Measurements of Social Support in Schizophrenia

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Abstract

A selective review of the literature reveals some methods and instruments that show promise for the investigation of social support as a factor in the course and treatment of schizophrenia. Approaches are divided into social-psychological questionnaires, ethnographical network studies, ethnographies, and clinical epidemiological investigations. Social support measures designed for the general population probably have little relevance in schizophrenia. It appears that the most useful information comes from immersion in the experience of the patients, families, and caretakers rather than from an effort to develop a measure of social support in general that would be applicable to them.

In a companion essay designed as an introduction to this review (Beels 1981), several points were made about the importance of social support as a dimension of the course and treatment of schizophrenia. These points include the following:

• Social support, like nutrition, is not a concept that can be readily applied from health to illness. Each mental illness has its own special sensitivity to factors of environmental support.

• Schizophrenic individuals have an unusually small circle of supportive people, mostly kin, and often including representatives of mental health organizations.

• The attitudes of these small clusters of close people toward mental illness, and the expectations they have concerning a patient's performance in work and sociability, are an important part of social support.

• Structural considerations such as the organization of tasks and initiative, and the distance and frequency of contacts, are probably more important in schizophrenia than are emotional factors such as the availability of an intimate confidant which, for example, has been shown to be important in depression.

• Local culture is of overriding importance in evaluating social support. Cultural definitions of illness and invalidism, work role, sex and age, appropriate sociability, and so on must be considered.

The measurement of social support in schizophrenia is a clinical art—hardly yet a science. While it is a matter of undoubted importance to the clinician, and is much described and written about, the efforts to measure it have presented great contradictions and uncertainties. This essay describes the state of the art at present, and indicates some of the problems and controversies surrounding it.

Orientation

The study of social supports is related to a more fully developed discipline, the study of life events. The most important life events—birth, marriage, job change, migration, death, and the like—are all major fluctuations or crises within the network of potential social support. Life events are seen as stressful changes that may lead to exacerbations of mental illness, while

Reprints of this article and a list of references in this field that have appeared since the article was written may be obtained from Dr. Elmer Struening, Epidemiology of Mental Disorders Research Unit, 100 Haven Avenue, New York, NY 10032.
social support is seen as the constant background of continually available relationships that buffer the effects of such changes. All of this is the familiar stuff of life, and the problem that confronts us is that when social scientists attempt to abstract elements of this pattern in order to measure them, the process of abstraction does violence to the experience or the clinical relevance that patient and clinician feel strongly but cannot quantify. Examples of these imponderables in the study of life events are: difficulties in deciding how long an event can have its effect, how to weigh the importance of an event, or where in time to place the impact of an event long anticipated. Investigators of social support have to ponder similarly difficult questions about the substance of the social fabric: Who are the people we turn to for support? Are they the people we see most often, the people we feel closest to, the people who would appeal to in a crisis, the people we think about most readily, or the people who have the most power over our lives? As the life events literature shows, and as we all intuitively know, social support is always in a state of flux, both in fact and in the way we feel about it. And beyond this is the further question, which also troubles the study of life events, of how accurately people report those "facts" of their social interactions. This is especially true of evaluation of the social supports of schizophrenic patients. These persons probably have the most confined and idiosyncratic social lives and the most fantastical ways of reporting both social support and life events.

In view of these difficulties, it is striking that whenever social support has been carefully measured it has turned out to be a very important factor in accounting for the course of schizophrenic illness. In a wide-range study of patients discharged from hospitals in Northern Manhattan, Caton et al. (1981) found that variables involving interpersonal stress and social support accounted for significantly more of the outcome variance (as measured by rehospitalization, for example) than variables of aftercare treatment in the community. The finding underlines both the importance of the social support concept and the need for a better understanding of what it means.

This report is mainly concerned with two different approaches to the measurement of social support. These are the self-report questionnaire, generally focused on the respondent's own qualitative evaluation of his or her supports, and the social network interview, in which the important people in the respondent's life are enumerated, classified, and evaluated in various quantitative ways.

Both approaches to the measurement of social support attempt to deal with the difficulty of making generalizations about such an idiosyncratic phenomenon. Each deals with the problem of abstraction in a different way, with a different view of the methodological perils to be avoided. Attitude measurement researchers, impressed with the difficult and time-consuming task of counting and inquiring about all the people in a respondent's life, and with the difficulty of evaluating the information collected in social network interviews, prefer the efficiency of scale construction. They use factor analysis to refine the psychometric properties of an instrument for measuring the subjective dimensions of social support. The Interview Schedule for Social Interaction (ISSI) (Henderson et al. 1980), which was administered to a nonpatient sample of 756 householders in Canberra in an impressive survey study of social support and depression, is an outstanding example of the self-report questionnaire approach.

Social network investigators, on the other hand, consider the subjective evaluation of support, especially in a psychiatric population, to be an uncertain reflection of the social reality of actual encounters and events, regardless of how reliably such an evaluation can be measured. Although they do not dismiss the importance of subjects' perceptions of social support, social network researchers are primarily concerned with the clinical relevance of systematically classified details of the respondent's social interactions. Garrison's (1972, 1978) study of the networks of Puerto Rican migrant women in New York, to be discussed later, is a leading example.

**Social Network Interviews**

The social network has been defined by Kapferer (1969, p. 182) as "...the direct links radiating from a particular Ego to other individuals, and the links which connect those individuals who are directly tied to Ego, to one another." 1

Social network analysis was originally a technique developed by anthropologists for the purpose of providing qualitative descriptions of concrete living systems in complex societies. The technique was later applied to the problem of discovering and assessing the social support available to individuals in stressful situations, including but not limited

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1 Readers who wish to examine the diagramming of social network data and/or related graphic techniques should consult Boissevain and Mitchell (1973). See also Sokolovsky (1980) for social network mapping.
to persons experiencing schizophrenic episodes or illnesses. Historically, three streams of thought have contributed to our understanding of the relationship between social support and mental health:

- Within anthropology, Elizabeth Bott (1971) was the first to use open-ended interviews to examine the relationship between social organization and social class on the one hand, and personal social networks and individual role functioning in families on the other.

- Within psychiatry, family therapists explored the influence of the social milieu on the etiology and course of mental illness, moving from the intimate matrix of the nuclear family to the extended family and, eventually, to the wider social networks of its members (Speck and Rueveni 1969).

- Within epidemiology, investigators formulated the social disorganization hypothesis (implicitly, if not explicitly, suggesting differences in the structure and function of individual social networks) to help explain differences in rates of psychopathology found in selected populations and geographical areas (Leighton et al. 1963; Murphy 1977; Struening 1975).

Later, investigators from each of these disciplines responded to Gerald Caplan’s (1974) influential formulation of the concept of social support by focusing on the impact of social support—or lack of support—on psychiatric illness. “Support” within a personal social network refers to the three support categories defined by Caplan—another individual, a network, a group or an organization that provide individuals with opportunities for feedback about themselves and for validation of their expectations about others, which may offset deficiencies in those communications within the larger community context” (Caplan and Killilea 1976, p. 19). With a few exceptions, the interviews included here reflect Caplan’s influence as applied to studies of the social aspects of schizophrenia.

In general, the network interviews elicit information on:

- Network size (total number of persons the focal individual interacts with during a specified time period).
- The frequency, intensity, and duration of the focal person’s connections with network members.
- The demographic characteristics of network members.
- The contexts or situations in which connections occur.
- The kinds of activities network members engage in.
- The social homogeneity, or heterogeneity, of the network as a whole.
- The multiplexity (number of different kinds of exchanges) within network relationships.
- The designation of the individuals to whom the focal person attributes primary support functions.

The interviews vary with respect to: (1) the availability of measures of density (interconnectedness), clustering, and symmetry or reciprocity of exchanges between members; (2) the extent to which network members are precategorized for the respondent by questions aimed at eliciting “friends,” “family members,” and so on; and (3) the inclusion or exclusion of middle range network members—that is, those who are not among the respondent’s intimates but are acquaintances with whom he or she interacts more than occasionally. Since research suggests that the presence of middle range network members may vary in importance for different types of patients, the comparative study of network size requires that attention be given to developing inclusion and exclusion criteria for these members (Hammer, in press).

In general, investigators report that the network interviews in fact elicit approximately what they were designed to elicit. Virtually all have been used to investigate the networks of psychiatrically ill patients. Though modifications may be needed for special populations (e.g., young children, the severely retarded, or specific subcultural groups), the interviews are applicable to most populations. Three have been translated into Spanish (Garrison’s, Salzinger’s and Pattison’s).

Typically, the networks of schizophrenic patients are smaller than those of comparable nonpsychiatric samples (Pattison et al. 1975; Tolsdorf 1976; Sokolovsky et al. 1978; Garrison 1981; Westermeyer and Pattison 1981). Some findings further suggest that preillness networks were already relatively small in comparison with the norms for the relevant social groups, and then became further reduced during the illness (Westermeyer and Pattison 1981).

Highly interconnected kin clusters have been reported for the networks of schizophrenic patients (Pattison et al. 1975; Tolsdorf 1976; Mueller 1980; Westermeyer and Pattison 1981). There are also some indications that schizophrenic patients have a scattering of nonkin contacts with no clustering among them (Sokolovsky et al. 1978; Hammer, in press), or that contact with an interconnected cluster may be mediated...
for the patient by one main person (Hammer, in press). Patterns of one-friend or one-sponsor relationships, as well as parent-child and institutional dependency, seem to be predominant among the more severely disturbed chronic patients (Garrison 1978; Westermeyer and Pattison 1981).

Several investigators have reported relatively few reciprocal relationships and few relationships with more than one content area in the networks of schizophrenic patients (Tolsdorf 1976; Sokolovsky et al. 1978; Westermeyer and Pattison 1981). Patients' networks also seem to contain high proportions of kin, and of persons sharing similar problems, thus limiting the social heterogeneity of the network as a whole (Pattison et al. 1975; Sokolovsky et al. 1978).

Network Interviews

The network interview will be compared by discipline of the investigator, with respect to (1) the goals of studies for which they were originally developed, (2) the populations considered, (3) the strengths and limitations of the format according to the researchers themselves, and (4) the implications of research results for treatment and program planning. We begin by reviewing anthropologically oriented studies, and then turn to work within psychology and psychiatry.

Anthropology

Anthropologists have used multiple approaches to obtaining network information, preferring a combination of observation and interview whenever feasible, and have sought the respondents' ways of categorizing relationships rather than imposing an outsider's preconceived categories on the interview.

Hammer. Using one variant of an interview that can be modified for different purposes, Hammer (1963–64) found that the likelihood of persistence or severance of a relationship between a schizophrenic patient and someone the patient was close to was a function of the degree of connectedness of the individuals around the patient. Her subsequent work has focused on measures of the various sets of connections and their presumed impact on a wide range of social processes. The interview elicits information on all the network properties mentioned in the outline above, with the exception of density and clustering measures.

A schedule of activities provides the framework within which Hammer's interview elicits network members. She believes this fundamental feature of her interview offers two advantages: first, it may provide a better base for recall; and second, it does not pre categorize for the respondent by asking for "friends," "relatives," and so on—categories that may have different meanings for members of different social and cultural groups. The interview's main limitation is its "fuzzy edge"—that is, the absence of clear criteria for inclusion or exclusion of the middle-range people in a respondent's network. Another potential limitation is that the interview requires considerable time to administer, an average of about an hour, depending on the size of the network being elicited.

Garrison. The anthropological perspective that informs Garrison's network interviews draws mainly on the work of Elizabeth Bott (1971) and W.F. Whyte (1955). In contrast with Hammer's initial study of patients' networks, Garrison's early work (1972) focused on a random sample of residents in an ethnically heterogeneous, low income urban neighborhood. Her network interview emphasizes family and peer relationships, eliciting information about kin and nonkin contacts in the respondent's household, neighborhood, borough, city, and elsewhere.

An egocentric effective support system is derived from Garrison's (1981) information about the respondent's contact with kin, neighbors, co-workers, co-participants in voluntary associations, and friends. Also elicited is a "reconstructed week" that provides data on additional network members whose names may have been overlooked in response to questions based on predefined categories. On the basis of information about help-giving and help-receiving, Garrison constructs indices of reciprocity. An index of the intensity of interaction may also be constructed, based on interview data about the frequency of interaction between the respondent and every network member, divided by the total number of network participants. Modifications would be needed in Garrison's format to permit systematic exploration of the interrelationships among the people who are directly connected to the focal person.

A major strength of Garrison's interview lies in the multiple approaches used to obtain the same information. Cross-checking is done through questions about the geographic location of network members, the categories to which they belong, and the time table of interactions (together with the contexts and activities involved) that is revealed by the reconstructed week. However, it is time-consuming
and would probably be impractical for large samples.

With respect to the relationship between psychiatric illness and social support, Garrison's most dramatic findings have been: (1) taken singly, none of the measures of support discriminated among the groups of migrant women she studied, but (2) when these support measures were put together with information about who was supportive (e.g., kin, nonkin, and fictive kin in various categories), it was possible to distinguish individuals with different degrees of psychiatric disturbance on the basis of differences in the types of nonkin support systems available to them (Garrison 1978).

Sokolovsky et al. Anthropologist Jay Sokolovsky and his team explored the networks of residents of a single room occupancy hotel in New York City in a pioneering study in which 20 percent of the hotel residents were formerly hospitalized psychiatric patients. The research team used a combination of participant observations and a social network interview to obtain information about the relationship of social contact patterns to symptomatology and relapse. An important advantage of Sokolovsky's approach is that initial information about interactional patterns was gained through observation, then applied to the task of constructing a social network interview with questions that were appropriate for the respondents and for the context in which their interactions occurred.

Sokolovsky and his co-workers recognize that a systematic approach to eliciting network data within a solid cognitive framework may be difficult to put into practice if a respondent is hallucinating or paranoid. The concrete nature of the social network questions is helpful to such respondents, however, and information from more than one person in a situation where there are overlapping networks is also advantageous. Furthermore, participant observation permits a lengthy interview to be carried out in more than one session.

Sokolovsky et al. (1978) not only found the patients' networks more socially homogeneous than those of nonpatients in the hotel, but also that network size was an important variable. In comparing first admission patients to multiple admission schizophrenic patients in a large municipal hospital, they found that total network size was two and a half times greater for the first admission patients. They suggest that the integration of ex-patients into large, more interconnected networks may reduce the frequency of hospitalization.

**Psychology and Psychiatry**

Tolsdorf. Tolsdorf's (1976) comparative study of the social networks of psychiatric and nonpsychiatric male patients at a Veterans Administration hospital was among the first to be directly concerned with the networks of schizophrenic patients. It is also of interest because the patient sample consisted of first-episode schizophrenic patients. Tolsdorf's findings on network size are consistent with those of Sokolovsky et al. (1978) and Pattison et al. (1975). All three studies found that schizophrenic individuals had more restricted networks than nonpsychotic individuals. Note, however, that although the mean number of people in the networks of the schizophrenic patients was smaller than that found in the networks of the nonpsychiatric patients, the two groups did not differ significantly in network size.

Tolsdorf's findings are also consistent with Sokolovsky's regarding higher proportions of asymmetric relationships and fewer relationships with more than one content area for the schizophrenic patients than for nonpsychiatric controls. There were significantly more kin in the networks of the schizophrenic subjects than in the networks of the comparison group in Tolsdorf's study. No significant differences were elicited, however, between schizophrenic patients and nonpsychiatric medical patients either in interconnectedness of the network as a whole or of the kinship part of the network.

The schizophrenic patients interviewed in Tolsdorf's study were hospitalized and receiving antipsychotic medication, which presumably lessened the difficulty of communication with them and increased the likelihood of obtaining systematic information about their social contacts.

Pattison et al. Pattison et al. (1975) have also compared the social networks of psychotic patients and nonpsychotic controls in an urban U.S. setting. They reported that the networks of the psychotic individuals were much more interconnected than those of either the normal or the neurotic samples.

In an extension of the U.S. work, Westermeyer and Pattison (1981) examined the networks of psychotic persons in a rural Asian group (the Lao) to determine whether differences in culture influenced the networks of psychotic individuals living in villages of about 200 people. They found the Lao data were strikingly congruent with the U.S. urban data on the networks of psychotic persons.

Two methodological innovations
characterize the Lao study. Prior studies of the psychiatrically ill relied on the respondent's report in oral or written form—a method that was not feasible in Lao because only half the subjects were literate and only 5 out of the 35 subjects in the sample were lucid enough at the time of interview to permit reliable communication about their current and past social contact patterns. Consequently, network data were obtained primarily by a proxy method—using information from people who were known to interact with the subject. While other investigators (Garrison 1978; Hammer 1963-64) have sometimes interviewed someone mentioned by the initial subject, as a partial reliability check, Pattison and Westermeyer may well be the first to use this technique as a primary approach to data collection. They also assigned each subject’s network members to a cluster on the basis of distinctions between kin and nonkin and shared common attributes, such as household membership, neighbors, and so on. This reflects a growing recognition among social network researchers that patterns of clustering, or scattering, are at least as significant for mental health issues as network size itself, though clusters based on the researcher’s, rather than the respondent’s, perceptions raise methodological questions about the meaningfulness of the resulting distribution of connections.

Salzinger et al. Two sets of studies of the social contact patterns of mothers who have problems with their children have drawn on social network methodology: the work of Salzinger (Salzinger and Kaplan 1981; Salzinger 1982) and of Wahler (1980). (See p. 406 for a discussion of Wahler’s work.) Their research may have relevance to the study of schizophrenia because they focus on the role of social isolation in psychopathology, with particular attention to the comparison between kin and nonkin social ties. In studies of the networks of mothers in families where child abuse and neglect have occurred, Salzinger (Salzinger and Kaplan 1981; Salzinger 1982) has reported that these mothers are isolated—that is, the networks are significantly smaller and social contacts are less frequent than those of control mothers, especially in their nonkin connections. But these mothers were also insular; the various peer and family subnetworks comprising the mothers’ total networks were less connected to each other, and significantly fewer members of the networks had actual contact with the home subnetwork.

Anderson, Hogarty, and Reiss. In a study of 35 families of deinstitutionalized schizophrenic patients, Anderson, Hogarty, and Reiss (1980) explored the connection between internal family behavior and the ways in which family members, especially parents of schizophrenic children, interacted with the outside world. This pilot study was part of a larger ongoing 7-year study of the environmental and personal factors that influence the course of schizophrenia. Using the Brown, Birley, and Wing (1972) index of expressed emotion (EE), Anderson and her colleagues divided the families into high and low EE groups. Since data analysis had not yet begun at the time of this writing, there are no findings to report. Anderson’s social network inventory elicits network members in predefined categories (e.g., family, friends, and neighbors) and also specifically asks for the names of people who have been helpful to the respondent in a recent crisis. It is designed for use with patients and members of their families. The subject’s satisfaction with his or her social relationships is explored, and density is examined for members of the core group of people to whom the respondent feels closest. A separate detailed set of questions is asked about members of the close group, including questions about whether and to what extent the closest people are aware of the patient’s current illness. Impressionistically, Anderson feels that parents of schizophrenic patients do not tend to use their network members directly as confidants—apparently believing their situation is too singular to be readily understood by people who do not have similar problems.

Mueller. A modified form of an interview developed by Mueller (1980) to measure aspects of an individual’s informal support system was used in a study of impact of the Three Mile Island Nuclear Plant and in a control site in Western Pennsylvania. Questions are aimed at measuring aspects of network structure, supportiveness of network relationships, and disruptions in the network. Mueller’s interview can be
Our colleague Muriel Hammer is eminently experienced in this area, and we have asked her to summarize the present situation. She writes:

Reliability and Validity

Only a brief comment will be made here about the complex issues of reliability and validity of social network data. A few studies have achieved apparently high levels of test-retest reliability for community samples (Fischer 1977), college students (Barrera 1978), and psychiatric patients (Hurd, Pattison, and Smith 1981). Most instruments, however, have no published results to date of reliability testing, and different instruments have not been tested against each other. Moreover, no systematic approach has been presented for establishing criteria of adequacy, for different purposes, for the levels of reliability obtained.

In addition to test-retest reliability, several other measures are available that relate to the confidence we may place in social network research results. High levels of intercoder reliability are reported by Salzinger, Kaplan, and Artemyess (1983) in transforming raw network data into categories appropriate for analysis of network clusters. My own material (Hammer, unpublished data) shows near-perfect confirmation, across linked respondents, with respect to whether two such respondents are members of each other's networks, whether they are kin, how often they see each other, and how long they have known each other. In one study (Hammer 1980a), two quite different approaches to eliciting network data (an open-ended interview and a list of names derived from prior linked interviews) show consistent results.

Finally, network data derived from participants' reports have been compared with network data derived from investigators' systematic observations of the participants' interactions with one another (Hammer, Polgar, and K. Salzinger 1969; Bernard, Killworth, and Sailer 1980; Burt and Bittner 1981; Romney and Faust 1982). In general, these comparisons have yielded significant correlations between the two sets of data, and in one case (Hammer, Polgar and K. Salzinger 1969) between each source of data and an external criterion. Considerable disagreement has been expressed, however, as to the extent of the discrepancies between reported and observed interactions, and how these are to be interpreted (Hammer 1980a, 1980b; Killworth and Bernard 1980; Romney and Faust 1982). Again it might be noted that the resolution of such disagreements requires criteria of adequacy, an issue that has not yet been systematically addressed.

In sum, while a great deal more work is called for if we are to establish adequate reliability and validity for social work network data, the results so far available are encouraging. [M. Hammer, personal communication]

Self-Report Questionnaires

The instruments for the measurement of social support that will be reviewed in this section are primarily qualitative, as contrasted with quantitative measures which have been described above.

SNAQ. The SNAQ (Social Network Assessment Questionnaire) was designed by Charles Froland (1978) specifically for use in a study conducted in Oregon among various types of mental health clients and a community sample. The study examined differences among these groups in the types and characteristics of relationships conducive to social support and the association with social adjustment (Froland et al. 1979). Dimensions of social support measured by the SNAQ were strongly associated with membership in hospital, day hospital, clinic, and control groups, each of which had characteristic types of support.

The instrument is designed to measure three broad areas characteristic of network relationships:

1. Overall structure of the network, to help delineate patterns among relationships (size, proximity, interconnectedness or density, and proportion of kin).

2. Patterns of interactions between parts of the network (length of association between network members, and means and frequency of contact derived from investigators' systematic observations of the participants' interactions with one another (Hammer, Polgar, and K. Salzinger 1969; Bernard, Killworth, and Sailer 1980; Burt and Bittner 1981; Romney and Faust 1982). In general, these comparisons have yielded significant correlations between the two sets of data, and in one case (Hammer, Polgar and K. Salzinger 1969) between each source of data and an external criterion. Considerable disagreement has been expressed, however, as to the extent of the discrepancies between reported and observed interactions, and how these are to be interpreted (Hammer 1980a, 1980b; Killworth and Bernard 1980; Romney and Faust 1982). Again it might be noted that the resolution of such disagreements requires criteria of adequacy, an issue that has not yet been systematically addressed.

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Moos et al. The work of Holahan and Moos (1982) indicates the importance of evaluating strategic social spaces in an individual's life (in this case, family and work space) as opposed to the general or open-ended view of social supports that earlier scales (Dean and Lin 1977) used. The
work of Holahan and Moos also suggests further investigation of how support in various environments is differentially related to distress as experienced by men and women.

The work of Holahan and Moos is important because they sought to contrast the environment scales (essentially a quality or satisfaction measure) with what they call “traditional measures of social supports” (an availability measure). Their study of a San Francisco community sample of families, investigating the relationship of social support in family and work environments to psychosomatic complaints and psychological distress, makes a case for the importance of qualitative as opposed to only quantitative measures of support. These measures significantly predict psychosomatic complaints and psychological discomfort, and account for considerably more of the variance than quantitative measures. However, the quantitative measure of support used by Holahan and Moos is a relatively crude one. In addition, a general problem with qualitative assessments of social support is that they are not comparable to other research results reported in this essay. Among patients, for example, it is the casual rather than intimate or nurturing contacts within the hotel that are strongly associated with measures of life satisfaction and high social functioning. Contacts with relatives and others outside the hotel are negatively associated with patients’ satisfaction and well-being. The point to be emphasized is that the hotel and its residents, as a social space with a certain perceived atmosphere, are more associated with positive outcome for ex-patients than are some of the expressive or involving types of contact that nonpatients seem to need and participate in.

Finally, it should be noted that the work of Barrera (1978) provides some encouragement that instruments like Lehman’s are reliable. Using a sample of college students, Barrera evaluated both the internal consistency and test-retest reliability of a 40-item social support inventory and found each to be at a high level. The range of support activities represented is similar to that used in the Lehman questionnaire.

Lehman’s Questionnaire. Lehman (1980) and his colleagues (Lehman and Felton 1978) are also interested in studying significant social spaces. Their focus is on the atmosphere of Manhattan’s single room occupancy hotels. The hotel is not only the principal social space occupied by the inhabitants, but it is for many the only one.

Lehman’s instrument was designed for research with schizophrenic populations, and derived in part from Moos’ environment atmosphere scales, particularly the Family Environment Scale (Moos 1975). Lehman feels its major concern is with the quality of social support and such things as “intensity,” “instrumental involvement,” and “interpersonal involvement.”

Lehman’s work is an outstanding example of the combination of two approaches to measuring social support: the attitude survey and social structural analysis.

Preliminary results are consistent with other research results reported in this essay. Among patients, for example, it is the casual rather than intimate or nurturing contacts within the hotel that are strongly associated with measures of life satisfaction and high social functioning. Contacts with relatives and others outside the hotel are negatively associated with patients’ satisfaction and well-being. The point to be emphasized is that the hotel and its residents, as a social space with a certain perceived atmosphere, are more associated with positive outcome for ex-patients than are some of the expressive or involving types of contact that nonpatients seem to need and participate in.

Expressed Emotion

Probably the most quoted and best replicated measure of the quality of social supports in schizophrenia is the expressed emotion (EE) rating—a count of critical or rejecting remarks recorded during an interview with the relatives of patients shortly after the patient is admitted to hospital (Brown, Birley, and Wing 1972). The
could coincide with social isolation and it is easy to see how such a set of clinical experience with adverse family atmosphere in schizophrenia, attitudes is very recognizable from the thicket of clinical elements from the interview with the relative, usually a parent) is generally around 0.8. It predicts relapse within months if the patient returns home to that family. The numbers are impressive: In a sample of 101 patients returning home, 58 percent of the high EE group relapsed as compared with 16 percent of the low EE group. The development of the EE measure is well reviewed by Kuipers (1979). Brown, Birley, and Wing (1972) noted that (1) failure to take medication was related to early relapse in high but not in low EE families; (2) the effect of high EE could be reduced by reducing the amount of contact between parents and children (arranging a day program for the patient and so on); and (3) parents with low rates of contact with friends and relatives outside the home, and with no one but the patient at home, were more likely to register high EE. The connection of the last two of these points to certain network characteristics—household composition and number of social spaces or clusters available—is clear.

Vaughn and Leff's (1981) work on a sample of parents of schizophrenic patients showed a high correlation of EE with

- Intrusiveness
- Feeling the patient's illness status was unjustified
- Disappointment
- Pressure on the patient to act normally

This somewhat contradictory set of attitudes is very recognizable from clinical experience with adverse family atmosphere in schizophrenia, and it is easy to see how such a set could coincide with social isolation and a sense of patient and parent being trapped with each other. Leff (1982) has had therapeutic success with an essentially network-oriented intervention for the treatment of high EE families. He puts them into multiple family groups with low EE families and notes that they learn other ways of dealing with their patient offspring in the course of treatment.

Kreisman. Kreisman, Simmons, and Joy (1979) developed an 11-item self-report Patient Rejection Scale to address what was viewed as the major drawback of the EE index of Brown, Birley and Wing (1972)—namely, its length and the long training period required to use it properly. Designed to measure "hostile rejection of the patient by the family" and "loss of interest," the Patient Rejection Scale has only been used on schizophrenic populations. The scale has demonstrated moderately high internal consistency, reliability, and test-retest reliability (Kreisman, Simmons, and Joy 1979). A new version, developed recently, increases the number of items to 23, and raises the reliability of the scale responses. Good preliminary evidence of construct validity of the original 11-item scale has been demonstrated; it correlates well with various indices of patient psychopathology and with the patient's assessment of the family as rejecting.

Ethnography and Clinical Epidemiology

At the outset, we noted that the network measurement approach and the attitude questionnaire approach to the evaluation of social support are each different ways of abstracting elements from the thick of clinical detail, aiming at higher levels of generalization. We have tried to make it clear what is gained and what is lost in this effort. We conclude with two approaches that take a different view of the descriptive task. These are ethnography and what we will call clinical epidemiology. Ethnography uses the descriptive categories of the patients and caretakers themselves, while clinical epidemiology uses the categories of clinical psychiatry. Both approaches begin with a long period of immersion in the contexts of patients, families, and caretakers, and then address the problem of social support only as one aspect of an effort to give an objective account of the regular patterns observed in the course of that experience. The ethnographers, for example, participate as much as possible in the patients' daily lives.

Since we began writing this report, two ethnographies of chronic patients, their families, and their mental health caretakers have appeared. Each emphasizes the importance of the patients-staff cluster, its atmosphere and ideology, to the course of illness. Scheper-Hughes (1981), in a description of a Boston State Hospital Day Center after-care program, describes staff attitudes that limit the latitude of change that patients expect of themselves. Estroff (1981) has written a very important book about the experience of patients in the Stein and Test (1975) model program for difficult chronic patients in Madison, Wisconsin. Reading these descriptions of the lives of chronic schizophrenic patients as they are actually lived, from the point of view of investigators who as much as possible lived with them, makes clear that these patients experience a straitened and stigmatized identity in their own reference groups, and in society at large—an experience that is unique. The constraints of the
subculture of chronic patienthood influence the amount and nature of available social support. Medication marks the facial and gestural expressions with which patients greet people. Public transportation is often inadequate or too difficult for patients to deal with. Housing for chronic patients is limited by lack of financial resources and by the landlord’s conscious tolerance of their stigma. Work opportunities are limited by their skills and the rules of disability payment. These facts are essential to understanding the nature and potential of social support in this population, and are not likely to be revealed by general measures of network properties or by attitude measurement.

The techniques by which the ethnographers generate data are the usual anthropological field methods of participant observation: detailed, open-ended, and structured interviewing, and systematic comparison of individual responses. Estroff (1981) also gave each of her subjects a modification of Roen and Burnes’ (1968) Community Adaptation Schedule, a self-report questionnaire, many items of which have to do with social support. She then used the distribution of responses on relevant items to illustrate points in her ethnography; the questionnaire also provided a validity check against subjective bias.

One problem in doing this kind of inquiry is the difficulty actively psychotic patients have in filling out multiple choice questionnaires, even if supervised by someone with whom the subject is at ease. Beels has developed a Q-sort instrument which was successfully used by Weiss (1982) in her ethnography of migrant Dominican-New York women who were chronic patients. The sorting of cards bearing the names of people in the inner circle of the network was quite easy and spontaneous for these patients, and gave patterns of response that agreed well with observation of their lives.

Our principal example of clinical epidemiology is the work of George Brown and colleagues (Brown, Birley, and Wing 1972), which culminated in the development of the EE measure described above. Their work with schizophrenia began with a field survey of discharged patients in which they asked them and their families a large number of questions. The researchers then returned to another sample with questions for replication, focusing on factors that might predispose patients to rehospitalization or relapse.

They take a clinical empirical approach to the evaluation of social support (in this case, support for the family as well as for the patient). For example, they divide their sample into patients who have more than 35 hours of face-to-face contact with their parents at home, and those who have less—a division that turns out to be quite significant for the mediating variable, high EE. EE is in turn related to the amount of contact that parents of the patients have with friends and relatives outside the household (simply rated as number of contacts per week). This finding has been contradicted by Carol Anderson’s (1981) recent investigations of EE and social networks in an American population. In the British study, symptomatic relapse in the patient at 9 months after discharge from the hospital is associated with the parents’ degree of social isolation. Parents who had more social contact with persons other than the patient had lower degrees of EE than parents with fewer contacts, and the patients with the more sociable parents had better outcomes than patients whose parents were more socially isolated.

Brown and Harris (1978), in a theoretical introduction to their book on depression, make it clear that they regard their success in this kind of investigation as stemming from (1) considerable clinical experience, which leads to knowing the right questions to ask; (2) a well-trained group of field interviewers with time and resources to devote to the problem; and (3) freedom from preconceived ideas arising from behavioral or social science theory or method.

These investigators have also made an important point about the diagnostic specificity of social contact patterns. In a survey of women on a Scottish island, they found that a local type of strongly integrated social support system of family, church membership, and integration into the crofting economy appeared to protect against depression; but such a support system was, on the other hand, strongly associated with symptoms of anxiety, which a comparison group of depressed women with less integrated support systems tended not to have. This suggests that the type of support system that protects against depression may contribute to anxiety and vice-versa. Again, the way in which social supports were defined in this study—by occupation, church membership, and whether or not the respondent was born on the island—is more a matter of knowing the right questions to ask than of methodological sophistication in developing the answers.

We want to make one point about these kinds of studies: If the investigator is occupied with trying to understand a given clinical population in context, measuring social support as a generalizable abstraction becomes subsidiary to other considerations. Indeed, it is possible to question whether a decon-
textualized "social support" has a measurable dimension or dimensions. What becomes of first importance, rather, is the investigation of the structure and function of the core social network—families, friends, and caretakers—by a variety of means. Standard measures can then be used item by item to provide a check on information obtained through observations and interviews. As suggested by the development of the EE index, this combination of approaches can eventually lead to important and potentially generalizable measures.

Conclusion

It should be clear from this review that the measurement of social support in schizophrenia is in an early but promising stage of its development. It seems to us that research should ideally proceed in two phases:

- Reliability and validity characteristics of measures of social support should be further refined.
- In collaboration with a chronic care facility, a population of patients should be followed over a number of years so that changes in their social connections as a process accompanying the development of their careers as patients can be studied. This will be a crucial stage that requires a multi-method, long-term commitment to a population of patients, families, and others. Patients should be carefully defined as to diagnosis, ethnicity, and social area characteristics. Several types of measures of the patient's social support, as described in this review, should be obtained at different stages in his or her career, in order to study the trends, changes, and cross-sectional correlations between measures. Under the present conditions of research funding, however, such a study may not be possible, and an approach guided by clinical experience may be a useful and less costly alternative.

We need to know a great deal more about the differential value of network interventions. Pancoast, Proland, and Collins (1980), in an excellent article on this subject, have described a number of different possible network interventions and characteristic types of social support that can be used by mental health professionals.

Clearly we are concerned here with an area of treatment specificity, where the possibility of helping or hindering the direction of the patient's course is very real. It is not a matter of promoting a warm, friendly atmosphere as a vague background for the "real" therapeutic agents—drugs or psychotherapy or whatever. The specific shape of the social environment and its match with the patient's specific requirements are both part of the armamentarium of psychiatry.

We hope this review will be helpful to researchers in the field, who face difficult choices in the next phase of the study of social support.

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**Acknowledgments**

We are grateful to Vivian Garrison, Muriel Hammer, Fran Palamara, and two anonymous reviewers for critical review of earlier versions of this article, and to Carol I. Weiss for bibliographic and editorial assistance.

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