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Preliminary Development of a Scale of Social Support: Studies on College Students[1]

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Growing research interest in social support underscores the need for reliable and valid measures of this concept. It is argued that measures that assess what individuals actually do by way of providing support make unique contributions to our understanding of natural helping processes. A 40-item scale, the Inventory of Socially Supportive Behaviors (ISSB), was developed in which respondents report the frequency with which they were the recipients of supportive actions. Results suggest that the ISSB has adequate test-retest and internal consistency reliability and is significantly correlated with network size and perceived support of the family. Although further research is needed to further substantiate its utility, the ISSB is seen as a promising tool for understanding natural helping processes.

When people are asked to indicate who they turn to in times of crisis and emotional distress, they typically cite key family members and friends who they consider "natural helpers" (Gurin, Veroff, & Feld, 1960; Croog, Lipson, & Levine, 1972; Keefe, Padilla, & Carlos, 1978). Particularly since Caplan's (1974) influential work, the term *social support* has been popularized to connote the various forms of aid and assistance supplied by family members, friends, neighbors, and others. Support networks formed by these informal helpers are thought to have a major

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impact on the psychological adjustment of community residents by providing direct assistance as well as by serving as referral sources to professional services (Gottleib, 1976; Gourash, 1978). It is not surprising that understanding the structure and effects of natural helping processes has become an area of intense research and theoretical interest.

Thus far, the research findings in this area have been provocative. Epidemiological research has suggested that the prevalence of psychological disorder in communities may be influenced by the availability of social support (Henderson, Byrne, Duncan-Jones, Adcock, Scott, & Steele, 1978). The role of social support as a buffer of the effects of stress has been discussed (Cobb, 1976; Dean & Lin, 1977; Rabkin & Struening, 1976) and has received some empirical support (Eaton, 1978; Sandler, 1980; Wilcox, Note 1). Additional research has addressed the role of support during critical life events such as unemployment (Gore, 1978), pregnancy (Nuckolls, Cassel, & Kaplan, 1972), and bereavement (Hirsch, 1980).

Although prior work suggests that social support is a promising area of research, a careful review of the literature also indicates that there is a critical need for the development of reliable and valid instruments to measure support (Barrera, Kochanowicz, & Gonzalez, Note 2). Many researchers have used social support scales in previous studies, but have neglected to evaluate or report the psychometric properties of their measures. In their review of social support as a moderator of stress, Dean and Lin (1977) commented that:

> Social support is thus considered the most important concept for future study and it also presents the most difficult task for instrumentation. A thorough search in the social and psychological inventories of scales has failed to uncover any measures of social support with either known and/or acceptable properties of reliability and validity. (pp. 408-409)

Despite some notable studies that have appeared since Dean and Lin's review (Henderson et al., 1978; Hirsch, 1979, 1980) their conclusion remains largely valid.

Because of the absence of well-developed measures of social support, researchers have adopted a variety of different approaches to assess this concept. One type of measure might be conceptualized as assessing social embeddedness, or the nature and structure of individuals' social ties with important others. Measures such as marital status, participation in community organizations, frequency of visiting friends, and presence of both parents in a household exemplify this approach to assessing social support (Eaton, 1978; Sandler, 1980; Tucker & Colten, Note 3). The logic underlying this approach is that, while not direct measures of social support received, these important social ties might serve as "social support resources" (Sandler, 1980, p. 43) and "provide . . . support during a crisis period"

(Eaton, 1978, p. 231). Social network analysis has been used as a more sophisticated approach to assess the size and structural (e.g., density) properties of social support systems (Hirsch, 1979, 1980; Pattison, 1977; Tolsdorf, 1976).

A second type of approach to the measurement of social support consists of assessing subjects' perceptions of the supportiveness of their significant social relationships (Moos, 1974, 1975; Procidano & Heller, Note 4). Illustratively, Moos (1974, 1979) has identified scales such as "emotional support" (university residences) and "cohesion" (family) to assess individuals' perceptions of the supportive aspects of various social environments.

In contrast to the above approaches, social support might be conceptualized as the diversity of natural helping behaviors that individuals actually receive when they are provided with assistance. Information on what these supportive behaviors are, and the frequency with which they occur, could fill an important gap in our understanding of social support processes (Gottlieb, 1978).

A study by Tucker and Colten (Note 3), for example, employed a variety of measures of social ties including the number of good friends, number of neighborhood friends, and the existence of a romantic relationship and same-sex best friend. The study provided some evidence that such social ties moderated the relationship between reported problems and distress. In their discussion of the results, Tucker and Colten commented, "One aspect of all this that we do not have much data on is how, behaviorally, the physical presence of others is translated into support" (p. 8).

As suggested by Tucker and Colten's statement, behavioral descriptions of support could significantly improve our understanding of the operation of social support systems. Questions of how structural properties of support systems relate to support that is actually received and how this support relates to the perceived supportiveness of one's significant environments illustrate issues which could then be addressed.

The purpose of the present series of studies was to develop an inventory for assessing help received from natural support systems, to evaluate its reliability, and to establish evidence of its relationships with other measures of support. Although intended for eventual wider use with a variety of community populations, these early scale development studies were conducted using college students as subjects. The need for repeated studies necessitated the use of an accessible subject population. Previous instrument development work in the area of social support (Procidano & Heller, Note 4) and in the related area of life stress events (Sarason, Johnson, & Siegel, 1978) have also taken advantage of the accessibility of the college student subject pool. Research on college student social

support, using social network (Hirsch, 1979) and perceived support (Procidano & Heller, Note 4) scales, have found interesting patterns of relationships between these measures and indices of both positive well being (e.g., self-esteem) and psychological disorder.

ITEM GENERATION

Prior to item generation a basic decision was made to conceptualize social support as including tangible forms of assistance such as the provision of goods and services as well as intangible forms such as guidance and expressions of esteem. This perspective is consistent with Caplan's (1976) formulation of support that was illustrated in the following quote:

> The significant others help the individual mobilize his psychological resources and master his emotional burdens; they share his tasks; and they provide him with extra supplies of money, materials, tools, skills, and cognitive guidance to improve his handling of his situation. (pp. 5-6)

Broadly defining social support to include these activities differs from Cobb's (1976) more limited definition of social support as *information;* information that leads a person to believe he or she is loved, esteemed, and part of a network of communication and mutual obligation. Because a broad conceptualization of support was adopted, items were selected for the scale that represented the diversity of supportive functions that characterize informal social support systems.

Empirical research, literature reviews, and discussion articles related to social support were surveyed for actual items that might be suitable for the new scale and for descriptions of social support that could provide ideas for the construction of items. A recent report by Gottlieb (1978) proved to be a particularly valuable source for item generation. In Gottlieb's study, interviews were conducted with 40 single, low-income mothers to determine the types of helping behaviors they had received in response to important problem they had experienced. An analysis of the content of these transcribed interviews resulted in the reliable identification of 26 categories of helping behaviors. Many of these categories were translated by the present authors into items that described the occurrence of a supportive behavioral event. Also noteworthy were reports by Asser (1978), Brim (1974), Caplan (1976), and Hirsch (1980) which played a role in further stimulating ideas for the creation of items.

Virtually all of the items selected from other studies required rewriting to conform to three principles that guided the new scale's construction: (a) behavioral specificity was emphasized in order to minimize the need for subjective inferences, (b) wording that would make an item only applicable to a specific population was avoided (e.g., helped me study for

an exam), and (c) explicit references to states of psychological adjustment were omitted. This third principle had special importance. One of the key research topics concerns the relationship between social support and adjustment. If a support measure itself included references to adjustment, any relationship between the scale and a measure of adjustment could be attributed to the direct content overlap between them. Illustratively, this has been a criticism of life events measures which sometimes include items that are themselves closely associated with states of psychological or physical adjustment (Dohrenwend & Dohrenwend, 1978).

The three authors met in a series of joint sessions to rewrite items selected from the literature, to eliminate redundancy, and to write new items that appeared to address important support functions. As a result of this process, 40 items were generated.

Because the purpose of the scale was to assess the type and amount of support that individuals received, instructions were written to request respondents to rate the frequency with which each of the 40 items occurred during the preceding month using the following 5-point scale: 1 = not at all, 2 = once or twice, 3 = about once a week, 4 = several times a week, and 5 = about every day.

Reliability

As a first step in evaluating the psychometric properties of the scale, a study was conducted to assess the instrument's stability (test-retest reliability) over a short time interval and its internal consistency reliability. Because one of the assumptions underlying the development of the scale was that individuals could reliably report the frequency of specific supportive activities, establishing the scale's test-retest reliability was considered particularly critical.

Subjects were 30 male and 41 female undergraduate psychology students who participated in the study as an option for completing course requirements. Each subject attended two assessment sessions which were held 2 days apart. During both assessments the 40-item Inventory of Socially Supportive Behaviors (ISSB) was administered along with other self-report scales to groups of approximately 25 subjects.

Selection of the 2-day period separating the testing sessions was based on two criteria. First, because ISSB items represented specific activities subjects were likely to experience, the interval had to be of sufficient brevity to prevent a substantial number of events from actually occurring during the testing interval. On the other hand, the interval needed to be long enough to guard against the effects of memory during retesting. A 2-day test-retest interval appeared to meet these criteria. Few of the events were likely to occur daily. Since the ISSB contained a fairly large number

Table I. ISSB Item Characteristics

Item	Item test-retest			Item-total correlation[b]
	Mean	*SD*	Reliability[a]	
Looked after a family member when you were away	1.54	1.27	.875	−.082
Was right there with you (physically) in a stressful situation	2.18	1.21	.621	.488
Provided you with a place where you could get away for awhile	1.92	.98	.659	.436
Watched after your possessions when you were away (pets, plants, home, apartment, etc.)	1.76	1.14	.726	.121
Told you what she/he did in a situation that was similar to yours	2.30	1.02	.573	.455
Did some activity together to help you get your mind off of things	2.45	1.10	.540	.468
Talked with you about some interests of yours	3.21	1.23	.471	.492
Let you know that you did something well	2.65	1.00	.586	.586
Went with you to someone who could take action	1.32	.71	.487	.138
Told you that you are OK just the way you are	2.46	1.01	.608	.676
Told you that she/he would keep the things that you talk about private—just between the two of you	2.28	1.17	.570	.598
Assisted you in setting a goal for yourself	1.76	.92	.607	.588
Made it clear what was expected of you	2.15	1.02	.526	.225
Expressed esteem or respect for a competency or personal quality of yours	2.39	.98	.441	.590
Gave you some information on how to do something	2.94	1.18	.558	.538
Suggested some action that you should take	2.32	.89	.624	.554
Gave you over $25.	1.51	.75	.858	.192
Comforted you by showing you some physical affection	2.39	1.21	.707	.532
Gave you some information to help you understand a situation you were in	2.11	.95	.519	.693
Provided you with some transportation	2.54	1.36	.858	.479
Checked back with you to see if you followed the advice you were given	1.70	.88	.639	.595
Gave you under $25.	1.93	.95	.669	.363
Helped you understand why you didn't do something well	1.94	.83	.569	.462
Listened to you talk about your private feelings	2.72	1.23	.747	.657
Loaned or gave you something (a physical object other than money) that you needed	2.06	1.03	.672	.435
Agreed that what you wanted to do was right	2.41	.96	.566	.670
Said things that made your situation clearer and easier to understand	2.56	1.04	.652	.652
Told you how he/she felt in a situation that was similar to yours	2.46	.98	.661	.567
Let you know that he/she will always be around if you need assistance	2.76	1.20	.640	.591
Expressed interest and concern in your well-being	3.13	1.26	.771	.711
Told you that she/he feels very close to you	2.58	1.24	.695	.613
Told you who you should see for assistance	1.68	.89	.615	.290
Told you what to expect in a situation that was about to happen	1.96	.92	.557	.518

Table I. Continued

Item	Item test-retest			Item total correlation[b]
	Mean	*SD*	Reliability[a]	
Loaned you over $25.	1.14	.39	.912	.016
Taught you how to do something	2.31	1.13	.583	.379
Gave you feedback on how you were doing without saying it was good or bad	2.08	.92	.519	.602
Joked and kidded to try to cheer you up	2.69	1.19	.692	.600
Provided you with a place to stay	1.79	1.23	.703	.361
Pitched in to help you do something that needed to get done	2.32	.97	.732	.548
Loaned you under $25.	1.66	.79	.591	.332

[a]All correlation are significant beyond the $p < .001$ level, $n = 71$.
[b]These correlations are based on data from the first administration of the scale. Total scores did not include the item score with which it was correlated.

of items that each had five response alternatives and because additional scales were also administered with the ISSB, the effects of memory were not thought to seriously influence subjects' responding during retesting.[3]

Total ISSB scores were calculated for each subject by adding the frequency ratings across all 40 items. Subjects' total ISSB scores on the first and second administration were substantially correlated, $r(69) = .882$, $p < .001$. Test-retest correlation coefficients for individual items ranged from a low of .441 to a high of .912.

The internal consistency of the ISSB was evaluated by calculating coefficient alpha for each administration of the scale. These analyses yielded coefficient alphas of .926 and .940 for the first and second administrations of the scale, respectively. Item-total correlations are shown in Table I. Although it was expected that all items would demonstrate moderate item-total correlations, these correlations for 7 of the 40 items were less than .30. As indicated by the item means shown in Table I, most of these items and an additional few were rated by subjects in this sample as occurring infrequently. Due to the preliminary nature of the study, the generally positive item test-retest correlations, and the possibility that items would be more frequently endorsed by additional samples, all items were retained in the scale for use in the subsequent

[3]The reliability question raised in the present study was concerned with participants' ability to reproduce their frequency ratings of supportive behaviors that occurred during essentially a *single* time period. Extending the test-retest interval to longer time periods, such as a month, would have been appropriate if a *separate* reliability question would have been at issue: How stable are participants' frequency ratings of supportive behaviors that occurred during *two different* time periods?

studies. Overall, the results are seen as providing encouraging evidence for both test-retest and internal consistency reliability of the scale.

Relationship of ISSB to Social Support Network Indices

In several previous studies, the assessment of social support has consisted of asking subjects to identify their social support networks, i.e., those people they know who are potential sources of aid and assistance (Hirsch, 1979, 1980; Pattison, 1977; Tolsdorf, 1976). The network metaphor conveys the notion that network members are linked to the focal subject and often to each other through their supportive relationships. Analysis of social networks virtually always includes a determination of size which is simply the total number of people in a network. The size of an individual's network certainly does not entirely determine that individual's frequency of supportive interactions. It seems reasonable, nevertheless, to predict that the frequency of socially supportive interactions would be positively related to the number of people in the network.

A second sample of 24 female and 21 male undergraduate psychology students served as subjects. Like those who participated in the study of the ISSB's reliability, these subjects volunteered as an option for completing course requirements.

To identify individuals who might be considered members of a subject's social support network, a structured interview was developed (Barrera, Note 5). This interview, the Arizona Social Support Interview Schedule (ASSIS), consisted of a series of six questions corresponding to six social support categories that had been derived from a previous conceptual analysis: (a) Material Aid, (b) Physical Assistance, (c) Intimate Interaction, (d) Guidance, (e) Feedback, and (f) Positive Social Interaction (Barrera et al., Note 2). Each question contained two subparts that requested subjects to indicate (a) which individuals were perceived as available sources of that particular type of support, and (b) which of those individuals named in response to the first subpart had actually provided that type of support during the past month. The ASSIS thus yielded both *available* network size (the number of people who were perceived as available to serve at least one of the supportive functions) and an *actual* social support network size (the number of people who were reported to have actually served at least one of the supportive functions).

It was also possible to weight the scores for both available and actual network size by the number of support categories each network member was reported to serve. Weighted scores were derived to give

added importance to "multiplex" relationships that were viewed by subjects as providing several forms of social support.

The ASSIS and ISSB were administered to each subject during individual assessment sessions. Results showed that ISSB total scores were significantly correlated with both available, $r(43) = .422$, $p < .01$, and actual social support network size, $r(43) = .322$, $p < .05$. Weighting the available network score did not increase the magnitude of its correlation with the ISSB, $r(43) = .401$, $p < .01$. Similarly, weighting the actual network size score only slightly increased its correlation with the ISSB, $r(43) = .379$, $p < .01$.

Indices of social network size proved to be significant correlates of the ISSB. Although these social network measures represented one important approach to assessing social support, the relationship between the ISSB and individual's subjective appraisal of support was also of interest.

Relationship of ISSB to Perceived Family Support

Moos (1974, 1975) has conducted extensive research in the development of scales for assessing people's perception of a variety of environments such as work settings, psychiatric hospital wards, community-based treatment programs, and others. The Family Environment Scale (FES) was one of the most recent additions to this series of instruments. The FES assesses individuals' subjective evaluations of their social environments on nine rationally derived subscales. One of these subscales labeled Cohesion is described as "The extent to which family members are concerned and committed to the family and the degree to which family members are helpful and supportive of each other" (Moos, Insel, & Humphrey, 1974, p. 4). The cohesion subscale contains items such as "Family members really help and support one another" and "There is very little group spirit in our family" (coded false). It was predicted that the frequency of supportive interactions among family members as assessed by the ISSB would be positively related to scores on the Cohesion subscale of the FES.

A sample of 16 male and 27 female psychology students participated in the study on a voluntary basis. An 18-item "Family Environment Questionnaire" was constructed by combining the nine Cohesion items with nine items from the Achievement Orientation subscale which were used as fillers.

Because the original ISSB was not restricted to support rendered within the family, instructions were modified to request subjects to report the frequency of socially supportive behaviors received from family members only. Subjects completed the ISSB, Family Environment

Questionnaire, and a brief background information scale (age, sex, marital status, etc) during a single group assessment session.

The ISSB was positively correlated with the FES Cohesion subscale, $r(41) = .359$, $p < .01$. Those subjects who reported the greatest frequency of socially supportive interactions with family members also tended to perceive their families as highly cohesive. The fact that some students were living apart from their nuclear families might have exerted an unknown influence on the correlation. Even in the face of this problem, the results supported the predicted relationship.

DISCUSSION

The purpose of these studies was to develop a social support measure, the ISSB, that would assess the frequency with which individuals received various forms of aid and assistance from the people around them. The findings are seen as providing evidence of the ISSB's reliability and its positive relationship with other related social support measures. By way of appraising the scale's utility, it is important to note several issues that emerged from the present studies as well as suggest future research directions.

The magnitude of the ISSB correlation with network size and perceived family support indicates that the supportive transactions it assesses are related to but not coterminous with these other measures of support. Network size can be viewed as a measure of the number of people who potentially can or actually have provided support to the individual. Perceived supportiveness scales assess the individual's judgment of the degree of support his environment provides. In contrast to these approaches, the major contribution of the ISSB is the assessment of natural helping transactions actually received by an individual within a specified period of time. It is important to make these conceptual distinctions between these different approaches to assessing social support. One promising direction for future research may be to further clarify the interrelationships between them. For example, Hirsch (1980) found that a network index, density, was negatively related to the adjustment of widows and mature women returning to college. The ISSB as a behavioral measure could potentially provide for a better understanding of this finding by assessing the effects of increased network density on the frequency and type of supportive behaviors people actually receive from network members.

In a similar vein, one might investigate whether perceived environmental supportiveness is due to the actual receipt of some specific forms of help more than others, what these critical helping behaviors are,

and how they differ as a function of the occurrence of different stressors. For example, while Gore (1978) reported that perceived supportiveness of wife, friends, and relatives contributed to a better adaptation to the stress of unemployment, it would also be useful to know which helping behaviors provided by these network members contributed to the perception that they were supportive.

Future research might also include investigations of the relationship between the helping behaviors measured by the ISSB and criteria variables such as symptomatology, psychological well-being, stressful events, and intrapersonal assets. The relationship between these measures and social support is complex and not currently well understood (Gore, 1979; Liem & Liem, Note 6). Liem and Liem (Note 6) in particular have suggested that little is currently known about the manner in which social relationships are supportive and thereby improve an individual's ability to cope with stress. They argued that the labeling of certain relationships as supportive neither identifies the conditions under which relationships lead to improved adjustment nor the qualitative properties of the support that are effective. The ISSB as a measure of the help actually received could be used as part of a multimethod assessment battery along with perceived support and network measures to yield increased understanding of these relationships.

The ISSB is intended to be a scale capable of assessing a number of support functions across a variety of populations. To provide for diversity and content validity, a range of social support transactions considered in previous literature (based on a wide range of populations) were represented in the scale. Although the items are seen as representative of supportive behaviors identified in the literature on natural support systems, they are not thought to include all supportive behaviors that might occur under all conditions. For example, self-help groups and professional helpers might utilize specific supportive behaviors that are not typically utilized by natural support systems.

One limitation of the present report is that data were collected from a single subject population, college undergraduates. Care was taken in selecting and writing the items, however, to avoid making them applicable only to a particular population. Consequently, the low frequency of endorsement of some items by the college student sample is not surprising. These items were retained in the scale because their frequency might be greater in other populations. Further research to investigate the psychometric properties and correlates of the scale with other populations is necessary to demonstrate its utility in a variety of community settings. Since the scale is seen as potentially filling an important gap in the currently available approaches to measuring social support, such research is strongly encouraged.

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