s. The impression of novelty, however, is not wholly accurate. At least twice before, support has been proposed as a central concept in social science. Likert argued in 1961 that the core element in supervisory success was the principle of supportive relations, the ability of some supervisors to conduct each transaction with subordinates in such a way that the individual's sense of personal worth and importance was enhanced. And Rogers (1942), 20 years earlier, had put supportive behavior at the center of his theory of psychotherapy and counseling.

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Whether or not the interest is new, its current magnitude and manifestations are impressive. The *Social Sciences Citation Index* shows a rapidly accelerating, almost geometric, growth in the number of articles with the term *social support* in their titles, from 2 in 1972 to 50 in 1982. This rate of publication is naturally spawning a growing number of review articles and monographs (e.g., Antonucci, in press; Broadhead *et al.*, 1983; House, 1981; Israel, 1982; Leavy, 1983; Mueller, 1980; Turner, 1983; Wallston *et al.*, 1983). Such rapid scientific development often reflects the influence of a specific theoretical concept or empirical measure (e.g., the literature on life events or the type A and type B behavior patterns).

The research appeal of social support, however, is based neither on the specificity of the concept nor on the emergence of some uniquely successful empirical measure. Rather, like the related concept of stress, social support has attracted researchers and stimulated research across the biomedical, behavioral, and social sciences because of its integrative promise and intuitive appeal. It suggests an underlying common element in seemingly diverse phenomena and it captures something that all of us have experienced. The term connotes enough that it has proved fruitful even in the absence of denotation. Indeed, one of the most influential review papers on social support (Cassel, 1976) offered neither an explicit definition of support nor any specifications regarding measurement. At this point, however, generality has served its purpose and lack of specificity in conceptualization and measurement poses increasingly serious problems for research on social support.

The basic task of this chapter is to evaluate existing measures of social support, to suggest directions for their future use, and to propose the development of new measures as needed. However, assessment of the adequacy of existing or proposed measures, especially their *construct validity*, requires a theoretical framework to give clarity and meaning to the concepts being measured. Such a framework must specify the nature of and the relationships among the various concepts and measures now used interchangeably within the broad domain of social support research. It must also state the relationship of key social support variables to their causes and consequences.

The Domain of Social Support

The term *social support* (like the terms *social network* and *social integration*) refers to a number of different aspects of social relationships. Social support is sometimes defined conceptually or operationally in terms of the *existence or quantity* of social relationships in general, or of a particular type such as marriage, friendship, or organizational membership. Social

support is also sometimes defined and measured in terms of the *structure* of a person's social relationships. In addition, social support is sometimes defined in terms of the *functional content* of relationships, such as the degree to which the relationships involve flows of affect or emotional concern, instrumental or tangible aid, information, and the like.

Because the term *social support* has been used to refer to each of these aspects of relationships, each must be considered part of the general domain of social support. *Social support* is, however, most commonly used to mean the last of these aspects of social relationships—their functional content. Similarly, the term *social network* is most often used to refer to the structures existing among a set of relationships (e.g., their density, homogeneity, or range). Finally, terms such as *social integration* or *isolation* are most often used to refer to the existence or quantity of relationships. Such designations are used throughout this chapter.

It is necessary to consider all three aspects of social relations—quantity, structure, and function—because they are logically and empirically interrelated. Moreover, they may constitute distinctive explanations of the effects of social support or social networks as these terms are used more generically. The existence or quantity of relationships is a necessary condition for, and hence a partial determinant of, both the network structure of those relationships and their functional content or qualities. Similarly, network structure may partially determine the functional content or qualities of relationships within the network. The potential connections among these different aspects of social relations are shown in Figure 5.1.

It is desirable on both substantive and methodological grounds that at least two, and preferably all three, of these aspects of social relationships be explicitly conceptualized and measured within a single study. Only then can the relationships both among these aspects of social relations and between them and health be understood. Figure 5.1 suggests, for example, that the connection between the existence of a social relationship (e.g., marriage) and health may be explainable wholly or in part by the different network structures or functional content associated with marriage. Conversely, the figure also suggests that some apparent effects of network structure or relationship content on health may be spurious products of the mere existence of the relationship (or of some other unspecified variable associated with the existence of a relationship).

Assessing the Quality of Measures: A Focus on Validity

How can researchers decide what is known and what needs to be known, or what is good and bad, about a measure of social relationships, network structure, or support? The standard, if incomplete, answer is by evaluation

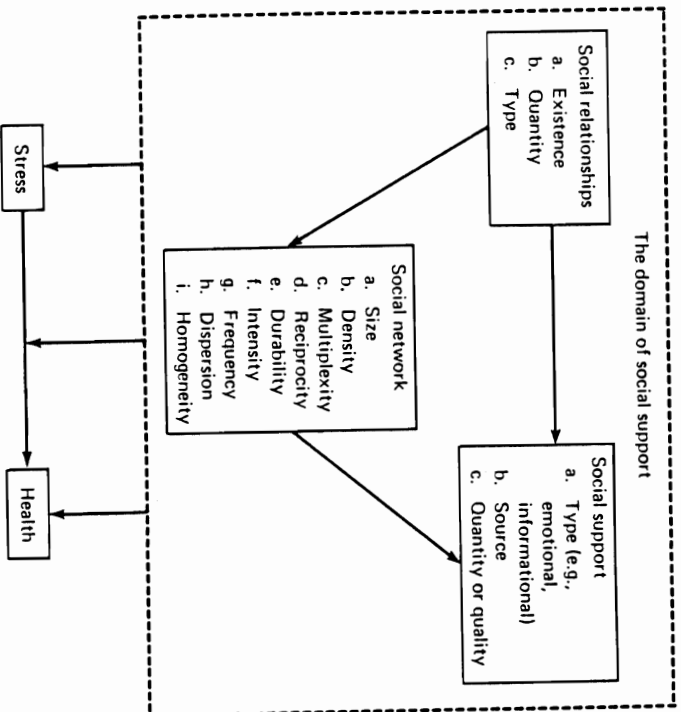


Figure 5.1. Theoretical framework for assessing the quality of measures of social support.

of the reliability and validity of the measure. This is easier said than done, because there are multiple forms of reliability and validity. High reliability, in terms of both internal consistency and test-retest stability, is a desirable feature of any measure and a crucial precondition of validity.

But validity remains the essential problem, and a complex one. There is no criterion validity against which measures of social relationships, networks, and support can be assessed. Of course, evidence of face validity, content validity, and convergent and discriminant validity is desired. Most critical, however, is evidence of construct validity (see Campbell, 1960; Nunally, 1978). The meaning of a scientific concept is really defined by its place in a theoretical system of relationships with other variables (see Cronbach & Meehl, 1955). What is most novel and critical about the concept of social support, as it has emerged since the early 1970s, is the idea that it is beneficial to health and well-being, either directly or because it moderates the negative effects of stress and other hazards on individual health and well-being as shown in Figure 5.1 (See Broadhead *et al.*, 1983; Cassel, 1976; Cobb, 1976; House, 1981; Kahn, 1981). Thus, assessing the validity of measures of social support involves consideration of the substantive rela-

tionships found between those measures and health, most notably the degree to which social support contributes to the ability to predict health outcomes.

If an empirical study uses a particular measure and finds that the relationships predicted within the framework are nonexistent or contrary to prediction, the reasons for the failure of prediction may be difficult to interpret. Especially when neither the measure nor the theory has been well established in previous empirical work, the negative results may mean that either or both are deficient. On the other hand, when well-designed empirical research confirms theoretical ideas about the relation between social support and health, confidence in both the theory and the measures used to test it is enhanced.

In the absence of a dominant, well-validated measure of social support, diverse proposed measures have proliferated almost as rapidly as have new empirical studies. It is easy to become preoccupied with comparisons of these measures and their psychometric properties. It must be remembered, however, that the litmus test of the validity of any measure of social support is its relationship to the major causes and consequences of social support.

A Note on Method

In this chapter we will review available measures of the existence or quantity of social relations, the network structure of those relations, and their functional content, paying attention not only to the formal psychometric properties of measures but also to the extent to which they have been shown to relate meaningfully to theoretically expected causes and health consequences of social support.

In the course of the review, we will show that the measures of social support used in prior studies range from one or two global items to questionnaires of from 50 to 100 or more differentiated items taking up to a half-hour to administer. Because both time and money are at a premium in most research, issues of cost-effectiveness must be considered—that is, how much is gained by using a longer, more differentiated, and more complex measure rather than a shorter, less complex, and more global measure? In the end we try to recommend how an investigator might choose or construct measures of social support for different purposes and under different constraints of time and resources.

In reviewing existing measures of social support we have tried to examine all empirical studies of support and health published between 1972 and mid-1983. Our basic universe was all studies that contained the term *social support* in their title and that appeared in the *Social Sciences Citation Index*

between 1971 and 1982. This list was supplemented by a parallel search of *Psychological Abstracts* and by information obtained through informal networks. We have reviewed not only studies focused on measurement but also empirical studies of social relationships, social networks, and social support in relation to physical and mental health.

Social Relationships as Measures of Support

The relation of the existence or quantity of an individual's social contacts or relationships to health and well-being has long been a focus of both experimental and nonexperimental research. Measures of the existence or quantity of social contacts or relationships are relatively objective, reliable, and easy to obtain. Such information can sometimes be obtained by observation or from behavioral records (e.g., marriage or organizational membership). Even if obtained by self-report, information on whether or not persons are married, live alone, or belong to a church or other organizations is generally simple to collect, stable over time, and accurate. Donald and Ware (1982, p. 110), for example, found 1-year test-retest correlations of .80 for church attendance and of from .64 to .66 for group membership and activity. Reports of marital status and living alone are probably even more stable and accurate.

People also report quite easily on the frequency of contacts with friends and relatives, and on the number of such relationships. These quantitative reports, however, are not as obviously accurate and stable as reports of formal membership and status. Donald and Ware (1982) report 1-year test-retest reliabilities of from .4 to .6 for reports of social contacts. Yet such reports appear objective and stable compared to reports of the functional quality of relationships, which are likely to be more labile and confounded with mental health status. This combination of objectivity, stability, and ease of assessment undoubtedly accounts for the popularity of measures of the existence and quantity of relationships in empirical research.

Measures and studies of social relationships are relevant to the study of social support in several ways. Often studies that purport to measure social supports or social networks operationalize these concepts in terms of the existence or quantity of social relationships (e.g., Berkman & Syme, 1979; Eaton, 1978; Funch & Marshall, 1983; Wan & Weissert, 1981). Even where such measures are more accurately described as social relationships or social contacts and resources (e.g., Donald & Ware, 1982; House, Robbins, & Metzner, 1982), they are hypothesized and often found to behave as measures of social support should behave. Finally, social relationships must exist in some quantity before they can have a structure and supportive content

or function. And some have argued that it is the sheer existence or quantity of relationships that is consequential for health, rather than their structure or functional content (e.g., Syme, 1982). The underlying idea here might be considered a social isolation hypothesis, although what exactly is consequential about social isolation is not spelled out.

Data relating the existence and quantity of relationships to health are impressive in quality as well as in volume. These associations have as yet not been fully accounted for in terms of more specific and theoretically satisfying measures of the structure or quality of relationships. Nevertheless, they present a coherent pattern.

Of all social relationships, marital status has been the most studied and most consistently related to health. Beginning with Durkheim's (1951) evidence that unmarried men and women are more likely to commit suicide than those who are married, numerous cross-sectional, retrospective, and longitudinal or prospective studies have shown a higher prevalence and incidence of many psychological and physical disorders and a lower life expectancy (or higher mortality risk) among the unmarried than the married. The benefits of marriage in these respects are almost always greater for men than women. There is also some evidence that not all unmarried states are equally deleterious, though evidence here is lower in quality and quantity and less consistent (see Berkman & Syme, 1979; Gove, 1972; Gove & Tudor, 1973; Gove, Hughes, & Style, 1983; House *et al.*, 1982; Ortmeyer, 1974).

The existence and quantity of contacts with friends and relatives have also been found to relate cross-sectionally, retrospectively, and prospectively to lower rates of psychological and physical disorders and mortality. Membership and attendance in church and participation in other voluntary organizations show positive relationships to well-being. These results are somewhat more sparse and variable than in the case of marital status, but still relatively consistent (see Berkman & Syme, 1979; Donald & Ware, 1982; Henderson, Byrne, & Duncan-Jones, 1982; House *et al.*, 1981; Wan & Weissert, 1981; Williams, Ware, & Donald, 1981).

In a number of studies, indexes were formed of the total number of social relationships or the frequency of social contacts. Three prospective mortality studies of broad community samples have shown independently that people with low levels of social relationships have at least twice the risk of mortality from all causes as persons with moderate to high levels of relationships (Berkman & Syme, 1979; Blazer, 1982; House *et al.*, 1982). Among women with breast cancer (Stage 3), those with higher levels of organizational involvement had a significantly longer survival period (Funch & Marshall, 1983). Medicare patients living alone or not having grandchildren were significantly more likely to be institutionalized over a follow-up period of

1 year (Wan & Weisert, 1981). Lower levels of social relationships and activities have also been associated cross-sectionally and longitudinally with symptoms of poor mental health (Henderson *et al.*, 1982; Williams *et al.*, 1981). Several studies have suggested that relatively isolated persons with few or no social relationships are especially at risk; increases above a moderate number of relationships appear to produce diminishing returns to health (see Berkman & Syme, 1979; Blazer, 1982; House *et al.*, 1982).

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 of large and broad-based samples. The results on human populations are reinforced by experimental studies showing the health-protective effects of social relationships in a variety of animal species. They are also reinforced by the frequent finding (discussed subsequently) that the size of social networks is predictive of health. All of these effects are, however, main or additive effects. The hypothesis that social relationships can buffer people against effects of stress has not really been tested in most cases, and when tested has been sometimes confirmed (Eaton, 1978) and sometimes not confirmed (e.g., Williams *et al.*, 1981).¹

In sum, although they represent very crude assessments of the nature of individuals' social worlds, simple measures of the existence and quantity of social relationships are relatively objective, reliable, and not artifactually confounded with measures of other relevant variables such as stress and health. There is also substantial evidence for their construct validity in terms of their relationships with health outcomes. Selected studies (Blazer, 1982; Gove *et al.*, 1983) have presented evidence that it is the quality of these relationships, particularly the perceived support they offer, that largely accounts for their effects. The majority of studies, however, have not gone beyond assessment of the existence and quantity of relationships, and some that have (House *et al.*, 1982) did not find these other measures to be predictive of health outcomes.

It seems logical that the beneficial effects of social relationships derive from the content and quality of those relationships. That presumption should not, however, lead to neglect of measures of existence and quantity. At least until the effects of social relationships on health can be empirically accounted for, assessment of the existence, quantity, and contact frequency of major social relationships should be a standard part of studies of social

¹The Williams *et al.* (1981) specification of the buffering effect in their regression models appears invalid, because a product term was created from two variables, neither of which has a real zero point (see Kessler & Cleary, 1980). One figure they presented, however, suggests little buffering.

support. Most important among these relationships are marital status, number and frequency of contacts with friends and relatives, church membership and attendance, and participation in other voluntary organizations. The Social Network Index of Berkman and Syme (1979) covers all these aspects of social relationships, and can readily be adapted and expanded for other studies. House *et al.* (1982) and Donald and Ware (1982) have provided other relatively brief batteries of questions on these topics.

Social Network Measures of Support

There has been a growing interest in using social network analysis to study the ways in which social relationships are linked to individual health and well-being. Some researchers have even urged "that we transmute support system analysis into social network analysis" (Wellman, 1981, p. 171). The purported advantages of network analysis are several: (1) It broadens the range of social relationships examined, (2) it encourages attention to multiple aspects and effects of these relationships, both positive and negative, and (3) it provides a method for describing the structural pattern of ties and for analyzing the effects of different patterns (Wellman, 1981; see also d'Abbs, 1982; Wilcox, 1981).

In our view, the unique features of a social network approach, as compared to the social relationships approach described earlier and the social support approach described subsequently, lie in its emphasis on (1) analyzing the structure of social relationships (as opposed to their mere existence or their functional content), (2) mapping a broad range of social contacts and relationships, and (3) attending not only to the focal person and his or her relationship to others but also to relationships among the other persons in the network of the focal person. That is, the issue is not just who are a person's friends, but who are the friends of those friends (Bois-sevain, 1974).

Social network analysis has a long history of application to a wide range of problems. At issue is how useful it has proved, or may prove, in analyses of the association between aspects of social relationships and health or well-being. Our sense is that the utility of network analysis for mapping individuals' social worlds and studying a broad range of social processes (e.g., communication and influence, power structures) is clear; the utility of many aspects of network analysis in understanding the etiologic pathways that link social relationships to health and illness remains to be established. Network analysis may be more useful to the understanding of health or illness behavior, where access to information and providers of care is crucial. Our reading of the literature concurs with that of Israel (1982), who iden-

tified a set of network characteristics she called structural and interactional: (1) size or range, (2) density (i.e., the extent to which all members of a network are linked with each other), (3) content (i.e., uniplexity versus multiplexity, or the extent to which relationships involve more than one type of content or transaction), (4) directedness or reciprocity, (5) durability, (6) intensity or emotional closeness, (7) frequency, (8) dispersion, and (9) homogeneity. These are distinguished from functional characteristics, or the functional content and quality of relationships (e.g., affective, instrumental, and cognitive support).²

Israel (1982, p. 71) concluded that "quantitative structural and interactional characteristics of networks have been found to have conflicting associations with well-being." The only exception to this is network size, which is generally found to be positively associated with health and well-being (e.g., Froland *et al.*, 1979; Gallo, 1982; Phillips, 1981), but which is really just a measure of the quantity of relationships people have (as are such measures as number of social contexts and range of socializing, used by Phillips, 1981). Many studies of social relationships and health (e.g., Berkman & Syme, 1979) have used the term *network*, but only a limited number, usually based on small and idiosyncratic samples, have actually assessed the kinds of structural network properties emphasized by Israel and other network analysts. The substantial costs involved in fully mapping social networks militates against systematic analysis of network properties in large samples. In short, the network characteristics considered and the method of assessment vary so greatly across studies that it is presently impossible to draw firm conclusions about the utility of the network approach for predicting and explaining health or illness.

After size, density is probably the network property most frequently and uniformly studied. Some studies (Gallo, 1982) have reported a positive association between density and indicators of mental health and well-being, some have reported a negative association (Hirsch, 1980, 1981), and some have reported no relationship (Phillips, 1981). Such a pattern of conflicting results may, however, reflect some underlying regularities. Walker, MacBride, and Vachon (1977), among others, have argued that networks of small size, strong ties, high density and homogeneity, and low dispersion are helpful in maintaining social identity and hence well-being to the extent that well-being relies on maintenance of social identity. However, change in social roles and identities is facilitated by larger networks with weaker ties, lower density, and greater social and cultural heterogeneity. This interpretation is consistent with differences in the populations of the stud-

²We would argue that intensity, connoting as it does strong affect, is as much a functional as a structural feature of relationships.

ies just cited: Hirsch found density deleterious to mental health among women experiencing widowhood and divorce, whereas Gallo found density positively associated with health in a community sample of persons 60 and over. Phillips, who found neither relationship, analyzed a representative "normal" sample of 50 northern California communities.

Reciprocity, or directedness, is another property of relationships and perhaps networks that logically seems relevant to health, and there is some empirical support for such relevance (Gallo, 1982). Relationships in which both the focal person and the network member initiate contact are health-promotive, those in which the focal person usually initiates contact are not, and those in which the network member initiates contact are negatively associated with health status.

Network analysis also highlights the importance of considering the characteristics of the others with whom an individual has social relationships. A neglected but promising variable appears to be the sex of the other or others in a relationship or network. Evidence suggests that relationships with women may be more supportive and health promoting than relationships with men, and conversely that the degree to which others (perhaps men especially) rely on women for support may be deleterious to women's health (see Belle, 1982). Marriage is generally more beneficial to men than women, but women benefit more from relationships with friends and relatives (which run predominantly along same sex-lines). And Kessler and McLeod (in press) have found evidence that the higher rate of symptoms of psychological disorder among women, as compared to men, stems in substantial part from the life events occurring to people they know (presumably requiring women to provide support). Obviously, the issues of reciprocity and sex composition of relationships are related in that women may benefit more from relationships with other women not because such relationships are less demanding, but because they are more reciprocal.

In sum, network analysis suggests a number of promising leads for new measures of the characteristics of social relationships that are consequential for health. However, at this point the empirical evidence for the utility of such measures is much lower in quality and amount than that for the effects of the sheer existence and quantity of social relationships. This is especially true of the more complex measures of network structure. The reasons are in part methodological. It is quite costly to collect and process the amount of data necessary to characterize fully the structure of social networks. The cost-effectiveness of such an effort, in our view, has yet to be demonstrated. Moreover, the validity of network data reported by the focal person has yet to be assessed, although some such efforts have been undertaken (Kahn, Wethington, & Ingersoll, in press). Thus, we feel it is necessary to be selective in measuring and analyzing network properties

in relation to health. For example, it is not yet known what the gains or losses are from focusing on smaller versus larger numbers of persons in obtaining data about social networks; however, some of our own work has suggested that at somewhere between 5 and 10 persons in a network, a point of greatly diminishing returns is reached in data collection.³ Among network properties, density, reciprocity, and sex composition seem most promising—the latter two being properties of dyads as well as networks. If a researcher desires a full assessment of network properties, the approach of Fischer (1982; see also McCallister & Fischer, 1978) represents the state of the art.

Although the structural analysis of networks is most highly developed, at least in a quantitative sense, network analyses have often proved most informative when they have focused on the content and quality as well as the structure of relationships (see d'Abbs, 1982; Israel, 1982; Wellman, 1981). Such a focus bears directly on the domain to which the term *social support* commonly refers.

Measures of Social Support in Terms of the Functional Content of Relationships

Our review uncovered over 40 published studies that have attempted to measure social support in terms of the functional content of social relationships as opposed to their mere existence or structure. Most investigators develop their own scales, so there are almost as many different measures as there are studies. The studies vary greatly in their populations and methods and generally employ weak research designs (i.e., cross-sectional correlations between reported measures of social support and mental health within small and idiosyncratic samples). Most studies present reasonable evidence for the reliability of their social support measures, but the evidence for construct validity is limited. There are few negative results but the positive results may be somewhat artifactual and not very generalizable. Thus, we are unable to find a single measure that is so well validated and cost-effective that it is to be preferred above the others; various measures may be appropriate for various purposes and circumstances, and continued efforts at measurement development are needed.

³How many people are elected in a network depends greatly on the questions used to define membership in the network. On this issue, we see no clear consensus. Fischer (1982, also McCallister & Fischer, 1978) has provided the most exhaustive method, asking about a variety of types of social relationships. Others generally have asked people to name others who are "close" or "important" to them (e.g., Kahn & Antonucci, 1980).

The assessment of social support, like that of social networks, ranges from global to differentiated. Differentiations are usually made with respect to (1) quantity or availability of support versus quality or adequacy of support, (2) source of support, and (3) type of support. Measures also differ in whether they ask about the perceived availability of support or the occurrence of actual supportive behaviors. In the latter case it is possible to assess these behaviors by direct observation, by report of the person who enacts the supportive behavior, or by report of the recipient of the behavior. Thus far, almost all measures of support, and also of social relationships and networks, have relied on the self-report of a focal person (recipient) about how others behave or how the focal person perceives their behavior. We will focus on such measures here, although we recognize the need to understand how objective behavior relates to perceptions of that behavior and to feelings of support engendered by it (see House, 1981, Ch. 5; Kahn & Antonucci, 1980). In reviewing specific measures we will first focus on those that have been designed for and empirically tested in specific and limited populations, and then consider measures designed and used for more general and representative populations.

Social Support among College Students

Procidano and Heller (1983) and Sarason *et al.* (1983) have developed fairly lengthy scales (20–40 items) of the perceived availability of social support, which are potentially adaptable to general populations but have thus far been used mainly in small studies of college students. Procidano and Heller measured only a global concept of support but have separate scales for family and friends. Sarason distinguished only between the number of supporters and satisfaction with them. Barrera, Sandler, and Ramsay (1981) have developed a 40-item Index of Socially Supportive Behaviors, which also yields a single global score. Considerable data are available on the reliability of these measures and their cross-sectional correlations with measures of personality, social relations, and mental health. Some of these data are from experimental studies. The item pools may be of interest to other investigators, but their utility beyond college student populations remains to be determined. We also feel that the measures are not very cost-effective for use in general population surveys because they use 20–40 items to generate one or two global measures of support.

Cohen and Hoberman (1983) and their colleagues (Cohen, Mermelstein, Kamarck, & Hoberman, 1984) have developed a 48-item Interpersonal Support Evaluation List (ISEL), which assesses the perceived availability of four types of functions of social support—tangible, appraisal, self-esteem, and belonging. A 40-item ISEL has also been developed for noncollege popula-

tions, although it has been used only once on a sample of other than college students (64 persons in a university-based smoking cessation program). These authors reported cross-sectional and some longitudinal correlations of the ISEL (total score and subscales) with mental and, to a lesser degree, physical health. They found evidence that these measures, with the exception of tangible support, buffer the relationship between stress and health. In the smoking cessation study the intercorrelations among the appraisal, belonging, and self-esteem scales ranged from .61 to .73, very close to the maximum possible given the estimated reliabilities of these scales (.6-.8). Thus the ISEL seems to differentiate clearly only two functions of support (tangible versus the others, which appear to consist primarily of emotional support). This is a basic dichotomy that gives the ISEL an edge over the measures just discussed, which it otherwise resembles.

Social Support in Special Populations

A number of other investigators have developed and used measures of social support in small and specialized nonstudent populations. Although many of these measures have shown some promise, evidence for their reliability is limited and their content is often narrowly focused. Among the more promising measures of this type are those of Norbeck, Lindsey, and Carrieri (1981), Brandt and Weinert (1981), and Cronenweil (1983). The Norbeck measure developed an interesting set of questions, based on the theoretical scheme of Kahn and Antonucci (1981), to assess three aspects or forms of social support—aid, affirmation, and affect—from multiple sources. The way the measure attempts to distinguish both types and sources of support is very useful. The scaling procedures used by Norbeck are flawed, however, and result in no empirical discrimination among forms of support.⁴ With different scaling procedures, the measure has promise and has been used in a small sample of employed adults (Norbeck, 1983). Brandt and Weinert (1981) operationalized Weiss's (1974) five functions of support—indication of personal value, group membership, provision for attachment and intimacy, opportunity for nurturance, and availability of help (informational, emotional, and material). Empirical validation was, how-

⁴The error of Norbeck *et al.* (1981) is one common among measures that ask people to nominate persons in their network (e.g., who are "close to them" or provide different kinds of support). If the overall measures of different types of support are based on numbers of persons named, the size of the network is confounded with assessment of the content or quality of the relationships. Norbeck added responses to questions regarding the behavior of each person named, making the measure of each type of support largely a function of the number of persons in the network. Consequently, most of her measures intercorrelate in the

ever, limited to a study of spouses of multiple sclerosis victims. Cronenweil (1983) tried to operationalize House's (1981) conceptualization of four types of support—emotional, instrumental, informational, and appraisal—using the interesting approach of defining a type of support and asking who provided that kind of support. The measures suffer from a moderate contamination of the quantity and quality of relationships, as discussed in footnote 4 and subsequently. The measure has also been used only in a small study of relatively well-educated new parents.

Social Support Measures in General Populations

A number of measures have been developed for and used in studies of the general population. The simplest of them are one- or two-item assessments of the presence or absence of a confidant (e.g., Lowenthal & Haven, 1968). Pearlin *et al.* (1981) used a variant of this approach in their longitudinal study of the stress process in a representative sample of adults aged 18-65 in the Chicago area. They created a summative index of two confidant items, one referring to friends and relatives and the other to the spouse. The index was shown both to have main effects on measures of well-being, and to buffer the impact of job disruption in longitudinal analyses. Fleming, Baum, Gisrel, and Gatchel (1982) and Turner (1981) presented slightly more elaborate global measures of support, tested on smaller samples.

Moos and colleagues (Billings & Moos, 1981, 1982; Holahan & Moos, 1982) have developed both a Quantitative Social Support Index (QSSI), a measure of social relationships similar to those discussed in the section "Social Relationships as Measures of Support," and a Family Relations Index (FRI) and a Work Relations Index (WRI) derived from Moos's (1974) Family Environment and Work Environment Scales. They presented cross-sectional associations of these measures with mental health and coping. Although the measures show evidence of construct validity, they do not appear to have special virtues for other users. The QSSI is similar to measures discussed earlier, and the FRI and WRI are global measures of support from two sources, developed largely before the concept of support had been made explicit. They do illustrate that current concepts and measures of support have much in common with earlier concepts and measures (e.g., cohesion). MacFarlane *et al.* (1981) developed an interesting measure that asks respondents to name individuals with whom they have discussed six types of problems and to indicate how helpful those discussions were. It also asks whether the other reciprocates by coming to the respondent to discuss problems. Thus far, however, only highly aggregated measures of the number of persons talked to and their average helpfulness across all problem

areas have been reported empirically (MacFarlane, Norman, & Streiner, 1983). The measures have the potential to yield a more differentiated picture of sources of support, but not of types. No evidence on the validity and utility of the reciprocity questions is available. The measure is suggestive but hardly definitive.

Henderson *et al.* (1982) have undertaken the most ambitious effort to measure forms of social support from many different sources. They developed a more than 50-item Interview Schedule for Social Interaction (ISSI), which assesses the availability and perceived adequacy of a wide range of social contacts and relationships (from people seen on the street to confidants). From this schedule they developed indexes of the availability and perceived adequacy of what they termed *social integration* and *attachment*. *Social integration* is really a measure of the number of relationships people have, whereas *attachment* refers to how much those relationships provide various types of support (emotional, tangible, etc.) Henderson *et al.* also constructed indexes of indifference to relationships and conflicts in relationships. In a broad community sample they examined the additive and interactive effects on neurotic symptoms of these variables in conjunction with life events. The analyses are both cross-sectional and longitudinal. Cross-sectionally, all four main indexes have both main and buffering effects on neurosis, though the effects of adequacy are stronger than those of availability. Longitudinally, the adequacy but not the availability measures produce both additive and buffering effects.

The results, about which Henderson and colleagues were unnecessarily skeptical, suggest substantial validity for these measures, and their work merits close examination. We have two related reservations about the ISSI, however. First, it is costly and probably not cost-effective. Second, it has so far been used only to create aggregated measures, which do not distinguish among types or sources of support, although the component items have the potential to generate some such distinctions. If the goal is this level of aggregation, a smaller number of items would suffice.

Finally, Schaefer, Coyne, and Lazarus (1981) have developed a measure of tangible, informational, and emotional support in a longitudinal study of 100 middle-aged and older persons. The respondent's tangible score was the number of situations (out of nine) in which he or she could count on help from another person. The situations ranged from minor (being able to borrow a cup of sugar) to major and demanding ones (such as needing care following an illness or injury).

Another section of the questionnaire asked participants to rate their spouse, close friends, relatives, co-workers, neighbors, and supervisors on five separate items designed to measure different types of support. Because ratings on four of the five items (i.e., caring, confiding, being reliable, and

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boosting spirits) were highly intercorrelated (average $r > .90$), the four items were summed into an index of emotional support. The fifth question, which asked explicitly about information, suggestions, and guidance, was designated as the measure of informational support.

The method of indexing appears to produce an artifactually high correlation (.85) between informational and emotional support, which makes it impossible to distinguish their separate effects. On the other hand, the measure of tangible support is very different, bordering on a measure of social isolation ("Is there anyone who..."). Thus this measure is also problematic, but among the few that distinguishes among both sources and types of support. Schaefer *et al.* (1981) did provide some evidence of construct validity.

Our own efforts at measurement have also met with mixed success at this point. In a study of workers in 23 occupations in multiple locations ($N = 636$), Caplan *et al.* (1975) developed a 12-item measure of perceived social support from work supervisors, co-workers, and persons outside of work with respect to work-related problems. In a study of white, male blue-collar workers in an industrial plant ($N = 1809$), House (1980) adapted this measure by adding several additional supervisor items and distinguishing persons outside of work into spouses versus friends and relatives. Both studies used items intended to distinguish between emotional and instrumental support, but empirically no such distinction emerged. Analyses by House and Wells (1978) and LaRocco, House, and French (1980), however, showed clearly that the importance of different sources of support varied with the context and the nature of the stresses being considered. Work-related sources of support were generally most consequential in alleviating occupational stress and buffering its effects on health, with the importance of supervisors versus coworkers varying by occupational setting. Spouses also proved to be important sources of support with respect to work-related problems, but friends and relatives were not consequential.

Two ongoing studies by Kahn and Antonucci (1978, 1984) and by Kahn, Antonucci, and Depner (1979) have attempted to measure some aspects of network structure and extensive supportive functions in two distinctive samples: a cross-sectional personal interview study of a national probability sample ($N = 718$) of persons aged 50 and over and a longitudinal mail survey of all persons first qualified to teach secondary school in Michigan in 1980 ($N = 678$). In the study of new teachers, respondents reported their network structure and the supportive behavior of network members by means of written questionnaires administered annually over a 3-year period. Network structure was identified by asking respondents to write the first names or initials of people "who are important to you or to whom you are important" in each of six categories: spouse or partner, family member

or relative, co-worker, supervisor, professional (doctor, psychologist, clergy member, psychiatrist, social worker), and friend (if not already mentioned). The supportive functions of aid, affect, and affirmation were measured by means of 12 five-point scales, each asking separately the extent to which the network as a whole and the most important network member in each of the six categories performed a specific function.

In the national survey, respondents were shown a diagram consisting of three concentric circles, with a center marked "you." Each respondent was asked to provide the first names or initials of network members who belonged in each of three circles—in the first circle people "to whom you are so close that it is hard to imagine life without them," in the second circle people who are "not that close but still very important," and in the third circle "people who are not as close as those in the second circle but still belong in your network." Demographic characteristics, category of relationship (friend, relative, etc.), frequency of contact, and other descriptors were measured for individual network members so that structural properties could be generated for the network as a whole.

Six specific support functions—intended to reflect the dimensions of aid, affirmation, and affect—were measured by means of 12 items, paired to assess the extent to which each of the six support functions was provided to the focal person by network members and the extent to which the focal person provided each of these forms of support to network members.

These studies attempted in different ways to operationalize the kind of matrix specification of sources and types of support illustrated in Table 5.1, which we feel provides the most useful broad framework for developing measures of social support. Thus far, we have had only partial success. Ongoing analyses of these data have succeeded in differentiating sources of support and showing their differential effects or correlates. Although we can, like others, construct indexes of different types of support with acceptable internal consistency, expressions of aid, affect, and affirmation, as measured in these studies, are so highly correlated with each other as not to be clearly empirically distinguishable. Moreover, in the national survey the amount of support of each type received by the focal person was measured by counting the number of network members who provided it. This method of estimating quantity of support, as we have pointed out, confounds support quantity with network size. Attempts have been made to deal with this problem in analysis (Kahn, Wethington, & Ingersoll, in press), but it seems advisable to avoid it by measuring quantity or magnitude of support independently of the number of providers. The concentric circle procedure for network mapping works well in personal interviews and provides rich network data. It is dependent on visual cues, however,

Table 5.1
Potential Forms of Social Support^a

Content of supportive acts	Source of support								
	Spouse or partner	Other relatives	Friends	Neighbors	Work supervisor	Co-workers	Service or caregivers	Self-help groups	Health and welfare professionals
Emotional support: esteem, affect, trust, concern, listening									
Appraisal support: affirmation, feedback, social comparison									
Informational support: advice, suggestion, directives, information									
Instrumental support: aid in kind, money, labor, time, modifying environment									

Within this matrix of types of social support, each can be (1) general versus problem-focused and (2) objective versus subjective.

^aFrom James R. House. *Work stress and social support*. © 1981. Addison-Wesley, Reading, MA. Table 2.2. Reprinted with permission.

and would require substantial modification for use in telephone interviews or written questionnaires.

Summary

Our review of published measures of the perceived availability or occurrence of specific types of supportive behaviors suggests to us that measurement in this area is still in a fairly primitive state. Most measurement efforts have not been guided by any explicit conceptual framework. Those that have been so guided have produced only preliminary results. Although we do not see one or a few standard measures to recommend for widespread use, we do feel there is a clear strategy to follow in developing better measures in this area, using existing measures as a source of ideas for items.

First, in any study the measurement of support must be guided by a theoretical conception of the nature of support and of how support relates to other variables in the study. Both for conceptual and methodological reasons, it is useful to distinguish among different sources of support (see LaRocco *et al.*, 1980) and among types of support (see Table 5-1). Which types and which sources are important depends on the nature of the problem under study. Most conceptual and empirical analyses of support, however, suggest that emotional support or affect should be distinguished from instrumental support or aid and that both of these should be distinguished from informational support and from affirmation or appraisal support (see House, 1981; Kahn & Antonucci, 1980). Relevant sources can be suggested both by stipulation of relevant roles (e.g., spouse, co-worker, supervisor) and by having respondents nominate persons who are important or close to them. We recommend letting respondents nominate a small number of persons and then adding critical role relationships they do not mention.

For each source of support, then, items should be written to assess the occurrence or availability of relevant types of support. It is important to ensure that the magnitude and quality of support received are clearly distinguished from the number of people who provide such support. Asking simply how many people do something confounds the number of relationships or network size with the functional content and quality of the relationship. Further, it artifactually inflates correlations among functional types of support.

Even with this common error avoided, it has proven difficult to achieve satisfactory discriminant validity among different types of support. To a considerable extent, this reflects reality. That is, people generally receive (or fail to receive) multiple types of support from the same persons. Those

who give emotional support are the ones who also can be turned to for instrumental aid, information, and affirmation or appraisal. This does not mean, however, that the analysis of different types of support should be forsaken. Rather, theoretical analysis must be sharpened. Different types of support are most likely to be discriminable and to have different effects *as the nature of the problem requiring support varies*. Thus, those interested in measuring and demonstrating the empirical utility of different types of support must attend more to the problem specific nature of the support process. For example, the discriminability and effects of types of support may vary for the bereaved versus the critically ill or versus persons seeking to stop smoking or drinking.⁵

Finally, how elaborate and differentiated measures should be is largely determined by balancing research goals against available resources. If there are limited resources and limited interest in support, a simple confidant type of measure may suffice. Slightly more elaborate are efforts to assess a global concept of support from differentiated others or different types of support from undifferentiated others. Most elaborate is the kind of matrix specification shown in Table 5.1.

Conclusion

Clearly, behavioral scientists are still in process of developing measures of the generic concept of social support, including social relationships, their network structure, and the specific supportive functions or content of relationships. As we have indicated, the measures used in a given study should be tailored to the needs of that study. This is not to say, however, that investigators should all construct their own measures from scratch. The existing literature provides good models for most types of measures, which if not usable verbatim can be adapted to specific other purposes.

Table 5.2 presents a suggested battery of social support measures and a guide to good examples of each type of measure. Additional measures are cited in the text and references. How many and which measures an investigator chooses depend on the nature of the study and the resources available. We do, however, have a number of recommendations.

⁵Cohen *et al.* (1984), for example, found that among persons in a smoking cessation program appraisal support promotes sustained smoking reduction after the end of the program among those who were abstainers by the end, but it promoted a return to increased smoking among those who only had reduced their amount of smoking by the program's end. This is one illustration of how support may sometimes have negative effects—a topic of great interest but beyond the scope of this chapter.

Table 5.2
Suggested Battery of Social Support Measures

Type of item	Useful references
Measure of existence of social relationships (especially marriage, contacts with friends and relatives)	Berkman and Syme (1979) House, Robbins, and Metzner (1982) Donald and Ware (1982)
Confidant measure	Pearlin, Lieberman, Menaghan, and Mullan (1981)
Measure of network size and structure based on a limited number of persons (5-10)	McAllister and Fisher (1982)
Measures of basic types of support from different sources (and with respect to particular problems, if appropriate)	Cohen and Hoberman (1983) House (1980) Schaefer, Cohen, and Lazarus (1981) Kahn, Wellington, and Ingersoll (in press) Norbeck, Lindsey, and Carrivert (1981)
Types (see Table 5.1) Sources Five closest persons Role-specific persons not among the five closest (see Table 5.1)	

1. *Studies should attempt wherever possible to measure at least two and preferably all three aspects of social relationships considered in this chapter: (a) their existence and quantity, (b) aspects of network structure, and (c) the functional content and quality of relationships.* It is critical to understand better how these aspects relate to each other and how important each is in relation to health.
2. *The number of persons or relationships considered should generally be limited to a range of from 5 to 10* because existing evidence suggests strongly diminishing returns above that level. Further analysis should be directed at determining the relative informational value of considering additional persons or roles even within this range. We have argued elsewhere that it is the absence of any supportive relationship that is most deleterious to health (House, 1981; Kahn & Antonucci, 1980). The incremental gain from each addition beyond the first such relationship has not yet been carefully studied.
3. *Measures of network structure should be used selectively.* Density, reciprocity, and aspects of network composition (e.g., gender) appear most promising. By limiting the number of persons considered and

- the network properties considered, we feel, network analyses will be made more productive and cost-effective.
4. *The quantity and quality of specific types of support functions should be measured independently of the number of persons providing such types of support.* For example, it is not enough to ask how many people provide emotional support; how much (or how well) each or all of them provides such support should also be asked.
 5. *Within types of support, priority should go first to measuring emotional support, and then to other aspects that are appropriate.* This is because emotional support has been most clearly linked to health, in terms of both direct effects and buffering effects.
 6. *Within sources of support, respondents should be allowed to nominate a few people close to them, and that list should then be supplemented with roles that seem most crucial for a particular study.*

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