INFORMATION TO USERS

This reproduction was made from a copy of a document sent to us for microfilming. While the most advanced technology has been used to photograph and reproduce this document, the quality of the reproduction is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help clarify markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure complete continuity.

2. When an image on the film is obliterated with a round black mark, it is an indication of either blurred copy because of movement during exposure, duplicate copy, or copyrighted materials that should not have been filmed. For blurred pages, a good image of the page can be found in the adjacent frame. If copyrighted materials were deleted, a target note will appear listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed, a definite method of "sectioning" the material has been followed. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For illustrations that cannot be satisfactorily reproduced by xerographic means, photographic prints can be purchased at additional cost and inserted into your xerographic copy. These prints are available upon request from the Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases the best available copy has been filmed.

University Microfilms International
300 N. Zeeb Road
Ann Arbor, MI 48106

Shaw, Jeffrey Stephen

THE SOURCES OF SOCIAL SUPPORT: THE DEVELOPMENT OF A VALID AND RELIABLE INVENTORY

City University of New York PH.D. 1985

PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy. Problems encountered with this document have been identified here with a check mark __✓__.

1. Glossy photographs or pages _____
2. Colored illustrations, paper or print _____
3. Photographs with dark background _____
4. Illustrations are poor copy _____
5. Pages with black marks, not original copy __✓__
6. Print shows through as there is text on both sides of page _____
7. Indistinct, broken or small print on several pages __✓__
8. Print exceeds margin requirements _____
9. Tightly bound copy with print lost in spine _____
10. Computer printout pages with indistinct print _____
11. Page(s) _____ lacking when material received, and not available from school or author.
12. Page(s) _____ seem to be missing in numbering only as text follows.
13. Two pages numbered _____. Text follows.
14. Curling and wrinkled pages _____
15. Other _____

THE SOURCES OF SOCIAL SUPPORT:

THE DEVELOPMENT OF A VALID AND RELIABLE INVENTORY

by

JEFFREY S. SHAW

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1985

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Dec 20, 1984
Date

Florence L. Denmark
Chair of Examining Committee

December 20, 1984
Date

Herbert D. Saltzman
Executive Officer

Professor Florence L. Denmark

Professor Charles Kadushin

Professor Samuel Messick
Supervisory Committee

The City University of New York

Abstract

THE SOURCES OF SOCIAL SUPPORT:
THE DEVELOPMENT OF A VALID AND RELIABLE INVENTORY

by

Jeffrey S. Shaw

Adviser: Professor Florence L. Denmark

The present research concerns the development of the Shaw-Denmark Social Support Inventory (SDSSI), designed to measure the sources of support one goes to for help with a personal problem. The initial version of the inventory consisted of questions for 13 individual supports concerning (1) the likelihood of going to each support for help; (2) which supports had been used in the past; and (3) how satisfied the subject was with each support used previously. Subjects were also asked about their satisfaction with their work and neighborhood.

The primary goal of the research was to develop an inventory with appropriate psychometric properties to allow for its use in future research. Two studies were conducted. In Study 1, carried out on 137 daytime college students, construct validity was established by basing the inventory

on previous relevant research, a factor analysis of the SDSSI variables yielding a meaningful structure, and primarily positive correlations between the SDSSI variables and adjustment. Also, test-retest correlations for the SDSSI variables appeared acceptable (mean=.61; median=.64) using a three week test-retest period.

For Study 2, carried out on 151 part-time evening graduate students, the SDSSI was modified to include three additional supports and a question on reciprocity. Also, questions to detect the response styles of social desirability and acquiescence were included. The results again provided a meaningful factor structure and primarily positive correlations with adjustment, and mostly low correlations between the SDSSI variables and response style measures.

Other relevant findings of the research were: (1) the SDSSI variable which correlated most strongly with adjustment was satisfaction with reciprocial relationships; (2) both studies provided possible evidence of a "support-oriented personality," as those subjects who utilized community resources in the past also used friend and relative sources of support more than other subjects; (3) a four-way breakdown of subjects by gender and past use or

non-use of community resources appeared far more informative than a mere male-female breakdown; and (4) the neutral adjectives of the Bem Sex-Role Inventory served as a possible mechanism for detecting response styles, though further research on this topic should be carried out.

ACKNOWLEDGEMENTS

There are many persons whose help has greatly contributed to my completing the research of this dissertation. First, the members of my dissertation committee, Professor Florence Denmark, who has also been a friend and advisor, and who along with Professors Charles Kadushin and Samuel Messick provided me with the technical support and expertise, as well as the personal support and confidence, in giving me much freedom in the design and carrying out of the research. Second, I appreciate the suggestions of my outside readers, Professors Morton Bard and Suzanne Oullette Kobasa, for their helpful comments, especially concerning the breadth of my theoretical background material.

Next, I must thank Professor Charles Smith for his long-term support and helpful suggestions during my entire graduate career, and Professor Irwin Kabak of New York University for his similar help during the past three years. Also, I must cite Professors Joel Owen and Aaron Tenenbein, who have consistently provided me with teaching positions and computer facilities at New York University while I was carrying out the dissertation research.

In addition, appreciation is expressed to Professor John Barrett of Baruch College and to Professors Halina Frydman, Pat Hayes, Glenn Heller, Howard Levine, and Richard Tashjian of New York University for allowing me to use their students as subjects for the research. Next, my thanks goes to Mr. Mario Escudero and Mr. Kirk Cypel for their assistance with data collating and data entry, and to Ms. Judith Heicklen who helped in proofreading the first draft.

I also wish to give thanks to Mrs. Diane Beebe of New York University who performed most of the typing of the manuscript, with the assistance of my roommate, Mr. Stephen Gates.

Finally, thanks must go to my mother, Mrs. Dorothy Pereira, for her support and confidence over my entire lifetime, and for her ability to hear my complaints on a regular basis, and to Mr. Stephen Gates again, for his enduring emotional support and for his ability to bear with me on a continuing basis.

TABLE OF CONTENTS

	Page
ABSTRACT	iv
ACKNOWLEDGEMENTS	vii
CHAPTER 1. OVERALL RATIONALE OF THE RESEARCH	1
CHAPTER 2. RATIONALE FOR STUDY 1	6
Stressful Life Events and Their Dimensions	6
Personality Moderators of the Effects of Stress	9
Some Overall Models of Stress	11
Social Support as a Moderator of the Effects of Stress	14
Some General Findings	16
Research Involving Comparisons Between Clinical and Normal Groups	17
Research on Depressed Persons	19
Research Involving Reactions to a Particular Stressful Life Event	20
Research on General Populations	23
The Measurement of Social Supports Up to Now	25
Behavioral Interactions During Which Support is Provided	26
Social Network Measures	29
The Sources of Social Support	33
The Distinction Between Relative, Friend, and	

Community Supports 34
The Issue of Quantity Versus Quality of Supports 35
The Importance of Neighborhood and Work Satisfaction 37
Two Measures of the Sources of Social Support Which Have Tried to Meet Certain Psychometric Criteria 38
Some Other More Informal Helpers 42
Some Problems in the Measurement of Social Supports 43
The Defining and Operationalizing of Social Supports 43
The Confounding of Social Support as Both an Independent and Dependent Variable 48
Does Social Support Provide a Main or Interaction Effect on Health? 50
Possible Problems with Measures Used in Conjunction with Social Support Measures 52

CHAPTER 3. METHOD FOR STUDY 1 56
Subjects 57
Procedure 58

CHAPTER 4. DATA ANALYSIS FOR STUDY 1 61
Variables Extracted 61
Analyses Performed 64
Scores on the SDSSI Variables 64
Use of Individual Sources of Support 65
Correlations with Adjustment 66
Factor Analysis 68

Test-Retest Reliability 69

CHAPTER 5. RESULTS OF STUDY 1 70

Scores On The SDSSI Variables 70

Individual Sources of Support 74

Correlations with Adjustment 75

Factor Analysis 78

Test-Retest Reliability 80

CHAPTER 6. DISCUSSION OF STUDY 1 83

Relationship of Results to Previous Relevant Findings 83

Test-Retest Reliability, Neighborhood Satisfaction, and Factor Analysis 89

Conclusion from Study 1 90

One Other Additional Finding 92

CHAPTER 7. RATIONALE AND METHOD FOR STUDY 2 94

Changes in the SDSSI 94

Other Changes in the Test Battery 97

Measures of Response Styles 97

Measuring the Type of Social Support Provided by the Most Often Used and Most Helpful Sources of Support 101

Method for Study 2 104

Subjects 104

Procedure 105

CHAPTER 8. ANALYSES FOR STUDY 2 107

Variables to be Extracted for Study 2 107

Analyses Repeated from Study 1 112

Additional Analyses for Study 2 115

Factor Analysis of Individual Supports 115

Analyses Relating to Response Style Measures 116

Use of Composite Measures from Factor Analyses 117

Analyses Relating to the Types or Categories of Support 118

One Final Analysis for Study 2 119

CHAPTER 9. RESULTS OF STUDY 2 121

Analyses Repeated from Study 1 121

Frequencies of SDSSI Variables 121

Use of Individual Supports 128

Correlations Between SDSSI Variables and Adjustment 131

Factor Analysis 140

New Analyses of Study 2 143

Factor Analysis of the Individual Supports 143

Relationship Between Composite Variables and Adjustment 146

Correlation of SDSSI Variables with Response Style Measures 151

Results Concerning Individual Categories or Types of Support 159

CHAPTER 10. DISCUSSION OF STUDY 2 AND OVERALL DISCUSSION 167

Has An Inventory with Appropriate Psychometric Properties

Been Developed? 167

Some Other Results Worthy of Discussion 176

The Distinction Between Number and Quality of Supports, the Different Effects of the Different Sources of Support, and the Importance of Reciprocity 176

The Use of the Four Subgroups of Subjects 180

The Importance of Relative Supports Versus Friend Supports 183

The Use of the Bem Sex-Role Neutral Adjectives as a Measure of Social Desirability Response Styles 185

Some Limitations of the Present Research and Possible Directions for Future Research 187

FOOTNOTES 191

TABLES 193

FIGURES 216

APPENDIX A. THE SHAW-DENMARK SOCIAL SUPPORT INVENTORY (SDSSI) USED IN STUDY 1 222

APPENDIX B. THE 26 ITEM SUBSET OF THE PERI (PSYCHIATRIC EPIDEMIOLOGY RESEARCH INTERVIEW) 224

APPENDIX C. THE ENTIRE RESEARCH INSTRUMENT USED IN STUDY 2 227

LIST OF TABLES

TABLE 1. Average Ratings of the Fourteen Independent Variables for All Subjects, and for Subjects Broken Down by Sex and by Use of Community Resources 193

TABLE 2. Proportion of Persons Going to Most Used Sources of Support Along with Highest Satisfaction Ratings 194

TABLE 3. Correlations of Independent Variables and Age with Adjustment 195

TABLE 4. Factor Analysis of the SDSSI Items 196

TABLE 5. Test-Retest Correlations of SDSSI Variables 197

TABLE 6. Average Ratings of SDSSI Variables for all Subjects and for Subjects Broken Down by Sex and Use of Community Resources 198

TABLE 7. Proportion of Persons in Study 2 Going to Each Individual Source of Support Along with Satisfaction Ratings for Each Source 200

TABLE 8. Correlations of SDSSI Variables and Age with Adjustment - Study 2 201

TABLE 9. Correlations of Each Individual Source of Support with Adjustment 202

TABLE 10. Average Values of SDSSI Variables and Adjustment for Subjects Broken Down According to Sex and Past Use or Non-Use of Community Resources 203

TABLE 11. Factor Analysis of the Eleven Independent Variables

of the SDSSI - Study 2 204

TABLE 12. Factor Analysis of Individual Supports of the SDSSI 205

TABLE 13. Correlations of Composite Measures with Adjustment 206

TABLE 14. Correlations of SDSSI Variables with Response Style Measures 207

TABLE 15. Significant or Approaching Significant Correlations between SDSSI Variables and Response Style Measures for the 4 Subgroups of Subjects 208

TABLE 16. Correlations of Composite Measures with SDPCMS, SDBSRI, and ACBSRI - All Subjects 210

TABLE 17. Significant or Approaching Significant Correlations Between Composite Measures and Response Style Measures for the 4 Subgroups of Subjects 211

TABLE 18. Correlations between SDBSRI, ACBSRI, and SDPCMS 212

TABLE 19. Types of Support Received from Most Often Used and Most Helpful Source of Support 213

TABLE 20. Number of Categories Cited by Subjects for Most Often Used and Most Helpful Source of Support 214

TABLE 21. Correlations between Adjustment and Number of Categories of Support Provided by the Most Often Used and Most Helpful Sources of Support 215

LIST OF FIGURES

FIGURE 1. Overall Model Of Stress 216

FIGURE 2. Vulnerability Model Of Stress 218

FIGURE 3. The Interaction Effect Of Stress And Social Supports On Health 220

CHAPTER 1

OVERALL RATIONALE FOR THE RESEARCH

The overall goal of the present research was to construct an inventory with appropriate psychometric properties to measure the sources of social support of persons. Sources of social support is defined as the persons or institutions to whom we go for help in dealing with a personal problem. Appropriate psychometric properties include both reliability and construct validity. More specifically, for the present research, reliability was judged by stability over time (test-retest reliability) by administering and then re-administering the questionnaire to the same subjects after a certain time period had elapsed. Construct validity of a questionnaire involves three major components as set forth by Loevinger in her 1957 monograph. The first, the substantive component, specifies that the questionnaire should be based on previous relevant research. That is, the questionnaire should have some relevant theoretical underpinnings rather than being purely empirically based. The second component of construct validity, the structural component, stipulates that the

items of a questionnaire should cohere in a meaningful way. One method of examining the structure of the items of a questionnaire, factor analysis, was used in the present research to examine the structural component of construct validity. Finally, the external component of construct validity involves examining the relationship between the responses obtained from the questionnaire and other relevant constructs. This aspect of construct validity involves both convergent and discriminant validity; that is, the questionnaire's results should both relate to other constructs to which we would expect it to relate, and also not relate to constructs with which we would not expect nor want a relationship, for example, response styles.

Construct validity as a concept in experimental design involves more than the three components specified by Loevinger. It requires a marshaling of evidence to provide continuing support for a construct or idea or theory (Messick & Barrows, 1972). Included in this continuing accumulation of evidence should be an examination of results across different subject pools and experimental settings. With this in mind, the present research was divided into two studies. Study 1 involved testing of the initial questionnaire on a day student college sample consisting of

both undergraduate and graduate students. Study 2 was carried out on a more general sample of subjects, a large majority of whom were involved in non-student working careers. Study 2, in addition to providing an additional subject group allowed for modifications to the initial questionnaire called for by the results of Study 1.

The development of the inventory of the present research is aimed at satisfying a need which has existed in the present overall research on social supports. Dean and Lin, in a 1977 article, in assessing efforts to that time to measure the amount of social support received by individuals, reported that their extensive literature search "failed to uncover any measures of social support with either known and/or acceptable properties of reliability and validity" (p. 109). My own present even more extensive search (up to 1984 rather than 1977) has revealed a continued lack of such an inventory at the present time.

It should be pointed out that work on the sources of social support comprises only one of the three major areas of current social support research. The other two areas involve (1) the behavioral interactions in which support is provided, and (2) social network analyses, in which the connectedness between one's sources of social supports is

examined. Thus, the development of an inventory with appropriate psychometric properties to measure the sources of social support involves only one of the three main areas of present social support research.

It is anticipated that the social support inventory derived from the present research will have extensive use in the future research on social support systems. Specifically, by relating social support usage to different criterion variables, the inventory could be used to examine questions such as when social supports may be most beneficial, which of the sources of support can be the most helpful, and when a greater usage of supports may actually be harmful. The inventory may also be used to help connect up the research on the sources of social support to the other two areas of social support research, namely, supportive behavioral interactions and social network analysis.

It is also believed that the social support inventory developed from the present research could be used as a clinical tool. If research shows, for example, that a lack of certain sources of support is often related to a lack of satisfactory adjustment, examining available supports by use of the inventory can point out whether there is a lack of

this source of support. If such a deficiency exists, appropriate clinical interventions may be carried out to improve supports in the deficient area.

Another possible use of the inventory may be in demonstrating discriminant validity. Results obtained could indicate criterion variables which are not related to the number of supports or to satisfaction ratings for certain sources of support.

Finally, it is expected that future use of the inventory will be made more attractive by its conciseness. It is hoped that the inventory will be limited to one page in length and be capable of being completed by subjects in approximately five minutes. This will allow for the inventory's being easily added to an already existing battery of clinical or research questionnaires.

CHAPTER 2

RATIONALE FOR STUDY 1

Stressful Life Events and Their Dimensions

In 1957, the Schedule of Recent Experience (SRE) was developed to measure the relationship between stressful life events and the onset of illness (Hawkins, Davies, & Holmes, 1957). This questionnarie consisted of a checklist of 43 events in one's life that involved change (e.g., death of a family member, change in residence, marriage). The amount of stress a person was subject to in a period of his or her life was measured solely by the number of stressful life events he or she had experienced in the relevant time period. In an attempt to improve upon the Schedule of Recent Experience, Holmes and Rahe (1967) developed the Social Readjustment Rating Scale (SRSS) in which each of the 43 events of the SRE was weighted according to the amount of adjustment required. Since 1967, a number of researchers have examined stressful life events from a multidimensional point of view in an attempt to determine which dimensions of events may lead to physical or psychological distress.

Reviewing this body of literature, at least some support can be found for each of the following five dimensions: (a) Amount of Change or Arousal (Mehrabian & Ross, 1977; Redfield & Stone, 1979; Roberts & Couzzo, 1980) - this was the original dimension first considered by Holmes and Rahe in 1967; (b) Desirability (Dohrenwend, 1973; Mehrabian & Ross, 1977; Fontana, Hughes, Marcus, & Dowd, 1979; Redfield & Stone, 1979; Ross & Mirowsky, 1979; Roberts & Couzzo, 1980; Suls & Mullen, 1981; Shaw, 1982) - all studies concerned with the dimension of desirability have found it to be relevant, with undesirable events causing more harm than desirable ones; (c) Control (Glass, Singer, & Friedman 1969; Mehrabian & Ross, 1977; Roberts & Couzzo, 1980; Suls & Mullen, 1981) - in studies where this dimension has been found to be relevant, uncontrollable events have been discovered to be more harmful than controllable ones; (d) Anticipation (Glass, Singer, & Friedman, 1969; Mehrabian & Ross, 1977; Roberts & Couzzo, 1980; Dohrenwend, 1980) - unanticipated events were determined more deleterious than anticipated ones; and (e) Meaningfulness (Shaw, 1982) - subjects who judged their events as less meaningful also rated themselves as less happy.

Although meaningfulness as a dimension of stressful

life events which correlates with adjustment has been examined in the only the one cited recent study (Shaw, 1982), the importance of the meaning one forms in response to stress has been considered for some time by psychologists. Lazarus, Averill, & Opton (1974) used the term appraisal to refer to the cognitive mediating process involved in the reaction to stress. More specifically, they defined primary appraisal as "the judgment that some situational outcomes will be either harmful, beneficial or irrelevant" (p. 260). By secondary appraisal they meant "the perception of the range of coping alternatives through which harm can be mastered, or beneficial results achieved" (1974, p. 260).

Bard & Sutherland (1955) found that adaptation or maladaptation for a woman after a mastectomy can only be predicted from the meaning that the loss of a breast has for the woman. Bard & Sangrey (1979) also cited the importance of meaning for crime victims. They asserted, "Every crime against a person is an act of violation" (p. 10). However, "the degree of violation experienced by an individual victim finally depends on the meaning of the crime in that person's life" (p. 17).

Personality Moderators of the Effects of Stress

Recent research has also focused on stress resistance. More specifically, there have been investigations as to whether there are internal (e.g., personality) or external (e.g., environmental) moderators of the deleterious effects of stress. Research has examined whether persons might possess certain personality characteristics or draw upon certain environmental resources to assist or even protect or buffer them from possible negative effects of high stress.

One personality moderator of stress which has been examined most closely is locus of control (Lefcourt et al., 1981; Johnson & Sarason, 1978; Joe, Miller, & Joe, 1979; Nelson & Cohen, 1983; Cooley & Keesey, in press). In all studies but one, that by Cooley & Keesey, internally locused persons fared better than externally locused ones when under stress. In the Cooley & Keesey study no significant results were obtained. It is not clear whether the lack of a significant finding in this one study resulted from the use of a physical criterion measure (the Seriousness of Illness Rating Scale) rather than a psychological criterion, or the employment of a total life events score rather than one based only on negative life events as the other studies had used.

Other personality variables examined as possible moderators of the effects of stress are the following: (1) The Sensation Seeking Motive (Smith, Johnson, & Sarason, 1978) - only persons low on this characteristic showed a significant relationship between stressful life events and scores on the discomfort scale of Lanyon's Psychological Screening Inventory. (2) Private Self-Consciousness (Mullen & Suls, 1981) - only those low on this characteristic exhibited a significant correlation between life events and number of illnesses in a prospective study with a three week follow-up period. (3) Negligent Health Behavior (Pardine, Napoli, Dytell, & Friedman, 1982) - those who were more negligent of their health (most specifically, poor diet and inadequate rest), scored higher on the number and severity of illnesses according to the Seriousness of Illness Rating Scale (Wyler, Masuda, & Holmes, 1968) and on the Zung Depression Scale (Zung, 1965). (4) Psychological Androgyny (Shaw, 1982) - subjects who were undifferentiated rated their stressful life events as significanty less meaningful than other subjects, with meaningfulness of stressful life events correlating significantly with alleged happiness. Thus, according to the results of this study, undifferentiated subjects were more susceptible to a

negative effect of stress, namely being unhappy. (5) Hardiness (Kobasa, 1979; Kobasa, Maddi, & Courington, 1981) - In these two studies it was found that individuals who possessed hardiness might be subjected to high levels of stress (as measured by stressful life events) without exhibiting high illness rates (as measured by the Seriousness of Illness Survey). Hardiness as defined in these studies involves three main characteristics: an internal locus of control; a sense of commitment, especially towards oneself; and viewing change as a challenge rather than as a threat.

Some Overall Models of Stress

Taking a more global view of the stress process, Ouellette Kobasa (1983) proposed an overall model of stress resistance which is depicted in figure 1. Looking at this model in more detail, the box labeled hardiness has already been discussed in the section above on personality moderators of the effects of stress. Some work, though not much, has been carried out on the concept of constitutional predispostion indicating that a well-functioning immunological system (Marshall, 1977) and family medical histories which do not include genetically linked deseases (Kobasa, Maddi, & Courington, 1981; Weiner, 1977) serve as

moderator variables for the effects of stress. There have also been limited investigations on the effects of health practices. As stated earlier, negligent health practices were found to be positively correlated with both physical and psychological criterion measures by Pardine, Napoli, Dytell, & Friedman, (1982). In addition, Kobasa, Maddi, & Puccetti (1982) found that physical exercise provided a buffering effect from the illness effect of stressful life events, but that this effect works only in the short run; that is, if you stop exercising the buffering effect ceases.

Insert figure 1 about here

With regard to transformational coping, Ouellette Kobasa (1983) posits that this type of coping, which involves facing your problems and trying to deal with them, as opposed to avoidance or wishful thinking, will most likely result in one's being buffered from the negative effects of stress. This idea goes along with some previous work of Janis on coping (1958) in which patients who were given appropriate information before an operation reacted better and were sent home significantly sooner than control group patients.

Dohrenwend & Dohrenwend (1981) provide five possible

models relating stressful life events, social situations (i.e. social supports), personal dispositions, and psychopathology. The one which appears most applicable for the present research is called "vulnerability," and is depicted in figure 2. In this model, a high level of stressful life events can lead to psychopathology unless social situations (i.e support) and/or personal dispositions are strong enough to ward off such a deleterious effect.

Insert figure 2 about here

The other four models posited by Dohrenwend & Dohrenwend are: (1) victimization, in which stressful life events can lead to psychopathology regardless of social situations or personal dispositions; (2) additive burden, in which stressful life events, social situations, and personal dispositions each provide independent additive contributions to the onset of psychopathology; (3) chronic burden, for which social situations and personal dispositions additively and independently cause psychopathology without regard to stressful life events; and (4) proneness, described as a situation in which prior psychopathology leads to stressful life events which in turn lead to an exacerbation of the psychopathology.

Social Support as a Moderator of the Effects of Stress

Now let us turn to the relevant previous research on social support systems. Much recent research has occurred in the area of social supports, and how they may serve as moderators of the deleterious effects of stress. Cobb, in a well-known review article (1976), provides evidence from a number of studies that the presence of social support systems can sharply reduce the probability of illness onset despite the occurrence of stressful life events. Instances of the reduction of the effects of stressful life events by social supports are cited for children (Stein & Susser, 1967), surgical patients (Egbert, Battit, Welch, & Bartlett, 1964), pregnant women (Nuckolls, Cassel, & Kaplan, 1972), and men who had recently become unemployed (Gore, 1978). In the last of these studies (by Gore), the presence of high levels of social support revealed a 90% reduction in physical distress compared with a group possessing low levels of support. In a study by Brown, Bhrolchain, and Harris (1975) the findings were similar, but here the outcome variable was a psychological one rather than a physical one. For 206 female subjects, of those who had

experienced a severe event or major difficulty, those who also reported that they had a confidant, defined as a person, usually male, with whom the woman had a close but not necessarily intimate relationship, only 2 (or 4%) had had a recent onset of affective disorder. Of the women who had experienced a severe event or major difficulty but possessed no confidant, 17 (or 38%) had had a recent onset of affective disorder. So, once again, an approximately 90% drop in illness incidence is observed with the presence of a social support.

The question of whether the outcome or criterion variable is a physical or psychological one is important for studies conderning social support as a stress buffer. This question will be discussed in greater detail in a succeeding section, Some Problems in the Measurement of Social Supports.

Since the Cobb review in 1976, there has been a plethora of research on social support systems and how their presence is related to possible negative outcomes of stress. By and large the results of these studies indicate that the presence of support systems seems to ameliorate these possible negative effects of stress. In discussing the recent individual studies, to impose some order on the large

number of studies, I have broken down the research into five broad categories: (1) Some General Findings; (2) Research Involving Comparisons Between Clinical and Normal Groups; (3) Research on Depressed Persons; (4) Research Involving Reactions to a Particular Stressful Life Event; and (5) Research on General Populations.

Some General Findings

These studies indicate the overall importance or strength of social support systems as predictors of some criterion variable, such as mental health status or psychiatric symptoms. In the first study by Lin et al. (1979), on a Chinese-American population in Washington, D.C., it was found that marital status, occupational prestige, and stressful life events explained only 8% of the variance of the criterion measure, psychiatric symptoms. When social supports were added, however, the percent of explanation rose to 21%. In another very recent general study, by Sarason et al. (1983), it was reported that persons high on social supports scored higher on indications of well-being, e.g., they "felt on top of the world."

Also, in a 1978 study, carried out on Australian subjects, Henderson et al. found that social bonds accounted for 47% of the variance in mental health status.

However, multicollinearity most probably exists in this study as the five independent variables used here seem highly related (e.g., two of the variables are available attachment and number of friends and acquaintances).

Research Involving Comparisons Between Clinical and Normal Groups

Further evidence for the importance of social supports in ameliorating the possible negative effects of stress is provided by studies comparing clinical and normal groups. Leavy (1983) in reviewing ten such studies found that in all ten cases the normal group had more available support. Mueller (1980) in comparing psychiatric groups with a general population discovered that the psychiatric persons had a smaller number of social supports. Such persons reported fewer close friends, in fact fewer contacts with all persons outside of the family. They also had more negative satisfaction ratings for their sources of support. Psychotics reported the smallest social networks, only about one half the size of the overall psychiatric population. In addition psychotics' networks consisted mostly of family.

Tolsdorf (1976) found that psychiatric patients also reported fewer intimate relationships. These relationships were primarily with family members who were in a dominant

position. Psychiatric patients also presented more negative attitudes about the ability of their networks to help them. In another study, Turner (as cited by Leavy, 1983) reported that "non-disabled" schizophrenics differed from "disabled" ones (e.g. mute or aggressive) in that the non-disabled possessed a higher level of support and were more satisfied with their support.

Finally, Froland et al. (1979) compared three clinical groups and general population subjects. The three clinical populations were: (1) outpatients (least impaired); (2) day treatment patients; and (3) state hospital inpatients (most impaired). The general population subjects had the largest social networks, most ties with the family, and the least degree of change in their networks due to moves, deaths, or other losses. Each of these positive features of social networks decreased with increased pathology; i.e., state hospital patients had the smallest networks, the fewest ties with family, and the greatest change in their networks due to losses. Overall the three treatment groups when compared with the general population had fewer long-term friends, fewer common interests with their friends and relatives, and fewer interactions existing between their friends and relatives. Comparing the three treatment groups to each

other, it was found that with increased pathology (from outpatient to state hospital group), there was an overall decrease in the amount of contact with friends, perceived stability of support, feelings of supportiveness of the network, and the extent of material or reciprocal exchange of support.

Research on Depressed Persons

In addition to the above study comparing clinical groups with normal groups, four studies have been carried out on depressed subjects. In one already mentioned from Cobb's review (1976), Brown, Bhrolchain, and Harris (1975) found a 90% reduction in the onset of affective disorders for women who had a confidant. In a more recent study, Stokes (1982) used four independent variables - network size, density, number of confidants, and dominance of relatives - to predict overall satisfaction for 38 male and 44 female subjects, and found number of confidants to be the only significant predictor (r=.37). In a third study with depressed persons, Mitchell, Billings, & Moos (1982) found that depressed subjects had fewer friends overall, fewer close friends, fewer contacts with relatives, and less supportive family and work environments than controls. Finally, in a finding contrary to the others, Haythornwaite

& Stone (1983) found that depressed women made significantly more use of their social support systems than a non-depressed matched control group. Though the sample sizes were small here (12 in each group), the mean figures of 2.92 and 1.08 were quite different.

Research Involving Reactions to a Particular Stressful Life Event

Some of the research in this area occurred earlier in time than much of the other social support research and hence had been cited in the Cobb review. Gore, in a longitudinal study carried out in 1973 but not published until 1978, looked at 100 recently unemployed men comparing those who were supported with those unsupported. The unsupported experienced three times the number of complications of the supported men, having scored higher on levels of cholesterol, illness symptoms, and affective responses. In an earlier prospective study, Nuckolls, Cassel, & Kaplan (1972) found that 90.9% of women with high life change both before and after pregnancy experienced complications if their social supports were low; only 33.3% of such women had complications if their social supports were high. Considered separately, however, neither life change nor support systems was related to complications.

Two other studies involving reactions to stressful life events had not been not cited by Cobb. In a more recent study involving pregnancy, Lewis & Jones (1980) found that those subjects reporting high stress along with high social supports experienced only an average problem rating of 5.3 during delivery compared with a high stress-low support group with an average of 15.3. (The averages for the low stress-high support and low stress-low support were 15.5 and 12.0 respectively.) Also, in a 1959 study, Kraus & Lilienfeld reported that widowed and divorced men particularly of young ages had three to five times the death rate of married men of the same age for every cause of death. The rate for arteriosclerotic heart desease and vascular lesions was ten times as great for the widowed and divorced group.

The above four studies are all examples of the buffering hypothesis, that those who are subject to high stress are protected from deleterious effects if their social supports are also high. The buffering hypothesis implies an interaction effect of stress and social supports for some relevant criterion variable, i.e. some measure of psychological or physical well-being. This relationship is depicted in figure 3.

Insert figure 3 about here

Finally, two other studies which were cited by Cobb were those of Egbert, Battit, Welch, & Bartlett (1964) involving surgical patients, and the study by Stein & Susser on children whose mothers returned to work during the first year of the child's life. In the Egbert et al. study (1964), it was found that for surgical patients, average age 52.2, help in the form of information about the extent of pain to be expected and how the pain could be relieved resulted in the use of significantly less medication, feeling significantly more comfortable, and in significanlty better physical and emotional condition according to an independent observer. Experimental patients were also sent home on the average 2.7 days earlier than controls. This experiment deserves particular attention I believe because of the older age of the subjects and the extremely informal nature of this support, instructions from an anesthetist. In the Stein & Susser (1967) study it was found that, for a sample of 671 children, those whose mothers returned to work when the children were between the ages of 6 and 12 months had delayed bladder control. However, this finding may, I believe, have been spurious because there was a very large

number of statistical tests performed in the study and most of the results were not signigicant (e.g., analyses according to age of the mother, birth order, depth of sleep, training practices, family structure, and financial status were all performed).

Research on General Populations

There have been four main studies on social supports using general population subjects. In the first, which has already been mentioned, that of Lin et al. (1979), it was found that marital status, occupational prestige, and stressful life events explained only 8% of psychiatric symptoms, but when social supports were added the percent of explanation rose to 21%. In the second study, by Biegel, Naparstek, & Kahn (1980), using a sample of 400 subjects from the Milwaukee and Baltimore areas, correlations between mental health status and different facets of social support varied depending upon the age, ethnicity, socio-economic status, and stress level of the subjects. For the overall group, the highest significant correlations were found for neighborhood satisfaction (r.=-21), owning one's own home (r.=-16), work satisfaction (r=-.13), and marital status and support from co-workers (r=-.11 in both cases). (Negative correlations were appropriate here as the relationship was

between a social support measure and number of psychological symptoms.) Next, in a study with an Australian suburban sample of 863 persons, Andrews, Tennant, Hewson, & Vaillant (1978) found that only direct crisis support from other persons, but not neighborhood or work satisfaction, was related to psychological impairment. No significant interaction effects for social support and stress level on impairment were found providing evidence against the buffering hypothesis. However, a significant three-way interaction was obtained with those having high stress, low support, and poor coping skills showing a 43.3% impaired rate as compared with a low stress, high support, good coping skills group with a 12.8% rate ($p<.0001$). In this study, a non-parametric chi-square test using "mean splits" was utilized whereas in many other studies continuous measures and multiple regression have been used.

Finally, saving for last what I believe is the most important study on general population subjects, is the one of Berkman & Syme (1979), a nine year (1965-1975) prospective study on 6928 adult Alameda county residents. Four sources of support were measured: marriage; contacts with close friends and relatives; church membership; and informal and formal group associations. For the results

over the nine year period, during which 682 subjects died, each of the four sources of support predicted mortality independently of the other three, with marriage and contacts with friends being found as the strongest predictors. Also, when diseases were broken down into four types, ischemic heart disease; cancer; cerebrovascular and circulatory; and all others (e.g., digestive and respiratory, accidents, and suicides) the results held for all of these four types.

The Measurement of Social Supports Up to Now

In 1977 Dean and Lin, assessing social support inventories to that time, reported that their extensive literature search "failed to uncover any measures of social support with either known or acceptable properties of reliability and validity." Krauss & Perrotta in 1980 stated that up to then there were only two types of support measures: (1) social network measures; and (2) ad hoc measures for individual studies. McFarlane, Neale, Norman, Roy, & Streiner in 1981, discussing support measures up to that time, cite a "deficiency of attempts to evaluate the psychometric properties of [social support] questionnaires."

Since 1977, research on the use of social supports has focused on three areas: (1) the sources of social support,

(2) the behaviorial interactions in which support is provided, and (3) social network analysis, in which the actual structure of social relationships is investigated. Since the present research focuses on the sources of social support, let us leave that area for last and look first at some of the major measurement attempts in the other two areas - the behavioral interactions in which support is provided, and social network analysis - in assessing the available measures for measuring social support up to the present.

Behavioral Interactions During Which Support is Provided

There are two questionnaires which address the issue of behavioral interactions during which support may be provided, although one of these measures appears to be used more for examining the number of persons providing support and satisfaction with this support rather than the behaviorial interactions themselves. First, the Inventory of Socially Supportive Behaviors (ISSB) of Barrera, Sandler, and Ramsay (1981) contains a list of 40 helping behaviors and asks subjects about their frequency of occurrence during the past month. The items were so chosen to represent a broad range of social support described in previous literature. In so doing the researchers attempted to adhere

to the substantive component of construct validity as specified by Loevinger (1957). Examples of items from this questionnaire included: expressed interest and concern in your well-being, gave you some information on how to do something, and talked with you about some interests of yours. Internal consistency for this questionnaire was evidenced by a coefficient alpha of .94, but no factor analysis of the items was performed, making the questionnaire somewhat deficient with regard to the structural component of construct validity, i.e., how the items cohere together (Loevinger, 1957). For the external component of construct validity, the relationship of the questionnaire responses to other variables or constructs to which they are supposed to relate (Loevinger, 1957), the authors cite a .36 correlation with their own previous measure, the Arizona Social Support Interview Schedule. This correlation, according to the researchers, indicated that the ISSB was "related to but not coterminus with other measures of social support." Unfortunately this assertion could be made about any moderate correlation. Finally, a test-retest reliability analysis for the items of the questionnaire had a median figure of .62 with a short test-retest period of only two days. Overall, then, except for

the substantive component of construct validity, the psychometric properties of the ISSB appear somewhat deficient.

The Social Support Questionnaire (SSQ) of Sarason, Levine, Bashan, & Sarason (1983), consists of 27 items describing situations in which social support might be important to people. The list of 27 items came from an initial list of 61 by eliminating those items that exhibited low correlations. Subjects were asked to provide a count of supportive persons for each item along with satisfaction ratings for such support. Although coefficient alphas are provided for the total number of persons (.97) and for total satisfaction ratings (.94) along with test-retest reliabilities over a four week period (.90 and .83 respectively for number and satisfaction ratings), no such analyses were provided for the items themselves. In addition, no factor analysis of the items was performed nor was the basis for the choice of the original 61 items explained. For evidence of the external component of construct validity, many findings are reported relating the total number of persons providing support and total satisfaction ratings with external variables. Some examples are that high scorers on the SSQ were higher on indicators

of well-being including self-esteem, and that these subjects also reported a greater number of positive life events. Those subjects with low SSQ scores were more concerned about material things. Overall, then, only the external component of construct validity appears strong for this questionnaire.

Social Network Measures

The simplest and most direct definition of a social network seems to be that of Hirsch (1979) - the "set of all others with whom one has social interactions." Lin, Dean, & Ensel (1981) give definitions of both social support and social networks which provide a clear distinction between these two concepts. Social support is defined as "support accessible to an individual through social ties to other individuals, groups, and the larger community" (Lin, et al., 1979, p.109), while "social networks provide the structural framework within which support may or may not be accessible to an individual" (Lin, et al., 1981, p. 74). There are a number of variables which have been extracted from social networks analyses. The most often found are the following.

1. Size - the number of persons in one's social network. There is some variability among researchers as to the precise definition of size from the number of presently significant others with whom one has social interacitons

(Hirsch, 1979) to the requirement that the person be known by name, have an ongoing personal relationship, and have had contact for at least one year (Tolsdorf, 1976). Mitchell (1982) limits this variable to individuals who are "most important" to you, to whom you feel "closest."

2. Density (or connectedness) - defined as the number of linkages between persons in the network divided by the total number of possible linkages [which is n(n-1)/2 where n is the network size]. Hirsch considers density the most important structural feature of networks.

3. Frequency of Contact (Mueller, 1980) - how often you have contact with each person in the network.

4. Proportion of Multiplex Relationships (Mueller, 1980) - proportion of persons with whom you have contact concerning more than one content area (e.g., health matters and finances); called multidimensionality by Hirsch to distinguish from the term multiplex which is sometimes used to define relationships which cut across formal roles, e.g., friends, neighbors, and relatives.

5. Directionality (Mueller, 1980) or Reciprocity (McFarlane, et al., 1981) - A reciprocal or bi-directional relationship is one in which you may also provide help to, as well as receive help from, someone.

6. Geographic Distribution (Mueller, 1980) - A measure of how spread out geographically the persons in the network are.

7. Satisfaction - Hirsch (1979) considers this variable as determined by how much one would like to see his or her social networks changed. Tolsdorf (1976) sees this variable as a belief as to whether the network has the expertise to help with a problem.

8. Average Amount of Support - Mitchell (1982) asked on a scale of 1 to 3 how much help each person of the network was for each of four content areas.

9. Other Variables extracted by Froland et al., (1979) are Duration of Relationships and Extent of Changes in the Network (e.g., as a result of moves, deaths, or other losses).

Some measurement instruments of social networks include those used by Hirsch (1979, 1980), Mitchell (1982), Tolsdorf (1976), Froland et al. (1979), and Mueller (1980). Hirsch (1979) used a combination of two measures, the Social Network Questionnaire (SNQ) and the Daily Interactions Rating Form (DIRF), to measure social networks. In the SNQ, subjects were asked to list up to 15 significant others they

were likely to interact with during any two to three week period, and also to mark off those who knew each other. The DIRF was filled out by subjects over a two week period indicating with whom time was spent during that period, whether this time was spent in a group, and how satisfying was the interaction. In a subsequent article, Hirsch (1980) asserts that construct validity for the DIRF could be found in his previous study (Hirsch, 1979). Despite careful reading of the previous study, I could not find evidence of construct validity for the DIRF in that study.

Mitchell (1982), in measuring social networks, asked subjects to list up to six individuals on whom they relied for support in any of the four areas of material assistance, emotional support, companionship, and information. Four variables output from this questionnaire were number of intimates; average support received, all sources; average support received, family; and average support received, peers. This measure was an ad hoc one used for the particular study; no psychometric properties were reported. Since the title of this article, as well as other work by Mitchell, includes the words "social networks," I have included his study in this section. However, it appears that this measure gives no more information than do the

sources of social support inventories discussed in the following section.

Other measures of social networks have been employed by Tolsdorf (1976), Froland et al., (1979), and Mueller (1980). All are ad hoc measures with no reported psychometric properties. So, while there have been a number of questionnaires to measure persons' social networks, none seems to have been created with appropriate psychometric properties to allow for their continued use in future studies on social support systems.

The Sources of Social Support

For the purposes of the present research, the definition of the sources of social support, "the persons or institutions whom we go to or use when we need assistance with a personal problem." Once again, the goal of the present research is the development of an inventory to measure the sources of social support which possesses appropriate psychometric properties to allow for its use in future research. In so doing, we first must consider the substantive component of construct validity (Loevinger, 1957). That is, the questionnaire should be based on previous relevant research on the sources of social support. Examining this previous research, three important issues

appear to emerge: (1) the distinction between relative, friend, and community resources; (2) the issue of the quantity versus the quality of supports; and (3) the importance of neighborhood and work satisfaction. Each of these three areas will now be reviewed.

The Distinction Between Relative, Friend, and Community Supports. Cauce, Zelner, & Primavera (1982), in a study involving high school students used three sources of support: (1) family - parents or other relatives; (2) formal - which possess a high degree of organization, e.g., guidance counselors and teachers; and (3) informal - more spontaneous and unstructured sources; e.g., friends and other adults. Differential uses of these three sources were found depending upon the age, sex, and/or race of the subjects. For example, younger males and older females reported their families as being more helpful. Also, concerning race, Hispanics had lower levels of informal support than both Blacks and Whites. Procidano, Heller & Swindle (1980) and Procidano & Heller (1983) also provide evidence for the distinction between friend and family support. They report that friend supports are more related to social assets (e.g., the CPI impression scale, self-confidence) while family supports are more strongly

correlated with indices of psychopatholgy (e.g., schizophrenia, psychosthenia). Mitchell (1982) also found significantly different correlations with outcome measures for friend and family supports. First, support from peers correlated negatively with psychopathology (r=-.41, p<.01) while family support had a positive, though not significant, correlation (r=.12). In addition, independence correlated positively with peer support (r=.43, p<.01), but virtually not at all (r=-.02) with family support. Finally, Froland et al. (1979) cited four sources of support: family, friends, agency or professional, and relatives or acquaintances. In a result contrary to that of the Procidano et al. and Mitchell studies, Froland et al. found that when more emphasis is given to family support there is less psychological distress while a greater emphasis on friend support relates to greater psychological distress. In any event, it appears from this overall body of research, that there should be a distinction between relative, friend, and community sources of support in a questionnaire measuring the sources of support.

The Issue of Quantity Versus Quality of Supports. In examining the issue of quantity versus quality of support, it seems that both quantity and quality are important when

measuring the sources of support. Krauss & Perrotta (1980) reported that discrepancy scores between what support was available and what was needed were better indicators of stress than the amount of support. Procidano & Heller (1983), in measuring "perceived social support," which they define as the extent to which a person believes his or her needs are satisfied, found such support to be correlated with anxiety, measures of social competence, and several indices of psychopathology. These relationships also existed after controlling for social desirability. Cohen & Hoberman (1982) conclude that there is consistent evidence that perceived availability of support rather than the actual level of past support seems to protect persons from the deleterious effects of stress. Finally, Abbey, Abramis, & Caplan (1981), in a very ingenious study, administered three forms of a social support questionnaire to three sets of subjects. Version 1 asked how much support "people" gave, version 2 asked about "some one person" in your life, and version 3 asked about "the person closest to you." Relationships with anxiety, depression, interpersonal sensitivity, and quality of life were strongest for the "people" version (r's about .4), as compared with the "some one person" (r's about .2), and "person closest to you"

version (r's close to 0). This finding provides evidence for the importance of the overall amount of support one receives.

The Importance of Neighborhood and Work Satisfaction. In a general population study already cited, Biegel, Naparstek, & Kahn (1980) found that a measure of neighborhood satisfaction was most correlated with mental health status, more so than was direct support. The correlations obtained here were highest for the elderly, ethnics, and those persons of higher socioeconomic status. Also, work satisfaction overall had higher correlations with mental health status than did direct support in this study. Here the correlations were strongest for ethnics experiencing high stress, younger subjects under low stress, and non-ethnics regardless of stress level. In addition, in the previously mentioned Lin et al. study (1979), social supports contributed significantly more to explaining psychiatric symptoms than marital status, occupational status, and stressful life events combined, and three of the nine questions of the social support measure involved neighborhood satisfaction while a fourth was an indicator of work satisfaction. Also, in the more recent Lin et al. 1981 study, four social support scales accounted for 66 percent

of the explained variance for a criterion variable of depression, and two of these four scales were community satisfaction and neighborhood satisfaction. Hence, these findings taken together provide evidence for the importance of both neighborhood and work satisfaction as sources of social support.

Two Measures of the Sources of Social Support Which Have Tried to Meet Certain Psychometric Criteria

The Social Relationship Scale (SRS) of McFarlane, Neale, Norman, Roy, & Streiner (1981) attempts to some extent to meet appropriate psychometric criteria. For this inventory, subjects were asked to list to whom they have gone for each of six types of problems - work, money and finances, home and family, personal and social matters, health, and issues relating to society in general. Subjects were also asked to rate the helpfulness of each source of support and whether the relationship was reciprocal. The sample for this study consisted of 518 general population subjects, though the manner in which these subjects were chosen was not provided.

The substantive component of construct validity, which the researchers call content validity, was evaluated by a

panel of four senior clinicians who judged the content adequate except for the inability to ask for three or four key or modal support figures. As a result, questions to elicit this information were added to the questionnaire. No literature review to justify the types of questions used in the inventory were included, though had such a review been included, the inventory would, I believe, have stood up reasonably well.

The external component of construct validity, which the authors call criterion validity, was obtained by a comparison between therapists who were parents, and parents coming into treatment with therapists. Significant differences were found for two of three measures. No evidence of the structural component of construct validity was provided. Finally, test-retest reliabilities were obtained for two of the measures of the questionnaire, number of supports and helpfulness. The figures over a one-week period were .91 and .78 respectively.

A second measure which may be considered under the sources of social support and which has tried to meet appropriate psychometric criteria is the Social Support Scale of Lin, Dean, & Ensel (1981). The initial formulation of the items of this inventory was based on two previous

questionnaires, some formerly used neighborhood and community satisfaction items from another study of the authors, and some newly constructed instrumental-expressive items. Basing the inventory on only two previous measures other than their own makes these researchers' inventory somewhat weak with respect to the substantive component of construct validity.

The internal consistency of the items of this inventory was examined by a factor analysis of the newly constructed instrumental-expressive items. Five factors were obtained, four of which correlated significantly with a measure of depression, and hence were retained in the inventory. Also retained were the community and neighborhood satisfaction items and a set of items from one of the two previous inventories, both of which correlated significantly with adjustment.

One problem with the Social Support Scale, besides its somewhat weak substantive validity, is that many of the items of the scale could be considered symptoms, causing a confounding of independent variable (social supports) and dependent variable (some measure of psychological or physical adjustment or maladjustment). In fact, in a recent study examining this question of confounding, Dohrenwend,

Dohrenwend, Dodson & Shrout (1984) found that more than two thirds of the items of the Social Support Scale were considered more likely than not to be symptoms by clinical psychologists. The reason for this is that many of the items of this inventory are not purely sources of support. For example, the instrumental-expressive items are those aspects of support "focusing on the activities and aspects which provide (or jeopardize) either instrumental or expressive support to the respondent" (Lin, Dean, & Ensel, 1981, p. 78). Examples of some of these items are "problems managing money," "no close companion," "too many responsibilities," and "problems communicating."

Overall then while the substantive component of construct validity appears adequate for the Social Relationship Scale, evidence for the external component of construct validity is quite limited, and for the structural component no evidence is provided. Finally, while the test-retest reliabilities appear adequate, they have only been obtained for only two of the output variables of the questionnaire.

Some Other More Informal Helpers

Cowen in his article, "Help is Where You Find It," (1982) discusses the helping activities of hairdressers, divorce lawyers, industrial supervisors, and bartenders. The most used helping skills of these informal helpers were found to be (1) offering support and sympathy; (2) asking questions and pointing out the consequences of bad ideas; and (3) just listening; hence, these skills appear very similar to those used by helping professionals. The importance of these findings is in emphasizing that support may be available in many informal settings, not only from traditional mental health workers or facilities. These informal support sources may be particularly important for persons who do not have the monetary resources to use more traditional community sources of support, or the knowledge of how to avail themselves of such traditional sources.

Additional research on the use of these informal sources of support could be quite enlightening. Some questions which could be addressed are: (1) the frequency of use of these informal helpers by persons, and (2) the relationship between use of these informal helpers and physical or psychological health. One possible limitation on the availability of these informal helpers should be kept

in mind. For example, when I have an appointment with a divorce lawyer or a hairdresser, I may talk about being depressed, but if I feel depressed some evening, I am much more likely to call a friend or relative than my lawyer or hairdresser.

Some Problems in the Measurement of Social Supports

There have been many problems encountered by researchers in the measurement of social support systems. The major problems appear to be: (1) the definition and operationalizing of social support; (2) the confounding of social support as both an independent and dependent variable; (3) the question of whether social support has a main effect or an interaction effect on health; and (4) problems with measures used in conjunction with social support measures, e.g., the use of physical criterion measures in some research and psychological ones in other studies. Each of these problems will now be discussed.

The Definition and Operationalizing of Social Supports

Many recent researchers on social support have tried to divide social support into certain categories or types. First, Cobb (1976) described social support as actions leading a person to believe he or she is cared for

(emotional support); esteemed or valued (esteem support); and a member of a network of communication and material support (common support). This last category also involves the availability of information and services. Kahn and Antonnucci (as cited by Leavy, 1983) list the three A's - affect, or emotional caring; affirmation, or feedback; and aid, or direct tangible help. House (as cited by Leavy, 1983) lists four types of support: emotional - (1) caring, intimacy; (2) instrumental - or direct help; (3) informational - giving relevant information or teaching a skill; (4) appraisal - feedback to evaluate one's performance. Thoits (1982) lists only two categories of support: (1) socio-emotional - understanding, acceptance, warmth; and (2) instrumental - giving help, information or advice. Cohen & Hoberman (1982) list four functions of one's interpersonal ties: (1) tangible support - or material aid; (2) appraisal - having someone to talk with about problems; (3) self-esteem maintenance - by comparing oneself to others; and (4) belonging - availability of people with whom one does things.

Gottlieb actually carried out an empirical study (1978) to discover the categories of social support. He found two main and two smaller categories. The main categories were

emotionally sustaining behaviors - those which promote emotionally supportive conditions; and problem solving behaviors, e.g. focused talking, referral. The smaller categories were indirect personal influence, i.e. knowing one would be there if needed; and environmental action, or advocating. Pearson (1982), in another empirical study, listed 329 descriptions of supports which were put into 13 categories and then factor analyzed. Three factors emerged: (1) emotionally oriented support - love, initimacy, acceptance, and help (explaining 64.3% of the common variance); (2) cognitively oriented support - encouragement, comfort, guidance, knowledge, and honesty (21% of the common variance explained); and (3) idealized support - admiration and satisfaction (accounting for 14.7% of the common variance).

Hirsch (1980) has, I believe, up to now the most complete list of categories of social support. He lists five forms of interaction: (1) cognitive guidance - providing information or advice, an explanation of something; (2) social reinforcement - praising or criticizing a specific action; (3) tangible assistance - helping to carry out some task; (4) socializing - e.g. going to the movies with someone; and (5) emotional support -

interacting to relieve emotional feelings. To make this list even more complete I would add two more categories: (6) indirect support - as stated already by Gottlieb (1978), this involves a knowing that one would be there if needed, and (7) sense of belongingness - a feeling that one is part of a neighborhood or work setting or a social organization. As I have already stated, from the earlier work of Biegel, Naparstek, & Kahn (1980), such attachments may be highly correlated with outcome measures of stressful life events.

Unfortunately even the most competent researchers on social supports have provided definitions which can be considered vague. Three such examples follow: (1) an "enduring pattern of continuous or intermittent ties that play a significant role in maintaining the psychological and physical integrity of the individual over time" (Caplan, 1974); (2) "that subset of persons of an individual's total social network upon whom he or she relies for socio-emotional aid, instrumental aid, or both" (Thoits, 1982); and (3) "support accessible to an individual through social ties to other individuals, groups, and the larger community" (Biegel, Naparstek, & Khan, 1980).

The definition of Sarason et al. (1983) starts well - the "existence or availability of people on whom we can

rely" - but ends in a rather limited way - "people who let us know they care about, value, and love us." I would modify and expand this last definition of Sarason et al. to include the seven categories of social support - "the existence or known availability of persons or institutions on whom we can rely to relieve our emotional feelings and our needs for tangible assistance, informational guidance, reinforcement or criticism, socializing, and/or to provide us with a sense of belongingness."

With regard to the operationalizing of social support, as has been already stated, most of the inventories developed have fallen into one of the three categories: behavioral interactions during which support is provided; social network measures, and the sources of social support. Sometimes it is not evident into which of these three categories an inventory falls. For example, the questionnaire of Mitchell (1982) is categorized as a social network measure because the author refers to his work as involving social networks, but the variables extracted give no more information than do sources of social support inventories.

Three other problems in operationalizing social support are the following. First, the variations in the defining of

social support can lead to differences in operationalizing support. For example, since Cohen & Haberman (1982) listed four functions of social support - tangible, appraisal, self-esteem maintenance, and belonging - their developed measure of support contains four subscales, one for each function of support. Second, there has been much variability in the social network variables extracted from inventories measuring such networks. As already stated, the main variables which have been extracted are size, density, frequency of contact, directionality or reciprocity, satisfaction, and average amount of support. Third, sometimes extreme care must be taken as to the exact wording used in social support inventories. As has already been stated, Abbey et al. (1981) found very different results for correlations between social support and criterion variables depending upon whether the words "people," "some one person," or "the person closest to you" were used in her inventory.

The Confounding of Social Support as Both an Independent and Dependent Variable

This problem appears to be the most often mentioned and most serious of those cited in social support research. In examining life events surveys, many stressful life events

involve losses or gains (that is changes in social supports), so it is difficult to tell whether a lack of social supports is a cause or an effect of stress (Thoits, 1982). For example, did one's lack of friends cause one's depression or did the depression lead to a reduction one's friend supports? Or are both of these forces operating? For example, in one study by Mitchell, Billings & Moos (1982), greater strain led to more family conflict which in turn led to depression. So support may serve as both a dependent variable for one stressor and an independent variable for a second stressor. The importance of this confounding problem is further underscored by Thoits' (1982) point that social relationships are more amenable to change during times of crisis than other relevant factors such as coping mechanisms or personality traits.

In addition, for some measures there may exist a confounding between the social support items and the criterion variable of psychological or physical health or illness. For example, as previously stated, the Social Support Scale of Lin et al. (1981) has more than two thirds of its items rated as more likely than not to be symptoms according to clinical psychologists. Fortunately, this type of confounding is less likely to exist with strict measures

of social support sources (i.e., the persons or institutions to whom we go for support) as in the present research. However, the problem of the extent to which level of support is the cause or the effect of psychological or physical criterion measures still does exist for such strict measures of social support sources.

Does Social Support Provide a Main or Interaction Effect on Health?

Another problem which must be considered in the relationship between social supports and psychological or physical outcome variables is the question of whether social supports have a main or an interaction effect on health. If a main effect exists, more (or less) adequate social supports would have a direct effect on psychological or physical health. If an interaction effect is found, then social supports have an effect on health only under certain circumstances, for example, for those persons under high stress or for only those persons with certain personality characteristics.

In examining the question of a main versus an interaction effect of social supports on health, Lin et al. (1979) asserted that the presence of social supports may serve either as an antecedent factor or a buffering factor

in ameliorating the effects of stress. In the former case, they asserted, the presence of supports would reduce the likelihood of occurrence of stressful life events. In the latter situation, social supports would help to control the interpretation of and the emotional response to stressful life events. Since both Lin et al. (1979) and Gore (1978) found no relationship between the amount of support and number of stressors, the evidence seemed to favor the buffering hypothesis or an interaction effect, over the antecedent or main effect, interpretation.

Another examination concerning whether an interaction or buffering effect of social support exists for persons under high stress was carried out by LaRocco, French & House (1980). In reviewing three previous studies, they found that for two of them, levels of social support interacted with job stress level to reduce anxiety, depression, and somatic complaints. Concerning the interaction effects of social supports and locus of control on health, Lefcourt Martin, & Saleh in a recent study (1984) found that social supports provided more benefits for persons with an internal locus of control, and more specifically, for persons who were more autonomous and less affiliative. Higher order interaction effects of social supports and other variables

on health have also been found. In the previously mentioned Biegel et al. (1981) study, three-way interaction effects of social supports, stress level (high or low), and demographic variables (ethnicity, age, and socio-economic status) were obtained for the outcome variable, frequency of psychological symptoms. Finally, in another study in which higher order interaction effects were found by Turner (1981), social support was found to be important for upper and middle class persons at all stress levels, but for lower class individuals only at high stress levels.

Possible Problems with Measures Used in Conjunction with Social Support Measures

In addition to the problems concerning social support measures cited above, there are possible problems with other measures utilized in the study of the stress-illness relationship of which we should be aware. The problems have, I believe, made it more difficult to establish consistent findings and to generalize results in this area of research.

The first problem is that criterion variables used may be measures of physical well-being in some studies and of psychological health in others. As previously stated, of four recent studies concerned with locus of control, only

one yielded no significant finding (Cooley & Keesey, in press), and this was the only one utilizing a physical criterion measure. However, this one study also differed in other ways from the three yielding significant findings, e.g., it was the only one to use a total life events score rather than a score based on negative events. The earlier work on stressful life events and their effects (e.g. Rahe, et al, 1964) was most striking I believe for the findings of physical detriments which can occur as the result of stress, rather than the psychological consequences. Intuitively, this is not surprising, as it is more striking and less obvious that stress can lead to heart attacks, skin disease or tuberculosis than depression or anxiety.

Another possible problem with life events surveys is that some studies consider total life events as an independent variable while others use only negative life events. Also, some studies employ idiographic life events measures while others use normative scales. For idiographic measures, subjects provide their own ratings of the dimensions of stressful events (e.g. desirability), while for normative scales, dimension ratings have been obtained from previous samples. The advantage of idiographic measures is that their use highlights the issue of

meaningfulness of life events, but also introduces a possible confounding problem. With idiographic scales it is possible that a relationship between stressful life events and some criterion measure is the result of the way in which the events are rated by persons rather than because of the occurrence of the events.

Another possible problem with life events scales, like social support inventories, is a possible confounding with the dependent variable, some measure of physical or psychological well-being. For example, in the previously mentioned Dohrenwend, et al. study (1984), the Kanner et al. Hassles Scale (Kanner, et al., 1981) was rated by clinical psychologists to have almost one third of its items as more likely than not to be symptoms, and almost one fifth of the items of the Holmes and Rahe Social Readjustment Rating Scale (Holmes & Rahe, 1967) were also so rated. The problem of the confounding of independent and dependent variable is especially important because most studies involving the stress-illness relationship are cross-sectional in nature. Most researchers, (e.g. Lin et al., 1979, Mueller 1980, Thoits, 1982) advocate the necessity of longitudinal designs for untangling the independent and dependent aspects of appropriate variables in the stress-illness relationship.

Finally, one final problem which has not received sufficient attention in previous literature is the possible confounding of results with response styles. A relationship between number of stressful life events and number of psychological symptoms could, for example, be the result of both responses being affected by an acquiescent response style. Greater concern should be paid to the response style tendencies of acquiescence and social desirability in future research on stress, illness and social support systems.

CHAPTER 3

METHOD FOR STUDY 1

With consideration for the three issues discussed in the previous chapter, namely: (1) the distinction between relative, friend, and community supports; (2) the importance of both quality and quantity of supports; and (3) the importance of neighborhood and work satisfaction; the inventory presented in Appendix A, called the Shaw-Denmark Social Support Inventory (SDSSI), was designed.

This questionnaire asks two questions with regard to 13 possible sources of social support. The questions concern the likelihood of going to each of the sources of support for help with a problem and the perceived satisfaction of previous help obtained from each of the sources. The 13 sources can be broken down into three broad sources of support: (1) relatives, consisting of the five sources of mother, father, sister or brother, spouse, and other relatives; (2) friends, including boyfriend or girlfriend, best friend, and other friends; and (3) community support sources, consisting of teacher, doctor, religious leader, therapist or counselor, and community group. In addition,

space is provided to indicate other sources of support not listed. Finally, two more questions asking for satisfaction ratings of one's neighborhood and work are included because of the relationships with mental health status found for these measures in the Biegel et al. study (1980).

It should also be noted that the SDSSI has been designed as a very concise instrument, one page in length, which can be completed quickly by most subjects, in about five minutes. It is hoped that this conciseness, along with its meeting appropriate psychometric properties will allow for the SDSSI's being an attractive research tool in many future studies.

Subjects

Subjects for Study 1 were 137 daytime university students in the New York City metropolitan area. Of these, 61 were graduate students enrolled in their first semester of a masters in business administration program. The remaining 76 subjects were undergraduate students enrolled in either a first semester statistics course or an introductory psychology course. Seventy of the subjects were female, 64 were male; the three remaining subjects did not specify their gender on the questionnaires completed.

The age range of the subjects was 17 to 46, though only 3 of the subjects were over 35. The mean age of the subjects was 23.1 with a median of 23. The males, with a mean age of 24.3, were slightly older than the females whose mean was 22.6.

Procedure

Subjects were asked to complete the SDSSI along with a recently developed measure of psychological well-being, a 26 item subset of Dohrenwend's Psychiatric Epidemiology Research Interview (PERI) (Dohrenwend, Dohrenwend, Kasl, Warheit, Bartlett, Goldsteen, Goldsteen, & Martin, 1979). This subset of items was utilized by the developers of the interview in a study on the behavioral effects of the nuclear accident at Three Mile Island. From the results of that study, the 26 item subset exhibited construct validity including a coefficient alpha of .91. Each of the 26 items of the subset required that the subject rate on a five-point scale their assessment of how often they had experienced some symptom in the past 12 months. The PERI Scale served as a broad measure of health including both physical and psychological factors. In fact, when three researchers (including the present author) independently judged each of the 26 items, upon combining their findings, it was agreed

that 7 of the PERI items were clearly indicators of physical health, 17 items were clearly related to psychological adjustment, and 2 could be considered as either physical or psychological.

The five-point scale used for the PERI items ranged from 1 = "very often" to 5 = "never." Thus higher average scores would indicate better psychological adjustment. Examples of items asked are: "In the past twelve months how often have you felt panicky?" "How often have you felt lonely?" "How often have you had a poor appetite?" "How often have you had headaches?" The entire PERI 26 item subset is provided in Appendix B. In addition to completing the SDSSI and the PERI scale subjects were asked to provide their age and gender.

Questionnaires were distributed in classroom settings and subjects were asked to record the number on their questionnaire for a second part of the testing to be conducted three weeks later. Neither names nor other identifying information was requested to insure the confidentiality of the responses. At the second testing, at which 101 followup questionnaires were obtained, subjects were asked to again complete the SDSSI without trying to remember their answers from the initial testing. The

purpose of this retesting procedure was to assess test-retest reliability. All subjects were given the option of not participating in the study or of discontinuing their participation at any time, but none chose this option.

CHAPTER 4

DATA ANALYSIS FOR STUDY 1

Variables Extracted

Fourteen independent variables and one dependent variable were analyzed for each subject. The dependent variable, ADJ, adjustment, was simply an average of the ratings on the 26 items of the PERI measure of adjustment. The 14 independent variables are each described below.

The first four variables (1 though 4), the "NW" variables, concerned the number of supports one would "probably" or "definitely" go to for help with a personal problem.

1. **NWTOT** - The total number of all types of support sources (out of 13) which the subject indicated he or she would "probably" or "definitely" go to for help with a personal problem.

2. **NWREL** - The number of relative sources of support (out of 5) which the subject would "probably" or "definitely" go to for help with a personal problem.

3. **NWFRD** - The number of friend sources of support (out

of 3) which the subject would "probably" or "definitely" go to for help with a personal problem.

4. **NWCOM** - The number of community resources (out of 5) which the subject would "probably" or "definitely" go to for help with a personal problem.

The next four variables (5 through 8), the "NU" variables, relate to the number of supports used by subjects in the past.

5. **NUTOT** - The total number of all types of sources which the subject indicated he or she had gone to in the past for help.

6. **NUREL** - The total number of relative sources of support gone to in the past for help.

7. **NUFRD** - The total number of friend sources of support gone to in the past for help.

8. **NUCOM** - The total number of community resources gone to in the past for help.

The next four variables (9 through 12), the "AU" variables, indicated average satisfaction ratings for supports used by subjects in the past. Each satisfaction rating was based on a scale of 1 to 5, where 1 denoted "very

dissatisfied"; 2, "somewhat dissatisfied"; 3, "neither"; 4, "somewhat satisfied"; and 5, "very satisfied."

9. **AUTOT** - The average satisfaction rating on a scale of 1 to 5 for all sources of support used in the past.

10. **AUREL** - The average satisfaction rating for all relative sources of support used in the past.

11. **AUFRD** - The average satisfaction rating for all friend sources of support used in the past.

12. **AUCOM** - The average satisfaction rating for all community resources previously used.

Finally, the last two variables (13 and 14), NRATE and WRATE, respectively denoted subjects' satisfaction with their neighborhood and work or job. The same five-point scale as for the "AU" variables above was used for NRATE and WRATE.

13. **NRATE** - The rating of neighborhood satisfaction on a scale of 1 to 5.

14. **WRATE** - The rating of work satisfaction for all subjects who worked, also on a scale of 1 to 5.

Analyses Performed

Scores on the SDSSI Variables

Average scores for all subjects for each of the 14 variables extracted from the SDSSI, as described above, were obtained. Results were broken down by sex and also by whether subjects used or did not use any community resources in the past.[1] T-tests were performed to compare male and female ratings on each of the 14 variables. T-tests were also used to compare the ratings of users and non-users of community resources. Finally, two-way analyses of variance were carried out to determine whether any significant interactions between sex and use or non-use of community resources existed for any of the 14 variables.

It was expected here that females would have higher utilization rates and higher satisfaction ratings than males as previous research has found that women tend to have more supportive relationships than men (Leavy, 1983) and women receive more of both social and emotional support than men (Hirsch, 1979). Concerning users versus non-users of community resources, it was not clear how these two groups might have differed on their use of other supports, namely friends and relatives. A lesser use of or satisfaction with friends and relatives by users of community resources could

indicate inadequate supports from relatives and/or friends, which caused persons to seek support from the community. On the other hand, a greater use of or satisfaction with friends and/or relatives by users of community resources could provide evidence of a "support-oriented personality." That is, those persons who use supports more in one sphere of their life (e.g., friends or relatives) are more likely to use them in another sphere (namely the community). No significant interaction effects were hypothesized.

Use of Individual Sources of Support

The proportion of subjects using each of the 13 individual sources of support (i.e. mother, father, sister or brother, etc.) and the average satisfaction rating for each of these individual sources were computed for all subjects. Results for male and female subjects were compared by z-tests for the difference between two proportions. T-tests comparing the difference between two means were again used to examine the satisfaction ratings of males versus females. It was expected here that female subjects would show higher utilization rates and higher satisfaction ratings than male subjects, based on the previously cited finding of Leavy (1983) and Hirsch (1979).

Correlations with Adjustment

Each of the 14 variables extracted from the SDSSI as well as age were correlated with the measure of adjustment obtained from the 26 item PERI scale. As stated previously, the adjustment score for each subject was merely an average of the ratings for the 26 items of the PERI subset.

Correlations were reported for both the total subject pool and for the four subgroups of subjects broken down according to sex and past use or non-use of community resources. Since the overall research on social support systems as reported in the previous chapter appears to suggest strongly that the availability of sufficient support systems ameliorates the negative effects of stress, it was predicted in the presently proposed research that correlations between the social support measures and the adjustment score would by and large be positive.

One set of variables for which positive correlations might not have occurred, or for which negative relationships could conceivably have been found, was for the variables relating to relative supports. While some research has indicated that family or relative supports are negatively related to indices of psychopathology (Garrison and Froland

et al., as cited by Leavy, 1983; Procidano, Heller, & Swindle, 1980), other studies have found a positive relationship between family supports and negative outcomes of stress. For example, Mitchell (1982) found that family support correlated positively with psychopathology, though the correlation was not significant, r=.12. Support from peers, on the other hand, was negatively correlated with psychopathology, r=-.41 (p<.01) in that same study. Also, Kobasa & Puccetti (1983) found that business executives with high family support, low hardiness, and high stress were the worst off of all subjects, scoring highest on illness weights on the Seriousness of Illness Rating Scale. The possible explanation for this finding was that high family support might have prevented the development of hardiness. In addition, Tolsdorf (1976) found that schizophrenic males reported family dominated support systems, and Mueller (1980) reported that for a psychiatric population, support systems consisted of fewer friends and fewer contacts with other outside persons and that psychotics' social networks were very small, consisting mostly of family members. However, while there is some evidence of a positive association between family support systems and negative effects of stress, if such a positive relationship does

exist, the question of causality still remains. Do overly strong family ties lead to problems or do psychological problems lead one to withdraw from friends and seek refuge in the family environment? Only a longitudinal, or at least a prospective, study (which is beyond the scope of the present one) will provide more information on this question.

Factor Analysis

To test Loevinger's substantive component of construct validity (Loevinger, 1957), to determine how well the items of the SDSSI cohere, a principal factor analysis was carried out with a varimax rotation on 11 of the 14 variables of the SDSSI. The three omitted variables were those which represented total figures - NWTOT, NUTOT, and AUTOT - as these variables are linear combinations (in this case, the sum) of other variables and, hence, should not have been included in the analyses (Messick, S., personal communication, 1984). It was hoped that the factor structure after rotation would be a meaningful one, especially with regard to the three issues on social support sources resulting from previous research - the distincion between relative, friend, and community sources; the importance of both quantity and quality of supports; and the importance of work and neighborhood satisfaction.

Test-Retest Reliability

Test-retest correlations were obtained for the SDSSI variables for all subjects who were present at the initial administration of the inventory and at a second administration three weeks after the initial testing. It was hoped that test-retest correlations would all exceed .5 with median and mean figures in the range of .6 to .65. These figures would be comparable to the figures obtained by Barrera, Sandler, and Ramsay for their Inventory of Socially Supportive Behaviors (1981) where the median and mean test-retest reliabilities were .623 and .640 respectively. In the Barrera, Sandler, and Ramsay study, a test-retest period of two days was used as opposed to three weeks for the present study.

CHAPTER 5

Results of Study 1

Scores on the SDSSI Variables

The average scores for each of the 14 variables of the SDSSI are given in Table 1. For all subjects, the average number of friend supports used was 2.28 out of a possible 3.00. Obtaining the ratio 2.28/3.00=.760 we can say that the subjects of this study had a utilization rate of 76.0% for friend support systems. In like fashion, the utilization rate for relative support systems was 59.8% (2.99 out of a possible 5); for community support systems this figure was 39.3% (1.18 out of 5). Thus, the utilization rate was highest for friend support systems, followed by relative supports and then community supports. Regarding the ratings of satisfaction with support previously received, friend supports again ranked first with a 3.94 average (out of 5) followed again by relative supports (3.70) and then community sources (3.52).

Insert Table 1 about here

The overall results were also broken down by gender.

Although females reported a higher number of support sources to which they would "probably" or "definitely" go for help for all three types of supports, and women also reported greater use of relative supports in the past as well as higher average satisfaction ratings for both relative and friend supports, none of these differences between male and female subjects was significant.[2]

The subjects were also broken down according to whether or not they utilized community resources in the past, and here some significant differences were found. Those who reported using at least one of the five community resources scored significantly higher on the measures NWTOT, NWCOM, NUTOT, NUREL, (all $p < .001$) and NWREL ($p < .05$). The result for NWCOM is not very surprising, as those who have used community resources in the past would be more likely to use them again in the future. Similarly, the results for NWTOT and NUTOT are not very revealing since these measures of total supports include use of community supports. The results involving NWREL and NUREL are of interest however. These results indicate that those persons who have utilized community resources in the past have used relative supports significantly more in the past and would also more likely use relative supports in the future. In addition, the

variables NWFRD and NUFRD are higher for those who have previously utilized community support systems, though the results here are not significant. A possible explanation for these findings is that use of community support systems may lead to greater use of support systems in the more immediate environment, namely friends and family. Another possible explanation, previously mentioned in Chapter 4, is that people may be considered either support-oriented or not. There may be a "support-oriented personality"; those who are more likely to utilize one type of support may also be more likely to utilize other types. A third possible explanation is that persons who seek out community resources for help with a problem may simply have more problems than those who do not avail themselves of community sources of support.

An explanation which would <u>not</u> be supported by the findings of Study 1 is that people who seek out community resources are those with a lower availability of other types of support. It should also be pointed out that the differences between subjects utilizing community support systems and those not utilizing such resources cannot be attributed to age differences, as the average ages of both subgroups were almost equal (23.2 for users of community resources versus 23.0 for non-users).

The breakdown of results between users and non-users of community resources was also carried out for male subjects alone and for female subjects alone. These results were either significant (as in the case of NWTOT for females and NUCOM for males, and NUTOT and NUREL for both sexes) or in the same direction as the overall results (for NWTOT for males, NWCOM for females, and NWREL for both sexes).

Two-way analyses of variances were also carried out for each of the 14 SDSSI variables to determine whether there were any significant interaction effects between gender and use or non-use of community resources. Only one significant interaction effect, for the variable NWFRD, was found. This result was as follows. For those who did not use community resources, males reported more friends that they would "probably" or "definitely" go to for help, 1.44 to 1.14. For users of community resources however, females reported a higher number on this measure, 1.63 to 1.19. This interaction was significant at the .05 level of significance. These results support a view that females who seek out community sources of support tend to be more outgoing (i.e. they are more likely to seek out friends, too) than other females, while for males the reverse is true. Males who seek out community sources of support are

less outgoing (with regard to friends at least) than other males.

Individual Sources of Support

Analyses were also carried out on the proportion of persons who used each of the 13 individual sources of support specified on the SDSSI - mother, father, brother or sister, spouse, other relative, boyfriend or girlfriend, best friend, other friend, teacher, doctor, religious leader, therapist or counselor, and community group. The most often used sources and most highly rated according to satisfaction are listed in Table 2.[3] Of the six most often used types of support, all are either friend or relative supports, with best friend and mother the two most often cited, by 86.1% and 83.2% of the subjects respectively. With regard to satisfaction ratings, best friend, spouse, and boyfriend or girlfriend are rated most highly with ratings of 4.16, 4.06, and 4.05 respectively. Two community resources also appear, religious leader and therapist or counselor, with ratings of 3.73 and 3.67 respectively.

Insert Table 2 about here

The extent of the use of each of the thirteen support systems and the satisfaction ratings were also analyzed by

gender. Four significant differences were found. Females were more likely than males to go to their mothers (94.3% to 71.9%, $p<.001$) and to their brothers or sisters (81.4% to 62.5%, $p<.05$) than males. Females also rated their satisfactions higher than males for other friends (3.86 to 3.43, $p<.05$) and for religious leaders (4.20 to 3.27, $p<.05$). These results support the hypothesis of the previous chapter, that if there were significant differences between males and females on utilization rates or satisfaction ratings, that results for females would be higher than those for males.

Correlations with Adjustment

The correlations for each of the fourteen independent variables with the dependent variable, adjustment (ADJ) as measured by the 26 item PERI Scale, and the correlations between age and adjustment are provided in Table 3. The results are given for the overall sample and also are broken down by gender and use or non-use of community sources of support.

Insert Table 3 about here

Looking at the overall sample, four results reached significance. The first was a significant negative

relationship between NWCOM, the number of community resources one would "probably" or "definitely" go to with a problem, and adjustment. In fact, all of the correlations involving number of supports (NWTOT to NUCOM) are negative for the overall sample except for NWREL, which is virtually zero (.008). However, looking at the results for the four sub-samples, these findings seem to apply only to the one subgroup of males who have not used community resources. For these male subjects, three of the seven measures involving number of supports are negative and significant, while a fourth, also negative, approaches significance. For females who have not used community resources, however, all seven of the correlations involving number of supports are positive, with one, NWTOT, reaching significance and two others, NUTOT and NUREL, approaching significance. Only one correlation involving the number of social supports reached or appproached significance for subjects who used community resources. NUREL, the number of relatives used previously, was positively related to adjustment for males who had used community resources ($p<.05$).

With regard to the satisfaction ratings for social supports (AUTOT to AUCOM) and their correlations with adjustment, for the overall sample, only AUREL was

significantly related to adjustment, and the relationship was a positive one. Looking at the sub-samples, the only significant results were for the female subjects who used community resources, for whom AUTOT and AUREL, satisfaction ratings for all supports and relative supports, were positively and significantly correlated with adjustment (both $p<.05$).

WRATE, the rating of work satisfaction was also positively and significantly correlated with adjustment for the overall sample, but these relationships were only found to be significant for the subjects, both male and female, who used community resources. Finally, age was significantly and positively correlated for the overall sample as well as for females who used community resources and males who did not use community resources.

Looking at the four columns corresponding to each of the four sub-samples, for males who did not use community resources, adjustment appears most related to number of resources, and this relationship is negative. For females who did not utilize community resources, again adjustment relates most to number of support sources used, but now the relationship is positive. For females who do use community resources, the quality of their support seems most

important; again, the relationship with adjustment is positive. Finally, for males who avail themselves of community resources no clear pattern of relationships with adjustment appears, with number of relatives used and work satisfaction rating being significantly and positively correlated.

Overall, then, there appear to be two interesting findings in these results. First, the correlations between the SDSSI variables and adjustment vary to quite an extent among the four subgroups of subjects broken down according to gender and use or non-use of community resources. Second, all of the correlations which approach or reach significance for any of the subgroups, except for males who have not used any community resources, are positive, as hypothesized in the previous chapter.

Factor Analysis

The eleven independent variables of the SDSSI (all but the total figures of NWTOT, NUTOT, and AUTOT) were factor analyzed by a principal factor analysis using a varimax rotation. The results of this factor analysis are given in Table 4. All loadings exceeding .3 are provided in bold type. Four factors with eigenvalues greater than 1 were extracted. These factors accounted for 65.6% of the total

variance. For the first factor, accounting for 21.5% of the total variance, the items with the highest loadings were AUREL (.724), AUCOM (.645), AUFRD (.599) and WRATE (.340). Since all of the ratings of support satisfaction loaded highly on this factor, this factor has been named "Quality of Support." The second factor, explaining 18.1% of the total variance, was named "Friend Supports." The highest loaded items here were NWFRD (.926), NUFRD (.664), and AUFRD (.317). "Relative Supports" appears to be an appropriate name for the third factor whose highest loadings were for the items NUREL (.915), NWREL (.537), and AUREL (.333). This factor accounted for 14.6% of the total variance. Finally, the fourth factor, whose highest loaded items were NUCOM (.552), NWCOM (.543), AUCOM (.441), and WRATE (.406), appears to represent "Community Supports." This last factor accounted for 11.4% of the total variance.[5]

Insert Table 4 about here

Thus, the factor structure obtained appears quite meaningful in terms of the substantive issues concerning the sources of social support discussed in Chapter 2. There is a clear distinction between relative, friend, and community sources of support as evidenced by the presence of factors

2, 3, and 4. Also, the importance of quality of support is evidenced by factor 1. However, a separate factor for quantity or number of supports was not obtained for this sample of subjects. Finally, the concept of neighborhood satisfaction (NRATE) loaded on factor 1 along with the other satisfaction ratings while work satisfaction (WRATE) loaded on factor 4 with the other measures of community support.

Test-Retest Reliability

The correlations for the eleven independent variables of the SDSSI (all except for NWTOT, NUTOT, and AUTOT) between the initial administration of the SDSSI and the second administration three weeks later are provided in Table 5. These figures are available for 101 of the 137 subjects who were present at both the initial and second administration of the SDSSI.[6]

Insert Table 5 about here

For the overall sample of 101 subjects who re-took the SDSSI, test-retest correlations ranged from .424 to .815 with a mean of .612 and a median of .636. Only three of the correlations, those for NWCOM, AUFRD, and WRATE, were below .5. In order to further investigate the stability of responses on the SDSSI measures, the results were broken

down by whether the 101 subjects were undergraduate or graduate students. Each of the three measures which had a correlation of under .5 for the overall sample had a value of less than .5 for only one of the undergraduate or graduate subgroups. The test-retest correlations for NWCOM and AUFRD were under .5 only for the graduate students. In addition, the correlation for AUREL was less than .5 for only the undergraduates. Thus, every one of the eleven measures of the SDSSI had a test-retest correlation above .5 for at least one of these subgroups. Also there are possible explanations for those results which yielded correlations of less than .5 . For the undergraduataes, for NWCOM, the number of community resources one would "probably" or "definitely" go to for a problem, it is not surprising that younger subjects such as undergraduates might be somewhat uncertain about their possible use of community resources. Also, the low correlations for AUREL and AUFRD for the undergraduates probably represent some lack of stability in how younger persons feel about their relatives and friends. For the graduate students, the low test-retest correlations for the item WRATE, rating of work satisfaction, may reflect an ambiguity in the wording of the question for that item. During the administration of the

questionnaire, a few subjects asked whether "work" meant "graduate work"; thus the occurrence of alternative interpretations of the meaning of the word "work" for the two test administrations is not unlikely.

Thus, the test-retest reliabilities of the independent variables of the present study appear quite satisfactory. In fact, our median reliability coefficient of .636 and mean coefficient of .612 compare favorably with the corresponding figures of .623 and .640 for the Barrera, Sandler, and Ramsay Inventory of Socially Supportive Behaviors (1981), where the the test-retest period was two days compared with three weeks in the present study.

CHAPTER 6

DISCUSSION OF STUDY 1

The main goal of the present research was to develop a reliable, concise, and valid measure of the sources of social support. To begin to assess whether these goals were met, we will first look primarily at the results of Study 1 as they relate to previous relevant findings on the sources of social support.

Relationship of Results to Previous Relevant Findings

The results obtained in Study 1 were very much in accord with previous relevant findings. First, in Study 1, the subjects reported using an average of 2.99 relatives, 2.28 friends, and 1.18 community resources. The figures for friends and community sources are very close to that reported by McFarlane et al. (1981) who used their Social Relationship Scale and found on a general population an average number of 2.21 friends and 1.14 professionals used as supports. In addition, McFarlane et al. reported a 3.71 average number for relatives supports (2.24 for close family; .82 for spouse, and .65 for other relatives). They

also reported average support figures of 1.43 for work related persons and .17 for neighbors.

Concerning satisfaction ratings, in Study 1 the subjects reported a general satisfaction with their supports, giving average ratings on a 1 to 5 scale of 3.94 for friend supports, 3.70 for relatives, and 3.52 for community resources. These results are in accord with those of Lewis & Jones (1980) for pregnant and non-pregnant adolescents. In that study both subgroups utilized and rated friend supports most highly, followed by relative supports, and then community sources. Also, for the Lewis & Jones study, the mean satisfaction ratings for mother, father, boyfriend, and best friend using the same five-point scale as in Study 1 were: (1) boyfriend, 4.38; (2) best friend, 4.37; (3) mother, 4.26; and (4) father 3.63. In Study 1, the order of results for these four groups was quite similar: (1) best friend, 4.16; (2) boyfriend or girlfriend, 4.01: (3) mother, 3.89; and (4) father, 3.48.

Concerning the correlations with adjustment, in Study 1 different patterns of relationships were found for both males and females depending upon whether they utilized community resources. For males not utilizing community resources, all seven measures relating to number of supports

were negatively correlated with adjustment, three of which reached significance with a fourth approaching significance. For males who did previously use community resources, the only significant relationship for these measures was a positive one, for NUREL. For females not availing themselves of community sources, adjustment was positively related to number of social supports while for other females the satisfaction with the total of all supports and with relative supports were positively correlated with adjustment. The finding of differential patterns of adjustment are in line with the findings of Biegel, Napastek, and Khan (1980) who found different correlations with adjustment, depending upon the socio-economic status, ethnicity, and level of stress of the subjects. Thus in both the present study and the one of Biegel et al. (1980), higher order interaction effects between social support and adjustment were found. In the present research, the different patterns of correlation between the four subgroups indicated a social support by gender by community resource effect.

One interesting finding of the present study which differs from many previous findings is that for some groups number of supports is more related to adjustment than

quality of support. In Study 1, of the four subgroups examined - males who had previously utilized community resources, males who had not previously utilized community resources, and females and males who had not used community sources in the past - only for the females who used community resources previously was quality of support more highly correlated with adjustment. Subjects who had not used community resources, both males and females, exhibited stronger relationships between number of supports and reported adjustment than between quality of supports and adjustment. In any event, the pattern of correlations among the four groups is so different, especially between users and non-users of community resources, that a four subgroup analysis such as that carried out in the present study would be recommended for future studies over the traditionally used simple comparison between males and females.

The significant negative correlations between number of supports and adjustment for males who had not used community resources in the past was surprising. However, such a negative relationship is not the first of this type. Sandler and Barrera (1980) found that stress correlated more with disorder for a high rather than a low social support group. Their possible explanation was that those under high

stress may feel a greater need to seek support systems; thus, under times of high stress persons mobilize their support systems and hence use a greater number of supports than during times of low stress. (This explanation implies that the negative relationship between stress and nuber of supports occurs from the dependent nature of social supports on stress level rather than that a greater number of supports leads to more stress.) This explanation applied to our results may mean the following. For males who have not previously used community resources, these subjects rate themselves as less well-adjusted when they call on a greater number of supports, because the less well-adjusted may need more supports. However, the question remains as to why these findings were obtained only for males who did not utilize community resources. An alternative explanation, which seems more feasible for our results, is that for males who do not use community supports, adjustment may be positively correlated with independence and autonomy and, hence, a low use of social supports. That is, such males may consider themselves well-adjusted if they live up to the traditional societal norms for males of independence and autonomy. On the other hand, for females who do not use community resources, considering oneself well-adjusted may

in part include having relationships in which some dependence is involved. Again this may be considered a more traditional societal norm for females. It is interesting in our study that the relationships between number of social supports and adjustment appear clearly only for the subjects who did not use community resources, and it is quite possible that traditional sex-role models are more likely to apply to such subjects.

A second alternative explanation for the negative correlations between number of supports and adjustment for male subjects who did not previously use community resources is that, for this group, the males who used the fewest number of social supports may have been exhibiting some form of social desirability response style. That is, these male subjects may have said that they were both well-adjusted and also used a low number of supports because both of these responses are considered desirable in society, especially for males. A third explanation, which would be more difficult to test empirically, is that these subjects may have been exhibiting repression in their responses. If this explanation is true, it could indicate that members of this male subgroup with the lowest number of supports may be most in need of psychological assistance. Along these lines,

Lewis & Jones (1980) asserted that those who report low stress may be most in need of help if they are unrealistic in their reporting. These researchers point out that a prerequisite for the appropriate use of social supports is recognizing that one is in a stressed state.

Test-Retest Reliability, Neighborhood Satisfaction, and Factor Analysis

As stated previously, the test-retest correlations for the SDSSI appear quite satisfactory. The median and mean reliability coefficients of .636 and .612 respectively compare very favorably with the corresponding figures of .623 and .640 for the Barrera, Sandler and Ramsay Inventory of Socially Supportive Behaviors (1981). The correlations of Study 1 look particularly good when we consider that the test-retest period was three weeks compared with two days in Barrera et al. study. In addition, in Study 1 three of the four low test-retest correlations (under .5), number of community resources undergraduates would use for help with a personal problem and undergraduates' satisfaction ratings for relatives and friends, were probably indicative of measures which were in fact less stable over time than the other measures. The low test-retest correlation for graduate students for WRATE, work satisfaction rating, was

probably the result of a lack of clarity about the term "work." In future administrations of the SDSSI, to help reduce ambiguity about the term work, it is recommended that the question on work be replaced by the following one: "Do you work 20 or more hours per week? If yes, how would you rate your satisfaction with your work or job?"

Finally, the factor analysis of the eleven independent variables of the SDSSI (except for the three total variables) yielded four factors which seem to represent quality or satisfaction with supports, friend supports, relative supports, and community resources, indicating a strong internal consistency of the items on the SDSSI.

Conclusion from Study 1

In summary, since the findings of the present study appear to be for the most part in accord with previous relevant findings, and since the results from the test-retest correlations and factor analysis appear adequate, the SDSSI of Study 1 does appear to be a measure of the sources of social supports which is both valid and reliable. Our third goal of conciseness was met since the inventory fits easily onto one page and can be completed by most subjects in five minutes or less.

Lastly, the category "other" was used sparingly by subjects, with the sources of "co-worker" and "myself" used once or twice. A further review of the literature to determine possible other sources of support to be included for groups other than full-time students was considered before final acceptance of the form of the SDSSI used in Study 2 of the present research. Further discussion of this issue is found in Chapter 7, Rationale and Method for Study 2.

Concerning neighborhood satisfaction, in the Biegel et al. (1980) study, this variable was positively and significantly correlated with adjustment, while in Study 1 the correlations between adjustment and neighborhood satisfaction did not reach significance for any group. These different results can probably be attributed to the different samples used in the two studies, college students in the present study as compared with urban residents in the Biegel, et al. study. It is thus recommended that a rating of neighborhood satisfaction remain in the SDSSI even though it was not significantly correlated with adjustment in the present study, as for some groups this measure may be a significant correlate.

One Other Additional Finding

The most interesting additional result obtained from the findings of Study 1 involved the role of community resources. Although used less often than friend or relative supports, the use or non-use of community supports appears in part to moderate the relationships between other support measures and adjustment. Whereas Cobb pointed out that social supports may act as moderators for the effects of stressful life events (1976), the results of the present study suggest that the use of one type of support source, namely community resources, may act as a moderator for the effects of other types of social supports. It is also interesting to note that those who use community supports do so not because of a lack of other supports since use of relative supports and friend supports was found to be higher for users of community resources than for non-users. Possible explanations for these findings of the present study are (1) use of community resources could lead to increased use of friend and relative sources of support; (2) there is a "support-oriented" personality, meaning that persons who use social support more in one sphere of their lives (e.g., community sources) tend to also use a greater number of supports in other areas of their lives (i.e.,

friends and relatives); or (3) persons who use community resources may merely have more problems, and hence use a greater number of supports, than persons who do not utilize community supports.

CHAPTER 7

RATIONALE AND METHOD FOR STUDY 2

Changes in the SDSSI

Three changes to the Shaw-Denmark Social Support Inventory were implemented for Study 2. First, as stated in the previous chapter, the question concerning work satisfaction was preceded by the question of whether the subject worked 20 or more hours per week. A work satisfaction rating was thus only asked for from subjects who replied that they worked 20 or more hours in a week.

Second, three additional sources of support were added to the SDSSI. Two of them were "boss or supervisor" and "co-worker." The rationale for the inclusion of these two sources was the finding of McFarlane et al. (1981) whose general population subjects reported an average of 1.43 work related persons used as supports. (This figure exceeded the 1.14 average figure for professional sources found in that same study.) These two additional sources of support were both considered friend supports; thus there were now a total of five friend sources of support on the SDSSI used in Study 2 - boyfriend or girlfriend; best friend; boss or supervisor; co-worker; and other friend.

The other added source of support for Study 2 was "child or grandchild." Although none of the subjects of Study 1 mentioned children or grandchildren as sources of support, discussions with colleagues led to the suggestion, and it seems to be a very appropriate one, that for an older non-student subject pool, children or grandchildren could be a very likely source of support. Inclusion of this additional support as a relative source of support meant that there were now six relative supports in the version of the SDSSI used in Study 2 - mother; father; sister or brother; child or grandchild; spouse; and other relative.

The third change in the SDSSI concerned the addition of a question on the reciprocity of support. A reciprocal relationship, according to social network theory, is one in which you may also provide help to, as well as receive help from, someone (Mueller, 1980; McFarlane, et al., 1981). Serving as rationale for inclusion of a question on reciprocity was a finding of the Froland et al. (1979) study comparing outpatients (least impaired clinically), day treatment patients, and state hospital patients (most impaired clinically). In that study it was found that with increased pathology the extent of reciprocal support decreased. Also, Tolsdorf (1976) found that, for

psychiatric patients, relationships were primarily with family members who were in a dominant position; i.e., the relationships were not reciprocal. Once again, we should remind ourselves that these findings for severely pathological subjects leaves open the question of whether the lack of reciprocity was a cause or an effect of the pathology. However, the possibility that reciprocity may be a cause (or a correlate) of pathology makes it a variable worthy of further study and calls for its inclusion in the inventory since it can be added without major modification.

The revised Shaw-Denmark Social Support Inventory (SDSSI) for Study 2 is given in Appendix C, page C-2. The added question concerning reciprocity is question 3, "Please place a check mark to the left of each of the above persons who have gone to you for help with a personal problem." Space to the left of each of the sources of support listed in the second question, directly above question 3, has been provided for the check marks. Pre-testing of this revised version of the SDSSI on a small sample (about 15 to 20) of New York City jurors indicated that the instructions of question 3 were clear to persons completing the questionnaire.

Other Changes in the Total Test Battery

In addition to the above mentioned changes to the SDSSI, there were two other major changes to the total test battery for Study 2: (1) measures to test for the response styles of social desirability and acquiescence were included; and (2) questions on the nature of the actual type of support (e.g. emotional, tangible assistance, etc.) for the most often used and most helpful cited sources of support were added. Each of these changes will now be discussed.

Measures of Response Styles

The two most often cited types of response style are social desirability and acquiescence. Social desirability, first discussed by Edwards (1957), is the tendency to respond in a way which would tend to present oneself in a favorable or socially acceptable manner to others. Acquiescence (Couch & Keniston, 1960) involves a tendency by persons to respond in the affirmative (i.e., to say "yes" or to use the upper end of a scale, e.g. "agree") to questions asked of them. Since construct validity involves an examination of both convergent and discriminant validity (Campbell & Fiske, 1959), i.e., constructs should not only relate to other constructs to which they are supposed to

relate, but also not relate to constructs which theoretically should be unrelated, any complete attempt at construct validity should include an investigation to insure that the findings obtained are not resulting from answers to questions primarily evoked by response styles. Relating this point specifically to social support systems and the Shaw-Denmark Social Support Inventory, it should be ascertained that correlational values between social support variables and the measure of adjustment obtained from the PERI scale can not be attributed to both of these variables being correlated with social desirability or acquiescence.

To assess social desirability response style, two measures were used in Study 2. The first was the Crowne-Marlowe Scale (Marlowe & Crowne, 1961). This questionnaire consists of 33 statements for which subjects are asked to determine the truth or falseness of each as it applies to themselves. The Crowne-Marlowe Scale has the advantage of being somewhat balanced as to keying (19 of the 33 socially desirable answers are keyed true and 14 are keyed false) and also of having been used somewhat extensively in previous research. It also has the advantage of including both of the orthogonal factors of social desirability as cited by Damarin & Messick (1965): (1) the Edwards type of social

desirability, or need for social approval; and (2) faking and impression management.

A disadvantage of the Crowne-Marlowe Scale is that many of the questions might seem somewhat obvious in their intent to the somewhat more sophisticated subjects of 1984 as opposed to subjects of 1961 when the scale was first used. This is especially true when all 33 items are presented together. The complete Crowne-Marlowe scale is presented in Appendix C, pages C-6 through C-7. Examples of items which are quite likely to evoke the idea that social desirability is being investigated are: (1) "Before voting I thoroughly investigate the qualifications of all the candidates." (2) "I never hesitate to go out of my way to help someone." (16) "I'm always willing to admit it when I make a mistake." (33) "I have never deliberately said something that hurt someone's feelings."

In order to obtain a second and more covert measure of social desirability, the 20 neutral items of the Bem Sex-Role Inventory were used. These neutral items are items which, according to a large subject pool, have been determined not to be more desirable for either a male or a female (Bem, 1974). Of these 20 items, 10 are socially desirable characteristics and the other 10 are undesirable.

The desirable adjectives are: helpful, conscientious, happy, reliable, truthful, sincere, likable, adaptable, friendly, and tactful. The undesirable characteristics are: moody, theatrical, unpredictible, jealous, secretive, conceited, inefficient, solemn, unsystematic, and conventional. Subjects were asked to rate themselves on each of these adjectives on a scale of 1 to 7, where 1 stood for "never or almost never true" and 7 denoted "always or almost always true." The order of presentation of these 20 adjectives for Study 2 was determined by use of random numbers. The full list of the adjectives, in the order used, together with the associated instructions for describing oneself, are given in Appendix C, page C-7.

A score of social desirability from these 20 adjectives can be obtained by averaging the 10 ratings for the socially desirable adjectives and the 10 reversed ratings for the undesirable descriptions. By reversed ratings, it is meant that 1's are converted to 7's, 2's to 6's, and so on. Since 10 or half of these 20 adjectives are socially desirable and the other 10 are undesirable, the list of 20 adjectives is balanced as far as keying is concerned.

As a measure of acquiescence, that is, the tendency to respond affirmatively, an average score for the 20 Bem

neutral adjectives can also be used, this time without reversing any of the ratings. In addition to being a covert measure, another advantage of using this average as an indicator of acquiescence is that it is balanced for social desirability, since half of the items are socially desirable and the other half undesirable.

Measuring the Type of Social Support Provided by the Most Often Used and Most Helpful Sources of Support

Before discussing the different categories or types of social support provided, it should be stated that this part of the research extends beyond examining the SDSSI for construct validity and involves linking up the present research with another area of research on social support systems. Reviewing the types or categories of support from the literature review of Chapter 2, the following seven categories of support were noted: (1) emotional support - making one feel loved and cared for or allowing one to express emotional feelings; (2) cognitive guidance - the giving of information or advice on what to do about a problem; (3) social reinforcement - giving praise or criticism for the way one was handling a problem; (4) tangible assistance - giving financial assistance or doing some other task to make things easier; (5) socializing -

e.g. going to the movies; (6) indirect support - knowing one would be there if needed; and (7) a sense of belongingness - being part of a neighborhood, work setting, or social organization.

The sense of belongingness aspect of social support appears to be addressed by the questions of the SDSSI concerning neighborhood and work satisfaction, and the inclusion of community group as a source of support. Based on the other six categories, subjects in Study 2 were asked which of the following nine types of support were provided by the source from whom they received help most often and the source whom they considered most helpful. Nine types of support were included because three of the six categories above were compound in nature, and hence, had to each be divided into two types (e.g., tangible assistance included the giving of financial assistance or the carrying out of some other task). Specifically, the subjects of Study 2 were asked for each of the nine types of supports whether or not that type was or was not received from the most often used and from the most helpful source of support. These nine types of support were the following.

1. Made me feel that I was loved and cared for (emotional support).

2. Allowed me to express my emotional feelings (emotional support).

3. Gave me information concerning what to do about the problem (cognitive guidance).

4. Gave me advice on what to do about the problem (cognitive guidance).

5. Gave me praise or criticism for the way I was handling the problem (social reinforcement).

6. Did some task for me to help make things easier (tangible assistance).

7. Gave me financial help (tangible assistance).

8. Spent time with me socially; for example, went to the movies (socializing).

9. Helped me just by knowing he or she would be there if needed (indirect support).

The exact form in which these questions were asked is given in Appendix C, page C-3.

Method for Study 2

Subjects

Subjects for Study 2 were 151 evening graduate students at New York University's Graduate School of Business Administration. All of the subjects were enrolled in a Masters in Business Administration (M.B.A.) degree program. Of these subjects 67 were males and 84 were females. The average age of the males was 26.8; for the females, the average was 27.2.

Since Study 2 was designed in part to test the SDSSI on a population other than a full-time student one, information about each subject's occupation was requested. Of the 148 subjects (out of 151) who provided this information, only 14 (or 9.5%) listed student as their occupation. Also, only 2 (or 1.4%) said that they did not work or that they were unemployed. The remaining 132 subjects were fully employed in a variety of occupations. Not surprisingly for students enrolled in an M.B.A. program the most listed occupations were: (1) and (2) (tie) Investment or Financial Analysis, and Management or Administration - 18 subjects (or 12.2%) each; (3) Accountant - 16 (or 10.8%) of the subjects; (4) Marketing or Sales - 15 subjects (10.1%); (5) Programmer or Systems Analyst - 14 subjects (9.5%); and (6) Banking - 13

(or 8.8%). Also listed quite frequently was Engineer, by 11 (or 7.4%) of the subjects. Lawyer was cited by 3 (2.0%) of the subjects. The remaining occupations listed were cited by two or fewer subjects: Real Estate Work, Consultant, Journalist or Editor, Economist, Professor, Advertising, Training, Public Relations, Communications, Nurse, Social Worker, Musician, Writer, and just plain working. Thus the subjects certainly appeared to represent a non-student population though the majority of jobs were in business or business related areas.

Procedure

The entire research instrument used in Study 2 is found in Appendix C. The first page is a brief set of instructions. Page 2 is the revised Shaw-Denmark Social Support Inventory (SDSSI). The third page provides the additional questions on the types of support for the most often used and most helpful sources of support. Pages 4 and 5 comprise the 26 item PERI scale of adjustment and also provide the space for subjects to indicate their age, sex, and occupation. Finally, pages 6 and 7 contain the Crowne-Marlowe Scale of Social Desirability and the list of 20 neutral adjectives of the Bem Sex-Role Inventory.

Of the 151 subjects, 50 completed the questionnaires

during the last half hour of one class session. The remaining 101 subjects were obtained from five other classes in which the questionnaire packets were distributed and collected during the following two class periods.[7] Since the number of students in these five classes totaled about 225, the return of 101 questionnaires represented a response rate of approximately 45%. Following two class periods, an explanation of the study was given to all students in each of the five classes in which the subjects filled out the questionnaires at home. A copy of this explanation can be found in Appendix D.

CHAPTER 8

ANALYSES FOR STUDY 2

The first analysis for Study 2 was a comparison on the variables extracted from the SDSSI between the subjects who filled out the questionnaire battery in class as opposed to those who completed their questionnaires at home. If the number of significant differences obtained had been more than that expected by chance, all other analyses would have been performed separately for these two groups. However, since the number of significant differences was not more than that expected by chance, the other analyses were carried out for all 151 subjects combined. (This finding is discussed in more detail at the beginning of Chapter 9.)

Variables to Be Extracted for Study 2

The variables extracted for each subject of Study 2 were as follows.

1-14. The same 14 variables as extracted in Study 1 from the SDSSI with the exception that all variables concerning relative supports were based on 6 individual supports instead of 5 (with child or grandchild added) and

variables relating to friend supports were based on 5 supports instead of 3 individual supports (boss or supervisor and co-worker having been added).

In addition, three more variables were extracted from the SDSSI in Study 2 as a result of the added question on reciprocity.

15. NGONTU - The number of persons who have "gone to you" for help with a personal problem.

16. NRECIP - The number of reciprocal relationships; i.e., the number of individual supports to whom you have gone to and who have also gone to you for help.

17. ARECIP - The average satisfaction rating for reciprocal relationships, on the scale of 1 to 5, as used for other satisfaction rating variables.

In addition, an adjustment score as in Study 1 was obtained for each subject.

18. ADJ - The adjustment score obtained by averaging the ratings of the 26 items of the PERI scale.

Three additional variables obtained for Study 2 subjects involved response style responding.

19. SDPCMS - The percentage of socially desirable

responses from the Crowne-Marlowe questionnaire. The percentage figure, based on total number of items answered, was used over the number of socially desirable responses since, at times, some item or items might not apply to all subjects. For example, "I never make a long trip without checking the safety of my car" would not apply to subjects who did not own a car.

20. SDBSRI - The measures of social desirability obtained from averaging the ratings on the ten socially desirable neutral traits of the Bem Sex-Role Inventory and the reversed ratings for the ten socially undesirable neutral traits.

21. ACBSRI - The measure of acquiescence obtained from averaging all 20 Bem Sex-Role Inventory neutral traits.

Finally, 24 additional variables were extracted for each subject based on the questions on the types of support for the most often used and most helpful source or sources of support.

22. MOSTOF - The most often used individual source of support (e.g. mother, father, etc.).

23. MOSTHL - The individual source of support considered most helpful.

24. OLOV - A "yes" or "no" variable based on whether the most often used source of support "made the subject feel loved and cared for."

25. HLOV - The same as OLOV for the most helpful source of support rather than the most often used source.

26. OEMO - The same as OLOV except for the category of support, "Allowed me to express my emotional feelings."

27. HEMO - The same as OEMO for the most helpful source of support.

28. OINFO - The same as OLOV except for the type of support, "Gave me information concerning what to do about the problem."

29. HINFO - The same as OINFO for the most helpful source of support.

30. OADV - The same as OLOV except for the type of support, "Gave me advice on what to do about the problem."

31. HADV - The same as OADV for the most helpful source of support.

32. OEVAL - The same as OLOV for the type of support, "Gave me praise or criticism for the way I was handling the problem."

33. HEVAL - The same as OEVAL for the most helpful source of support.

34. OTASK - The same as OLOV for the type of support, "Did some task for me to help make things easier."

35. HTASK - The same as OTASK for the most helpful source of support.

36. OFIN - The same as OLOV for the type of support, "Gave me financial help."

37. HFIN - The same as OFIN for the most helpful source of support.

38. OSOC - The same as OLOV for the type of support, "Spent time with me socially; for example, went to the movies."

39. HSOC - The same as OSOC for the most helpful source of support.

40. OBTHR - The same as OLOV for the type of support, "Helped me just by knowing he or she would be there if needed."

41. HBTHR - The same as OBTHR for the most helpful source of support.

42. OOTHR - The same as OLOV for any other specified type of support.

43. HOTHR - The same as OOTHR for the most helpful source of support.

44. OTOT - The total number of types of support cited for the most often used source of support.

45. HTOT - The same as OTOT for the most helpful source of support.

Analyses Repeated from Study 1

Most of the analyses carried out in Study 1 were repeated for Study 2. In fact, the only analysis from Study 1 which was not repeated in Study 2 was the computation of the test-retest correlations, as the results of Study 1 indicated that the correlations were sufficiently high.

Those analyses which were repeated as in Study 1 are as follows. First, the average ratings for all of the variables from the SDSSI were computed for all subjects, and also for the four subsets of subjects broken down according to sex and past use or non-use of community resources. The variables from the SDSSI now included the 14 variables of Study 1 plus the three variables obtained from the question on reciprocity - NGONTU, NRECIP, and ARECIP. Once again, if there were significant differences between males and females

on any of these variables it would be expected that females would have the higher scores. Concerning differences between users and non-users of community resources, if the results of Study 2 were in accord with those of Study 1, users of community resources would have greater utilization of friends and relatives. Two way analyses of variance were also computed for each of the SDSSI variables to examine whether there were any significant interactions between sex and past use or non-use of community resources.

Second, utilization rates and average satisfaction ratings were computed for all of the individual sources of support. The utilization rate for each source of support was the percentage of persons who indicated that they had used that source of support in the past. The individual sources of support were the 13 sources of Study 1 plus the 3 supports added for Study 2 - child or grandchild, boss or supervisor, and co-worker. Sex differences were again examined, and it was again hypothesized that, if any significant differences were found, female utilization rates or satisfaction ratings would be higher than the corresponding values for males.

Next, correlations between the SDSSI variables and the measure of adjustment from the PERI scale were computed for

all subjects and for each of the four subgroups of subjects - males who used community resources in the past, female past users of community resources, and male and female past non-users of community resources. Most, if not all, significant correlations were expected to be positive. The correlations for males who had not used community resources in the past, which had been negative and significant in Study 1, were examined to see if these findings were replicated in Study 2. Correlations between age and adjustment, as in Study 1, were also computed for Study 2.

In addition, a factor analysis of the eleven independent variables of the SDSSI was carried out as in Study 1. The variables representing total figures - NWTOT, NUTOT, and AUTOT - were once again omitted as these variables are the sums of other variables. Also, the variables concerning reciprocity - NGONTU, NRECIP, and ARECIP - were not included in the factor analysis as these measures are not independent from other SDSSI variables. (For example, NGONTU will tend to be higher when other measures of number of supports are higher.) As in Study 1, it was hoped that factors obtained from the factor analysis would be at least somewhat representative of the substantive issues underlying the research on the sources of social

support. As previously cited in Chapter 2, the three main issues which have emerged from this body of research are the distinction between relative, friend, and community sources of support; the importance of both quantity and quality of support; and the importance of work and neighborhood satisfaction.

Additional Analyses for Study 2

Factor Analysis of Individual Supports

In addition, in Study 2, a factor analysis of the 16 individual supports (e.g., mother, father, etc.) was carried out to determine whether these individual items do in fact cluster into the categories of relative, friend, and community resources. This factor analysis yielded four factors three of which did indeed represent relative, friend, and community sources of support. The fourth factor appeared to represent marital status. To further investigate marital status, two additional analyses were performed. First, a *t*-test was carried out comparing adjustment scores from the PERI scale for married versus unmarried subjects. Second, factor analyses for the 16 individual items of the SDSSI were carried out separately for married and unmarried subjects. Since the factor

structures for these two subgroups were almost identical, married and unmarried subjects were included together in all other analyses.

Analyses Relating to Response Style Measures

Since one of the main reasons for carrying out Study 2 was to examine the relationship of variables of the SDSSI and response style tendencies, correlations were computed between all 17 variables extracted from the SDSSI and the three response style measures - the social desirability score from the Crowne-Marlowe Scale, and the social desirability and acquiescence scores from the 20 neutral adjectives of the Bem Sex-Role Inventory. Correlations between these response style variables and age and the measure of adjustment from the PERI scale were also computed. It was expected that most correlations obtained would be close to zero, or at least be non-significant. A comparison of the pattern of correlations between the SDSSI variables and the two different measures of social desirability, the one from Crowne-Marlowe Scale and the one from the Bem Sex-Role adjectives, was also carried out. If there were differences here, it was predicted that the correlations would be stronger for the Bem Sex-Role adjectives as this measure is a more covert one of social

desirability. Correlations among the three response style measures were also computed for all subjects and for each of the four subgroups of subjects - males who have used community resources in the past, females who have used such resources, and males and females who have not used community resources in the past.

Use of Composite Measures from Factor Analyses

To further investigate the relationship between adjustment and the three main issues which have emerged from the research on the sources of social support - the distinction between friend, relative, and community sources of support; the issue of quantity versus quality of support; and the importance of work and neighborhood satisfaction - correlations were computed between adjustment scores and composite measures obtained from the factor analyses of the SDSSI variables (e.g. NWREL, NWFRD, etc.) and of the 16 individual supports of the SDSSI. A total of five composite measures were computed from the factor analysis of the SDSSI variables as five factors emerged from this factor analysis. Three composite measures were used as a result of the factor analysis of the 16 individual SDSSI items. The correlations between adjustment and the composite measures were computed both for all subjects and for the four subgroups of subjects

- males who had used community resources in the past, females who used such resources in the past, and males who had not previously used community sources of support.

In addition, correlations were computed between these eight composite measures and the three measures of response style to futher investigate the relationship between response style patterns and results obtained from the SDSSI. Once again, these results were carried out for both the total group of subjects and the four subgroups.

Analyses Relating to the Types or Categories of Support

Four different analyses were carried out for the responses to the questions on the types or categories of support obtained from the most often used and the most helpful source of support. First, frequencies for the 16 individual sources of support (e.g. mother, father, etc.) were obtained to determine how many times each of these sources had been cited as the most often used and most helpful source of support. Second, frequencies were obtained for each of these types or sources of support (e.g. made me feel that I was loved and cared for, etc.) to determine how many times each of these categories was cited as being provided by the most often used and the most helpful sources of support. Third, t-tests were performed

for each of the sources to determine whether there were significant differences in adjustment between recipients and non-recipients of each of the types of support. Finally, totals of how many categories of support were provided for each subject by the most often used and the most helpful sources of support were computed, and correlations were computed between these totals and the PERI measure of adjustment.

It was hypothesized that if any significant results were obtained from the t-tests mentioned above, that recipients of a particular category of support would have higher adjustment scores than non-recipients. It was expected that if any significant correlations were obtained between adjustment and the total number of categories of support cited for the most often used or the most helpful source of support, that these significant correlations would be positive, indicating that a receipt of more types or an overall broader support was associated with better adjustment.

One Final Analysis for Study 2

One final analysis for Study 2 was to compute correlations for each of the 16 individual supports (e.g., mother, father, etc.) between the satisfaction rating for

past usage of that support and the PERI measure of adjustment. Since this particular analysis had not been carried out in previous studies, it was difficult to formulate a hypothesized result. One possible formulated hypothesis was that correlations between satisfaction ratings and adjustment would be strongest for friend supports, as these supports have seemed most important for young subjects as evidenced by higher utilization rates in Study 1 and in the previous study of Lewis & Jones (1980).

CHAPTER 9

RESULTS OF STUDY 2

The first analysis for Study 2 was a comparison of scores on the 17 SDSSI variables between subjects who had completed their questionnaires in class as opposed to those who had filled out the test batteries at home. Only one significant difference was found, for the variable NUCOM (1.42 average for classroom subjects as opposed to 1.31 for at home subjects, $p,<.03$). Since one significant difference out of 17 is just about the number we would expect by chance, results for classroom and at home subjects were combined for the remaining analyses of Study 2.

Analyses Repeated from Study 1

Frequencies of SDSSI Variables

The average scores for each of the 17 variables output from the SDSSI are given in Table 6. Concerning the total number of supports used for all subjects, the average total number of supports used in the past was 7.81, somewhat higher than the figure of 6.47 for subjects of Study 1. This difference may in part be accounted for by the three

added supports included in the version of the SDSSI used in Study 2 - child or grandchild, boss or supervisor, and co-worker. Subtracting out the instances of these three supports for Study 2 subjects, the average figure for NUTOT becomes 6.69 which is still slightly (3.4%) higher than the 6.47 average for Study 1 subjects. This difference may in fact have been greater had exactly the same inventory been used for both studies as some of the indications of use of the three added supports may have been cited under "other friend" or "other relative" by Study 1 subjects.

Insert Table 6 about here

Looking at the past usage of relative, friend, and community supports, the average figure of 1.14 for community supports for Study 2 subjects was almost the same as the 1.18 figure for Study 1 subjects. Concerning relative supports, subtracting out the past use of child or grandchild, the figure for Study 2 subjects of 3.20 is still a bit higher (by about 7%) than that for Study 1 subjects, 2.99. The average past number of friend supports used for Study 2 subjects after subtracting out the newly added supports of boss or supervisor and co-worker is 2.35, very slightly higher than the 2.28 figure for Study 1 subjects.

Thus, concerning number of supports used in the past, the figures for Study 2 subjects are a little higher than for Study 1 subjects with regard to friend and relative supports, a not too surprising finding in view of the fact that Study 2 subjects were older than Study 1 subjects, 27.1 to 23.1, on the average.

A similar pattern of results appears to have occurred for the "NW" variables, the number of supports one would "probably or definitely" go to for help with a personal problem. The average number of community resources one would probably or definitely use for help with a personal problem is about the same for Study 2 subjects, .37, as for Study 1 subjects, .34. The number of relatives and friends one would probably or definitely use is higher for Study 2 subjects, 1.56 and 1.60 respectively, as opposed to 1.36 for both relatives and friends for Study 1 subjects; once again some of this increase may be attributable to the three additional supports for the version of the SDSSI used in Study 2.

Concerning satisfaction ratings, in Study 1, friend satisfaction ratings were highest, 3.94 out of 5.00, followed by relative ratings, 3.70, and then ratings for community resources, 3.52. In Study 2, however, while

friend support average ratings are still highest, 3.97, relative ratings, 3.96 average, and ratings for community sources, 3.92 average, are at just about the same level as friend ratings. Perhaps with increasing age persons either are able to develop more satisfying supports or they view their support relationships as more satisfying.

Concerning NRATE, rating of one's neighborhood, it is not surprising that the average rating of subjects of Study 2, 3.93, is somewhat higher than that for Study 1 subjects, 3.47. All of the subjects of Study 2 compared to about 45% of the subjects of Study 1 attended a private university rather than a public institution. Also, as previously stated, aproximately 90% of the subjects of Study 2 were employed full-time, and many were in somewhat lucrative jobs in business or finance.

With regard to WRATE, work satisfaction rating, it is a bit surprising that the average figure for Study 2 subjects, 3.63, was lower than that for Study 1 subjects, 3.88. One possible explanation is that the figure for Study 2 subjects was based on jobs which, for the most part, seemed to be full-time jobs, while the jobs for Study 1 subjects may have consisted more of part-time jobs. Perhaps resentment towards full-time jobs, and hence less positive satisfaction

ratings, may have occurred more for full-time rather than for part-time jobs. Another possible explanation is that Study 2 subjects may have had jobs which required too much responsibility.

Concerning the three additional variables extracted from the revised SDSSI, first, NGONTU, the number of persons who have gone to the subject for help with a personal problem, had an average value of 5.97. Interestingly, this figure is almost a full 2 points below the total number of supports used by subjects in the past, 7.81. Hence our subjects of Study 2 seem to be more users than providers of social support. This 7.81 figure is reduced to only 6.67, still somewhat greater than 5.97, when the 1.14 figure for community resources is subtracted.[8] Of the 7.81 total number of their supports used in the past, 5.22 sources on the average involved reciprocity (NRECIP), that is, both the providing and receipt of support. The average satisfaction rating of these reciprocal relationships was 4.03, slightly, but not appreciably, higher than the average rating for all supports, 3.95.

With regard to gender differences, in Study 1 females scored higher than males on seven of the eight SDSSI variables involving number of supports and five of the six

variables relating to satisfaction ratings, but none of the differences was significant.[9] In Study 2, females again scored higher than males on seven of the eight measures concerning number of supports, but here there were three significant differences. On NWTOT, total number of sources subjects would "probably or definitely" go to with a personal problem, females cited 3.85 sources as opposed to 3.13 for males ($p<.02$). Concerning NWFRD, the number of friends one would probably or definitely seek out for help with a personal problem, females again were significantly higher than males, 1.79 to 1.36 ($p<.02$). Also, for NUFRD, the number of friends used in the past, females cited a significantly higher number than males, 3.64 to 3.18 ($p<.04$). The two added variables for Study 2 relating to number of supports, NGONTU and NRECIP, were also significantly higher for female than for male subjects. The average female rating for NGONTU, number of persons who have gone to you for support, was significantly higher than that for males, 6.36 to 5.48 ($p<.02$). This finding was also true for NRECIP, number of reciprocal relationships, with a 5.60 average for females as opposed to a 4.73 figure for males ($p<.02$). Concerning satisfaction ratings in Study 2, four of the seven variables were higher for females than males,

but these figures were all quite close with no significant differences obtained.

With regard to a comparison between users and non-users of community supports, the finding of Study 1 that users of community resources also tend to utilize other sources of support more occurred again in Study 2. The less interesting findings here are that users of community resources have a far greater number of total supports, 4.05 to 2.86, ($p<.001$) and community supports, .64 to .03, ($p<.001$) that they would probably or definitely use for help with a problem in the future, and a greater number of total supports that they have used in the past, 9.27 to 6.00 ($p<.001$). Of more interest are the results that past users of community resources also have used friends more in the past, 3.81 average to 2.98 for past non-users of community resources ($p<.001$), as well as relatives, a 3.41 average to 3.02 ($p<.04$), and have more friends that they would probably or definitely go to for help with a problem in the future, 1.74 to 1.41 for past non-users of community resources ($p<.07$). The figure for relatives one would probably or definitely go to for help with a personal problem was also higher for past users of community resources, 1.67 to 1.42, but this difference did not reach or approach significance.

Finally, both the number of persons who had gone to the subject for support and the number of reciprocal relationships were significantly higher for past users of community supports than for non-users. The figures for NGONTU were 6.50 for past community support users to 5.35 for non-users ($p<.001$). For NRECIP, the corresponding figures were 5.96 to 4.36 ($p<.001$). No significant two-way interactions were obtained for any of the 17 SDSSI variables according to sex of the subjects and past use or non-use of community resources.

Use of Individual Supports

The proportion of persons going to the most often used of the 16 individual sources of support (mother, father, etc.) and the individual supports with the highest average satisfaction ratings are given in Table 7. The two most often used sources of support, as in Study 1, are best friend and mother, cited by 90.1% and 86.8% of subjects respectively. Once again, the other most often used individual sources consist entirely of either friend or relative supports - brother or sister (78.9%), father (76.8%), other friend (72.2%), boyfriend or girlfriend (68.6%), and co-worker (63.6%). The use of spouse, cited by 33.1% of all subjects, increases to 78.1% when based only on

the number of persons married, 64, rather than all of the subjects, 151.

Insert Table 7 about here

With regard to satisfaction ratings, again as in Study 1, the three highest individual supports were spouse, boyfriend or girlfriend, and best friend, with almost identical ratings of 4.28, 4.27, and 4.25 respectively. Once again, two community supports appear on this list - therapist or counselor which had appeared in Study 1, with an average rating of 3.91; and teacher, which had not appeared in Study 1, with a rating of 3.79. The community resource religious leader, which had been found among the highest satisfaction ratings in Study 1, was ranked 12th in Study 2 with an average rating of 3.58.

Concerning gender differences, if we exclude community group, which was utilized by only 8 subjects (4 males and 4 females) and child or grandchild, cited by only 4 subjects (3 males and 1 female), of the remaining 14 supports, all of which were used by at least 33 subjects, females had higher utilization rates on 12 of these 14 supports. This number of higher values for females was significantly more than we would expect by chance (n=14, p<.02, according to use of the

binomial theorem). In addition, the female utilization rate for best friend, 95.2%, was significantly higher than that for males, 83.6% ($p<.03$), and the differences for other friend, 78.6% for females to 64.2% for males, and boyfriend or girlfriend, 75.0% to 61.2% with female rates higher, approached significance ($p<.06$ and $p<.07$ respectively). Finally, when including only the number of subjects who were married, females went significantly more to their spouses for help than males, 85.2% to 73.0% of the the time, with this difference approaching significance ($p<.10$). Thus the hypothesis that females would have higher utilization rates than males if gender differences existed was supported.

With regard to gender differences on satisfaction ratings of individual supports, excluding the infrequently used sources of community group and child or grandchild, females gave higher ratings than males to 10 of the remaining 14 individual sources. The occurrence of 10 out of 14 higher ratings by females is not more than could be predicted by chance ($p=.18$ by use of the binomial theorem). Also, none of the differences between males and females on satisfaction ratings was significant or approached significance.

Correlations Between SDSSI Variables and Adjustment

The correlations between the 17 variables extracted from the SDSSI as well as age and the PERI measure of adjustment for all subjects and for subjects broken down according to gender and past use or non-use of community resources is given in Table 8.

Insert Table 8 about here

If we look carefully at this table and, at Table 3, which provides the corresponding results for Study 1, there is a fair amount of replication of results. First, looking at all subjects, the variables relating to the number of supports in Study 1 were all negative except NWREL which was virtually 0 (.008), although only 1 correlation was significant (NWCOM=-.174, $p<.05$). In Study 2, of 10 correlations involving variables relating to the number of supports, the 8 from Study 1 plus the 2 added variables of NGONTU and NRECIP, 7 of these were negative with 2 of these results reaching significance, NWCOM=-.19 ($p<.02$) and NUCOM=-.21 ($p<.01$), and one approaching significance, NUFRD=-.12 ($p<.08$). However, in Study 2, two of the three positive correlations between number of support variables and adjustment were significant, those for NWREL (.21,

$p<.01$) and NUREL (.17, $p<.03$). Thus, overall, the two studies seem to provide evidence that the fewer number of supports one uses outside of the family, the better adjusted one is. In addition, for Study 2 subjects, a greater use of relative supports is associated with higher adjustment. The importance of relative supports for Study 2 subjects is also highlighted by the significant correlation between satisfaction with relative supports and adjustment, $r=.22$ ($p<.01$). This finding replicated the results of Study 1 where the corresponding figure was .175 ($p<.05$).

Observing the correlations of the SDSSI variables with adjustment, we see that for all subjects, each of the seven variables indicating satisfaction with supports is positively correlated with adjustment, with four of these results reaching significance and one more approaching significance. Of these findings the highest correlation is for ARECIP, $r=.29$ ($p<.001$), the average satisfaction rating for reciprocal relationships. This is also the only variable which yielded a significant or approaching significant result for all of the four subgroups of subjects; the figures ranged from .24 ($p<.10$) for females who had not used community resources in the past to .38 ($p<.02$) for males with no prior community resource use.

The other significant results between satisfaction ratings and adjustment for Study 2 subjects were for total supports, r=.18 (p<.02), and neighborhood rating, r=.17 (also p<.02). Work satisfaction rating, which was significantly correlated with adjustment for Study 1 subjects, r=.27 (p<.01), only approached significance for Study 2 subjects, r=.11 (p<.10). So it appears overall that satisfaction ratings, especially for relatives and for reciprocal relationships, are positively correlated with adjustment.

To further investigate the relationship of the satisfaction ratings for supports and adjustment, correlations between these satisfaction ratings and adjustment were computed for each of the 16 individual sources of support of the SDSSI (e.g. mother, father, etc.) and adjustment scores. The results are given in Table 9. Each correlation was based on the subsample of persons who had used that individual support in the past. Ignoring the results for child or grandchild and community group, which were based on only four and six subjects respectively, all of the correlations for relative supports except for other relative were positive and significant. The highest correlation obtained was for spouse, .38 (p<.01), followed

by mother and father, both .19 ($p<.02$), and sister or brother, .15 ($p<.05$). The only other significant result for any of the individual sources was for best friend, .19 ($p<.02$), another support which most persons could consider quite important. Thus it appears that most supports which we intuitively feel might be most important (close family and best friends) do indeed seem to be most important for Study 2 subjects. However, one other support which we might have thought to be important for Study 2 subjects, boyfriend or girlfriend, was not significantly related to adjustment ($r=0$). A possible reason for this is that a boyfriend/girlfriend relationship is less likely to be stable than those of a best friend or relatives.

Insert Table 9 about here

Concerning the four subgroups of subjects, there appears to be some replication of results from Study 1 in the Study 2 findings, and some differences as well. Starting with the females who had not used any community resources in the past, in Study 1 this subgroup had three correlations which either reached or approached significance, and all of these involved number of supports - NWTOT ($r=.420$, $p<.05$), NUTOT ($r=.339$, $p<.10$), and NUREL

(r=.325, p<.10). The finding for NUREL, number of relatives used in the past, was replicated in Study 2, r=.36 (p<.03). However, in Study 2, the other finding involving these same NW and NU variables which reached or approached significance was negative, for NUFRD, r=-.28 (p<.07). Also, the non-significant correlations for the other NW and NU variables in Study 2 are a mix of positive and negative values making the relationship between number of supports and adjustment less clear for Study 2 females who had not previously used community resources than for their Study 1 counterparts. However, the importance of number of supports over satisfaction ratings for this subgroup, as had been the case in Study 1, is also supported by the significantly positive correlation between adjustment and NGONTU, r=.37 (p<.02), the number of persons who have gone to the subject for support with a problem. This subgroup was the only one of the four to yield a significant correlation between NGONTU and adjustment.

For females who had used community resources in the past, in Study 1 three significant correlations between SDSSI variables and the PERI scale of adjustment were obtained - those for AUTOT, total satisfaction with past supports, r=.454 (p<.01); AUREL, satisfaction with support

provided by relatives in the past, r=.415 (p<.05); and WRATE, work satisfaction rating, r=.634 (p<.01). In Study 2, the result for AUREL again reached significance, r=.28 (p<.03), while that for AUTOT approached significance, r=.19 (p<.09). The finding for WRATE was not significant, however (r=.07). In addition, in Study 2, for females who had used community resources in the past, three other results approached significance. The correlation for NWREL, the number of relatives one would probably or definitely go to for help with a personal problem, was .22 (p<.07). Also, the correlations for NWTOT, the total number of supports one would probably or definitely go to for help with a personal problem, and for NUFRD, number of friends used in the past, approached significance, r=.19 and r=.21 respectively (p<.10 and p<.07). In addition, the correlation between ARECIP, the satisfaction rating for reciprocal relationships, and adjustment was significant for this subgroup of subjects, r=.33 (p<.01). Age, which had been significantly correlated with adjustment for this subgroup in Study 1, r=.425 (p<.01), was not significantly correlated with adjustment for this or any other subgroup in Study 2.

The next subgroup of subjects, males who had used community resources in the past, had in Study 1 only two

significant correlations - for NUREL, number of relatives used in the past, r=.349 (p<.05) and for WRATE, work satisfaction rating, r=.444 (p<.05). In Study 2 the significant correlation for NUREL was replicated, r=.33 (p<.04), but the one for WRATE was not significant, r=-.10 (n.s.). In addition, for this subgroup in Study 2, the correlation for NRATE, neighborhood rating, was significant, r=.36 (p<.02). It is interesting that neighborhood rating was significant for both male subgroups in Study 2. Perhaps for these subjects, who are for the most part in business and finance careers, economic success may be more important than for other subjects, and of all the SDSSI measures, neighborhood ratings would most closely be related to economic success. Two other correlations also approached significance for this subgroup - those for NWREL, number of relatives one would probably or definitely go to for help with a personal problem, r=.28 (p<.06); and ARECIP, satisfaction with reciprocal relationships, r = .28 (p<.08) as well.

Finally, we turn to the males who had not used any community resources in the past. In Study 1, this group had yielded three significant and two approaching significant results, all of which were negative. None of these findings

was replicated in Study 2. In fact, this subgroup had the highest number of significant correlations, five, and all were positive - NWTOT, total number of sources one would probably or definitely go to for help with a personal problem, $r=.39$ ($p<.02$); ARECIP, satisfaction rating with reciprocal relationships, $r=.38$ ($p<.02$); WRATE, work satisfaction rating, $r=.37$ (p also $<.02$); NRATE, neighborhood satisfaction rating, $r=.32$ ($p<.04$); and AUTOT, the average satisfaction ratings for all supports used in the past, $r=.29$ ($p<.05$). Another positive correlation approached significance, that for NUREL, number of relatives used in the past, $r=.25$ ($p<.08$). The only negative correlation for this subgroup which reached or approached significance was for NWCOM, number of community resources one would probably or definitely use in the future, $r=-.24$ ($p<.09$). However, this lsat result can for all practical purposes be ignored as the mean for this variable for this subgroup was only .03, which for a subgroup size of 34, indicates that the variable's value for one of these subjects was 1, and for all other subjects, it was 0.

It is very difficult to say why the results for this subgroup of subjects was so different from the corresponding results of Study 1 and also why in both studies correlation

patterns for this subgroup seemed most different from the other three groups. The difference between males who had not used community resources in the past and the other subgroups can be observed further in Table 10, which gives the average scores on all of the SDSSI variables and the adjustment scores for subjects broken down both by gender and past use or non-use of community resources. Looking at the ten variables concerning number of supports, the males who had used no past community resources were always lowest of the four subgroups (except for NWCOM for which the subgroup was tied with females past non-users of community resources). In addition, males who had not used community resources in the past rated themselves highest on adjustment (3.82 average) compared with the other three subgroups (3.67, 3.75, and 3.31 averages). These results, that one subgroup of subjects had a low number of supports and high adjustment scores, may in part explain the negative correlations for all subjects between number of supports and adjustment. Looking at Table 10 again, the satisfaction ratings for males who had not used community resources in the past do not seem very different from the other three subgroups. In any event, the overall findings of Study 2 seem to provide furhter support that a four-way breakdown of

subjects as has been carried out here seems more appropriate than merely an examination of gender differences.

Insert Table 10 about here

Factor Analysis

The factor analysis results for Study 2 are not quite as clear-cut as the results obtained in Study 1. In Study 1 (see Table 4), four factors with eigenvalues greater than 1 were extracted; these four factors accounted for 65.6% of the total variance. In Study 2, once again a principal factor analysis using a varimax orthagonal rotation was carried out.[10] Five factors with eigenvalues greater than 1 were extracted, accounting for 71.2% of the total variance. The results are given in Table 11. All loadings exceeding .3 are once again in bold type. Factor 1, accounting for 21.0% of the total variance, is very similar to factor 1 obtained in the first study. The three highest loadings were for AUREL, AUCOM, and AUFRD in both studies, satisfaction ratings for relatives, community resources, and friends. Thus, as in Study 1, this factor is named "Quality of Support." The loadings for AUREL, AUCOM, and AUFRD in Study 2 were .752, .742, and .527 respectively.

Insert Table 11 about here

Factor 2 of Study 2 had as its two highest loading variables NWREL (.773) and NUREL (.672). This factor accounted for 16.1% of the total variance and was most similar to factor 3 of Study 1 where the two highest loading items were also NWREL and NUREL. However, in Study 1 the next highest loading factor was AUREL (.333) leading us to call this factor, "Relative Supports." In Study 2, the loading for AUREL on factor 2 is only .120; thus, we now call this factor, "Quality of Relative Supports."

Skipping to factor 4 in Study 2, this factor very much resembles factor 4 of Study 1. In both cases the three highest loading items are NWCOM, NUCOM, and AUCOM, all measures relating to community supports. Thus, this factor is appropriately named "Community Supports," as it was in Study 1. The loadings for NWCOM, NUCOM, and AUCOM on factor 4 were .827, .426, and .226 respectively. This factor accounted for 10.6% of the total variance in Study 2.

Factor 5 of Study 2 appears very similar to factor 2 of Study 1. In both cases the three highest loading variables are NWFRD, NUFRD, and AUFRD, all variables relating to "Friend Supports," a seemingly appropriate name for this

factor. The loading for these three variables in Study 2 are .823, .289, and .203 respectively. In Study 2, however, this factor accounted for only 9.3% of the total variance as opposed to 18.1% for factor 2 of Study 1. Some of this difference may be explained by the presence of factor 3 in the second study whose highest loading is for the item NUFRD (.864), number of friends used in the past. The second highest loading variable on this factor is NUCOM (.381). This factor, which accounted for 14.2% of the variance in Study 2, may be called, "Past-Use of Non-Family Supports." The appearance of factor 3 in Study 2 seems to indicate a greater tendency for Study 2 subjects than for Study 1 subjects to associate a use of community resources with a greater friend support usage. This tendency was also found in the result of Table 6 in which past users of community resources used friends more in the past, a 3.81 average number, as opposed to past non-users of community resources, 2.98 average ($p<.001$). While this finding was also true for Study 1 subjects, in which a 2.38 average number of friends used in the past was found for past community resources users as opposed to a 2.14 figure for past non-users of community supports, the difference for Study 1 subjects was not significant.

New Analyses of Study 2

Factor Analysis of the Individual Supports

A factor analysis of the 16 individual supports of the SDSSI (e.g., mother, father, etc.) was carried out to determine whether in fact the use of these supports does cluster into the categories of relatives, friends, and community sources. Sixteen dichotomous variables, one for each support, were used as input to the factor analysis. The variable for each individual support was equal to 1 if that support had been used in the past and 0 if it had not been previously utilized. A principal components factor analysis with a varimax oblique rotation was utilized. Five factors with eigenvalues greater than 1 were obtained. One of these factors, however, factor 3, had as its highest loadings the variables for community group (.90) and child or grandchild (.55). Since only four subjects had utilized child or grandchild as a source of support and only eight had used a community group, it was thought that this factor may have merely been representing the fact that most subjects had used neither of these supports.

The analysis was rerun omitting the variables for child or grandchild and community group. Four factors with eigenvalues greater than 1 were obtained. These factors

accounted for 54.5% of the total variance. The results of this factor analysis are given in Table 12. The first factor appeared to represent "Community Supports"; it explained 23.3% of the total variance. The highest loading items were for teacher (.77), doctor (.64), and religious leader (.61). Also loading fairly highly on this factor were the variables for therapist (.39), boss or supervisor (.31), and other relative (.30). Factor 2 had as its highest loadings those for spouse (.68) and boyfriend or girlfriend (-.79); this factor accounted for 12.8% of the total variance. An appropriate name for this factor appears to be "Marital Status," as the results indicate that those subjects who use their spouse as a support (most probably married subjects) would not use boyfriends or girlfriends (probably used by unmarried persons). The third factor, explaining 10.6% of the total variance, seems to represent "Relative Supports"; the highest loading items here are for mother (.61), father (.60), and sister or brother (.38). Finally, the fourth factor, accounting for 7.8% of the total variance, appears to reflect "Friend Supports." The highest loading items for this factor are for other friend (.76), co-worker (.54), and best friend (.53). The variable for boss or supervisor also has a reasonably high loading (.28)

on this factor. Overall, then, this factor analysis on the individual items of the SDSSI appears to support the idea of the three broad sources of support - relatives, friends, and community sources.

Insert Table 12 about here

Since one of the factors from the factor analysis of the 16 individual items of the SDSSI represented marital status, it was desired to determine whether the overall factor structure of these items differed for married and unmarried subjects. To accomplish this, separate factor analyses were run for the married subjects (n=64) and the unmarried subjects (n=87). One individual support, spouse, was omitted from these analyses, since most married subjects had used their spouse as a support and most unmarried subjects had not, and hence, a "pseudo-factor" would have been obtained if the item spouse had not been removed. For the factor analyses for both the married and unmarried subjects, factor 1 had as its four highest loading items the community supports of teacher, doctor, religious leader, and therapist. Factor 2 for the married subjects and factor 3 for the unmarried subjects both had as their three highest loading factors the relative supports of mother, father, and

sister or brother. Also, factor 3 for the married subjects and factor 2 for the unmarried persons had the same three highest loading factors - the friend supports of best friend, co-worker, and other friend. Since these factors were the same for both married and unmarried subjects, as far as the highest loading items, and were also the same as factors 1, 3, and 4 of the factor analysis for all subjects combined (all but the one representing marital status), it was concluded that the factor structure for married and unmarried subjects were similar enough to permit these subjects to be included together in subsequent analyses.

Relationship Between Composite Variables and Adjustment

To further investigate the relationship between the sources of social support and adjustment, composite measures obtained from the factor analyses of the SDSSI variables and of the 16 individual supports were created, and correlations between these variable and the adjustment score from the PERI scale were obtained. A total of eight composite variables were computed. The first five were obtained from Table 11, the factor analysis of the SDSSI variables.

These variables are:

1. SATIS, the sum of AUREL, AUFRD, and AUCOM, the three

highest loading items on factor 1 of Table 11, indicating a measure of overall satisfaction with supports.

2. NUMREL, the sum of NWREL and NUREL, the two highest loading items on factor 2 of Table 11; this variable denotes the number of relative supports.

3. OTHNUM, the sum of NUFRD and NUCOM, the two highest loading items on factor 3 of Table 11, indicating other (namely friend and community) number of supports used in the past.

4. COM, the sum of NUCOM, NUCOM, and AUCOM, the three highest loading items on factor 4 of Table 11. This composite variable represents community supports.

5. FRD, representing friend supports, this composite variable is the sum of the three highest loading items on factor 5 of Table 11 - NWFRD, NUFRD, and AUFRD.

From Table 12, the factor analysis of the 16 individual supports, three more composite measures were obtained.

6. INDCOM, individual community supports, which is the sum of the four community supports loading highly on factor 1 of Table 12 - teacher, doctor, religious leader and therapist.

7. INDREL, denoting individual relative supports, is the sum of the items mother, father, and sister or brother, the three highest loading items of factor 3 of Table 12.

8. INDFRD, standing for individual friend supports, and is the sum of the three highest loading items of factor 4 of Table 12 - the friend supports of best friend, co-worker, and other friend.

First, to investigate the relationship between marital status and adjustment, a t-test comparing married and unmarried subjects on their PERI scale of adjustment score was carried out. The results revealed that married subjects scored significantly higher than unmarried subjects on adjustment, 3.76 average to 3.48 ($p<.001$). This result was not surprising as previous research has shown marriage to be an important correlate of adjustment. For example, as stated in Chapter 2, Berkman & Syme (1979) found marriage and contact with friends to be the strongest predictors of mortality in their nine year prospective study on a general population (the relationship being negative of course).

Correlations between each of the eight composite variables described above and the PERI scale of adjustment are given in Table 13. Results are provided for all

subjects and for the four subgroups of subjects broken down according to gender and past use or non-use of community resources.

Insert Table 13 about here

Looking first at the composite variables from the factor analysis of the SDSSI variables, we see that both NUMREL, number of relatives used, and SATIS, overall satisfaction rating with supports, are positively correlated with adjustment for all subjects and for all subgroups of subjects with most of the results reaching or approaching significance. On the other hand, OTHNUM, indicating number of friend and community supports, for the overall group and for each subgroup negatively correlated with adjustment, the result approaching significance (for females who had not previously used community resources, (r=-.28, p<.07) and reaching significance for all subjects (r=-.20, p<.01)).

These results are in accord with the correlations obtained between adjustment and the composite variables obtained from the 16 individual supports. For these composite measures, INDREL, indicating number of relatives used, is positively correlated with adjustment, and INDCOM and INDFRD, representing use of community and friend sources

of support respectively, are negatively correlated with adjustment. These three results are all significant for the overall sample of subjects (r=.21, p<.01, for INDEL; r=-.25, p<.001, for INDCOM; and r=-.15, p<.04, for INDFRD). In addition, the correlation for INDREL is significant for males who had previously used community resources (r=.53, p<.01) and the correlations for INDREL and INDFRD both approach significance for females who in the past had used community resources r=.22 and r=.21 respectively (both p<.07).

The results of Table 13 provide a convenient summary of many of the results of Table 8, the correlations between all of the SDSSI variables (plus age) and adjustment. Looking back at Table 8, of 18 correlations between adjustment and the variables AUTOT, AUREL, AUFRD, and AUCOM, 16 are positive with 4 of these reaching significance and another 2 approaching significance, indicating an overall positive relationship between adjustment and satisfaction with supports for Study 2 subjects. For the variables, NWREL and NUREL, in Table 8, all 10 of the correlations are positive with 4 reaching significance and another 3 approaching significance, thus indicating a positive relationship between number of relatives used as supports and adjustment

for these subjects. Finally, in Table 8, for NUFRD and NUCOM, representing number of friends and relatives used in the past, 7 of the 8 correlations obtained are negative, (the last one being 0), with one of these reaching signficance and three more approaching significance. So, once again, the results of Tables 8 and 13 are in accord, indicating that for Study 2 subjects, a negative relationship exists between number of non-relative supports used and adjustment.

Correlations of SDSSI Variables with Response Style Measures

The correlations between the 17 variables extracted from the SDSSI, as well as adjustment and age, and the three response style measures - SDPCMS, SDBSRI, and ACBSRI - are given in Table 14. Recall that SDPCMS is the percentage of socially desirable responses given on the Crowne-Marlowe Scale, and SDBSRI and ACBSRI are, respectively, social desirability and acquiescence scores obtained from the Bem Sex-Role Inventory neutral adjectives. Observing these correlations, we see that most of the values obtained were quite low. For the correlation of the 17 SDSSI variables with SDPCMS, 9 were lower in absolute value than .05 with 3 more lower than .10. Only 2 of the 17 results reached

significance, those for NWREL, r=.15, and NUREL, r=.17 (both p<.03). For SDBSRI, the relationships with the SDSSI variables were a little stronger with 4 correlations reaching significance, those for NWREL, r=.22; AUREL and ARECIP, both r's=.21 (p<.01 for all three); and for NRATE, r=.19 (p<.02). Once again, however, most of the correlations were small, with 7 of them .05 or less in absolute value and 5 of the remaining ones less than .10. In fact, the strongest correlate of these two measures of social desirability was the PERI measure of adjustment which had a .25 correlation with SDPCMS and .38 with SDBSRI (both p<.001).

Insert Table 14 about here

Concerning acquiescence, only two of the SDSSI variables had significant correlations with ACBSRI, the measure of reciprocity - ARECIP, r=.15 (p<.04), and the number of persons who had gone to the subject for help,NGONTU, r=-.14 (p<.05). The fact that one of these significant correlations was positive and one negative leads us to conclude that these two significant correlations may have been spurious. For the other correlations between SDSSI variables and ACBSRI, once again most values obtained

were small, with five of them below .05 in absolute value and eight more less than .10. Thus our hypothesis that most correlations between the SDSSI variables and measures of response style would be small and non-significant was supported. Also, as hypothesized, the correlations between the SDSSI variables and the Bem Sex-Role measure of adjustment appear a little higher than those between the SDSSI variables and the Crowne-Marlowe measure.

Table 15 gives the correlations which reach or approach significance between the SDSSI variables, and also age and adjustment, and the three response style variables for subjects broken down according to gender and past use or non-use of community resources. Three interesting results from this large number of findings are the following: (1) There are only three instances in which an SDSSI variable is significantly correlated with both SDPCMS and SDBSRI - NRATE for males without past use of community resources, NGONTU for females who had not used community resources in the past, and NWCOM for males with prior use of community resources. (In this third case, one of the significant correlations was positive, .34, and the other negative, -.34). (Adjustment was also significantly correlated with both social desirability measures for males with no previous

use of community resources.) (2) The number of significant or approaching significant results between SDSSI variables and SDPCMS is 13 and between SDSSI variables and SDBSRI is 17, again indicating that the Bem neutral adjectives may be a more sensitive measure of social desirability for this subject pool than the Crowne-Marlowe Scale. (3) Interestingly enough, all 6 of the significant or approaching significant correlations between SDSSI variables and ACBSRI are negative for male subjects while 9 of the 11 significant or approaching significant correlations for female subjects are positive. It is somewhat difficult to speculate on the reason for such a pattern of results. One possible explanation is that acquiescence may have a different social meaning for females than for males. For females, being acquiescent may be considered a desirable characteristic, as would adequate support systems, and hence the positive correlations. For males, however, being acquiescent has more traditionally been considered undesirable, and hence would be negatively correlated with the desirable state of having adequate support systems.

Insert Table 15 about here

To further investigate the relationship between the

SDSSI variables and the three measures of response style, correlations between these three measures and the eight composite variables described in the last section were computed. These results are given for all subjects in Table 16 and for the four subgroups of subjects broken down by gender and past use or non-use of community resources in Table 17.

Insert Tables 16 and 17 about here

Observing first Table 16, the two composite variables which correlate most strongly with social desirability are NUMREL, number of relatives used, and INDREL, number of individual relative supports used in the past. These findings are in accord with those of Table 14 in which three of the four correlation values between the variables NWREL and NUREL and the social desirability measures were significant. Thus, it appears for the total subject pool that number of relatives has a small to moderate, yet significant, correlation with social desirability, somewhere in the neighborhood of .2.

The third composite variable of Table 16 which yields significant or approaching significant relationships with social desirability is INDFRD, individual friend supports

used in the past, and here the result is negative. The corresponding results in Table 14 are for the variable NUFRD which also has negative correlations with SDPCMS (r=-.13) and SDBSRI (r=-.04). However, for these values of Table 14, the results for SDPCMS only approaches significance and the one for SDBSRI is not significant. Thus, overall, it appears that the number of friends used in the past has a marginally significant negative relationship with social desirability, somewhere in the neighborhood of .15.

With regard to acquiescence, for the eight composite, one correlation value approaches significance, for INDREL (r=.11, p<.09), just about what we would expect by chance. These findings seem to be in accord with those of Table 14 which indicate overall no significant or approaching significant relationship between the variables of the SDSSI and acquiescence.

Looking at the Table 17 results for the four subgroups of subjects, once again the composite variables having the highest correlations with social desirability are INDREL, for which 5 of 8 values reach or approach significance (though one is negative, r=-.33, for SDPCMS for females without prior community resourse use), and NUMREL, for which 4 of 8 correlations reach or approach signficance (all are

positive here). Thus, further support of a small, but significant, positive correlation between number of relative supports and social desirability are provided by the results of Table 17.

These results are in agreement with those of Table 15, the correlations for the SDSSI variables and response style measures for the four subgroups of subjects. According to Table 15, 2 of the 3 SDSSI variables most highly correlated with social desirability are NWREL, for which 3 of 8 correlations are positive and significant, and nurel, for which 4 of 8 correlations reached or approached significance (with one of these negative, $r=-.32$, again for SDPCMS for females without prior community resource use). The other of the 3 SDSSI variables most correlated with social desirability according to Table 15 in NRATE, neighborhood satisfaction rating, for which 3 of 8 correlations were positive and significant, and 1 correlation was negative and significant.

Concerning acquiescence, the findings for the composite variables in Table 17 once again are in accord with the results of Table 15. For male subjects, 3 of 16 correlations between the composite measures and the acquiescence measure were significant or approaching

significance and all of these results were negative. For females, 4 of 16 correlations between the composite measures and acquiescence were significant and all were positive. Also, only one of the composite figures, SATIS, had a significant or approaching significant result for more than one subgroup, and in this case, the result for males without prior community resource use was positive, while that for females without previous use of community supports was negative. Thus, overall, the findings of Table 17 indicated that correlations between the SDSSI variables and acquiescence were opposite in sign for male and female subjects and also supported the hypothesis that overall the SDSSI responses were not significantly correlated with acquiescence.

Finally, Table 18 gives the correlations among the two measures of social desirability and the measure of adjustment for all subjects and for subjects broken down by gender and past use or non-use of community resources. There is a moderate significant correlation of .30 ($p<.001$) for all of the subjects between the two measures of social desirability. This figure varies from .19 for the subgroup of males who had used community resources to .41 for males with no prior use of community resources. There is also a

significant correlation of .49 ($p<.001$) for all subjects between SDBSRI and ACBSRI, the measures of social desirability and acquiescence obtained from the Bem Sex-Role Inventory neutral adjectives. However, this correlation value held only for one of the four subgroups - females who had used community resources, $r=.74$ ($p<.001$); for the other three subgroups this result was negative, though not significant.

Insert Table 18 about here

Results Concerning Individual Categories or Types of Support

As stated in the previous chapter, in Study 2 each of the subjects was asked to state the person he or she goes to most often for assistance with a personal problem and the person who has been most helpful when it comes to obtaining help with a personal problem. Also, for these persons, subjects were requested to denote which of nine types of support were received. These nine types of categories of support are listed on page 2 of Appendix C.

The number (and percentage) of subjects who said they had received each of these individual types of support from the most often used and most helpful source of support is

given in Table 19. For the most often used source of support, those types of support cited most were: (1) Allowed me to express my emotional feelings (91.4%); (2) Helped me just by knowing he or she would be there if needed (86.1%); (3) Gave me advice on what to do about the problem (83.4%); and (4) Made me feel that I was loved and cared for (80.8%). The two lowest cited types of support were: (1) Gave me financial help (28.5%); and (2) Did some task for me to help make things easier (48.3%). In between in frequency the three types of support found were: (1) Gave me praise or criticism for the way I was handling the problem (74.8%); (2) Gave me information concerning what to do about the problem (71.5%); and (3) Spent time with me socially (66.9%). Thus, the most cited types of support generally involve emotional support with the added cognitive support of advice giving. The more tangible types of support, such as financial aid or carrying out some task, are lowest for Study 2 subjects, not a very surprising finding in view of the overall high socio-economic status of the subjects (as evidenced by their occupations), and their high level of overall functioning (mostly full-time workers attending graduate school at night).

Insert Table 19 about here

The results for the most helpful source of support were almost the same as those for the most often used source. This is not unexpected when we consider that 114 of the subjects (or 75.5%) listed the same source as the most often used and the most helpful. The only difference in the order of the frequencies of the types of support between the most often used and the most helpful source was for "Gave me information concerning what to do about the problem" and "Gave me praise or criticism for the way I was handling the problem," which were fifth and sixth ranked for the most helpful source of support, while these rankings were reversed (sixth and fifth) for the most often used source. Another finding possibly worthy of note is that the greatest difference in frequencies between the most often used and the most helpful source of support occurred for "Spent time with me socially," 66.9% for the most often used as opposed to 58.9% for the most helpful support. This finding could indicate that this type or category of support may in some way be different from the other categories. The fact that the frequency for the most often used support here is higher than for the most helpful source in this case could mean that this type of support is more of a time filler and less

of a transformational (as Kobasa, 1983 has stated) type of support.

To further investigate the importance of these nine categories of support, t-tests were performed comparing the adjustment scores obtained for recipients and non-recipients of each of the categories of support for both the most often used and the most helpful sources of support. None of these 18 t-tests produced differences which were significant or approaching significance. Next, the total number of categories cited for the most often used and the most helpful source of support was computed for all subjects. These results are given in Table 20. Looking at these figures we see that the most often used and most helpful sources of support in general appear to be providing broad support to the subjects of Study 2 as is indicated by the finding that almost 80% of the subjects indicated receiving five or more of the nine types of support from the most often used support (78.7% exactly) and most helpful source of support (78.6%).

Insert Table 20 about here

One further analysis carried out on the categories of social support was to compute correlations between

adjustment and the number of categories of support provided by the most often used and the most helpful sources of support. These results, provided for all subjects and broken down according to sex and past use or non-use of community resources, are given in Table 21. For all subjects and for subjects who had used community resources in the past, there was virtually no correlation between the number of categories of support received and adjustment. For subjects who had not used community resources in the past, however, the correlations were far more substantial, approaching or almost approaching significance. Also, these correlations were opposite in sign for female and for male subjects. For females the correlation was .27 for the most often used source of support ($p<.07$) and .21 for the most helpful source ($p<.13$). For males, however, the figures were negative, -.23 for the most often used source of support ($p<.10$) and -.26 ($p<.08$) for the most helpful cited support. These findings for the subjects who had not previously used community resources seem somewhat similar to the correlations obtained between the SDSSI variables and acquiescence, positive correlations for females and negative results for males. An explanation similar to the one used for those results may apply here. The positive correlations

with adjustment for female past non-users of community resources indicate that for these females subjects a greater use of support is associated with higher adjustment. Since females have traditionally used support more than males, according to past research, greater use or breadth of support by females may be more in accord with a traditional female sex role, and hence, associated with higher adjustment. For males, on the other hand, a more traditionally sex typed role involves autonomy. Hence, less reliance on social supports, indicated here by a lower number of categories, would be related to higher adjustment. The question remains as to why this pattern of results was obtained only for past non-users of community support systems. Perhaps the non-users of community support of these subjects are more bound by traditional sex roles than the users of community supports. This explanation seems more plausible for Study 2 subjects who are primarily business oriented and have full-time employment in corporate environments than it might be for other subject pools.

Insert Table 21 about here

Finally, analyses of the 16 individual sources of support (e.g. mother, father, etc.) were carried out to

determine which of these sources was cited most frequently as the most often used and the most helpful sources of support. For the most often used source, of the 148 subjects (out of 151) who cited only one source as most often used, 70 gave relative sources of support, the leading ones being spouse (by 38 subjects), mother (17 subjects), and sister or brother (10 subjects). Of the 69 subjects who chose a friend support as most often used, 32 chose boyfriend or girlfriend, and 31 gave best friend. Of the 9 subjects who cited a community source of support as most often used, 8 of them listed a therapist or counselor with the last one choosing religious leader. These results were mirrored for the most helpful source of support. Of the 148 subjects who cited one source here, 74 subjects gave relative supports including 34 citings for spouse, 20 for mother, and 12 for sister or brother. Of those 64 subjects who cited a friend support as most helpful, 30 each chose boyfriend or girlfriend and best friend. All 10 of the subjects who gave a community support as most helpful chose therapist or counselor.

Lastly, t-tests were performed comparing adjustment scores for those subjects who chose friend supports as opposed to those who cited relative sources as most often

used and most helpful. For the most often used source of support, those subjects who chose friend supports had an average adjustment score of 3.71 as opposed to those who chose relatives, whose average was 3.53, and the difference between these two averages was significant ($p<.04$). The direction of the difference was the same for the most helpful source of support with a 3.67 average for those who chose friends compared to a 3.59 figure for subjects who chose relatives, but here the results neither reached nor approached significance.

CHAPTER 10

DISCUSSION OF STUDY 2 AND OVERALL DISCUSSION

The discussion of Study 2 and the overall discussion of Studies 1 and 2 together will be divided into four sections. First, the question of whether an inventory with appropriate psychometric properties has been developed will be discussed. Second, some other relevant findings of Studies 1 and 2 will be addressed. Included in this section will be a discussion of the findings for quantity versus quality of support, the different effects of relative, friend, and community supports, the importance of the Study 2 finding for the variable of reciprocity, the breakdown of the subjects into the four subgroups, and the use of the Bem Sex-Role Inventory neutral adjectives as a measure of the response style of social desirability. The third section of this chapter will address some limitations of the present research. Finally, possible directions for future research will be discussed.

Has an Inventory with Appropriate Psychometric Properties Been Developed?

While there are certainly some limitations to the

present research, which will be discussed later in this chapter, the overall evidence seems somewhat extensive that the SDSSI has now been sufficiently tested to allow for its more general use in future research. Let us review the evidence of the psychometric properties of the SDSSI. In Study 1, which was carried out primarily with full-time college students, the initial version of the SDSSI was based on appropriate past research on social support systems which had elicited three basic concepts: (1) the distinction between relative, friend, and community sources of support; (2) the importance of both quantity and quality of supports; and (3) the importance of work and neighborhood satisfaction. Basing the inventory on these concepts satisfied Loevinger's (1957) substantive component of construct validity. As evidence of the structural component of construct validity, a factor analysis of the subjects' responses in Study 1 yielded four very clear factors representing satisfaction with support, friend supports, relative supports, and community resources. Evidence of external validity was obtained by computing correlations between the SDSSI variables and a measure of adjustment from the PERI Scale (Dohrenwend, et al., 1979). With the exception of one of the four subgroups of subjects - males

who had not used community resources in the past - all correlation values which reached or approached significance were positive, as hypothesized. Finally, test-retest correlations of the SDSSI variables appeared adequate, comparing favorably with the Inventory of Socially Supportive Behaviors of Barrera, Sandler, & Ramsey (1981).

In Study 2, three additional individual supports - child or grandchild, co-worker, and boss or supervisor - were added to the inventory along with a question on reciprocity. This additional question was included as a result of the importance of the variable of reciprocity from prior research (e.g., Froland et al., 1979; Mueller, 1980; McFarlane et al., 1981). In addition, two measures to examine for social desirability response style and one variable to measure acquiescent responding were included in Study 2 to investigate whether answers to the SDSSI questions were based on either of these response styles. Also, questions on the types of support received from the most often used and most helpful source of support were included in Study 2. However, these last analyses were not considered part of the initial testing of the psychometric properties of the SDSSI, but rather an attempt to begin to connect the SDSSI research to another area of recent work on

social supports, namely the categories of social support. Study 2 was also carried out with a different subject pool from Study 1, part-time graduate students most of whom (87.4%) were fully employed.

The results of Study 2 were also quite encouraging. For the total subject pool, of the 17 correlations of SDSSI variables with adjustment, 5 were significant and positive with 1 more positive and approaching significance. In addition, 2 correlations were significant and negative with 1 more negative and approaching significance. The 3 negative correlations were all associated with variables related to number of supports, so it is conceivable that for the subjects of Study 2 a lower number of supports is related to better adjustment. When examining correlation coefficient values for the subjects broken down according to sex and past use or non-use of community resources, of 68 values, 10 were positive and reached significance, another 9 were positive and approached significance; only 2 were negative and approached significance, and none were negative and reached significance. So, overall, the hypothesis of a positive relationship between SDSSI variables and adjustment was supported. Many of the significant correlation results of Study 2 were replications of Study 1 results. However,

the significant negative correlations of Study 1 for males who had not previously used community resources were not obtained again in Study 2.

The factor analysis results of Study 2 were not quite as clear-cut as those of Study 1, but the results of Study 2 were still quite similar to those of the first study and representative of the distinction between relative, friend, and community supports. As in Study 1, factors representing satisifaction with supports, friend supports, and community resources were obtained. Another factor representing relative supports had high loadings for the variables representing number of relatives, but a comparitively low loading on satisfaction with relatives (.12), and was thus called "Quantity of Relative Support." Also, an additional factor from those obtained in Study 1 emerged with the highest loadings for number of friends and number of community resources used in the past. This additional factor could represent a greater merging or combining of friend and community supports by Study 2 subjects who were older (by about five years on the average) and more worldly (87.4% working full-time) than Study 1 subjects.

In addition, in Study 2, a factor analysis of the variables representing past use of the 16 individual

supports of the SDSSI (e.g. mother, father, etc.) yielded four factors - community supports, relative supports, friend supports, and marital status. Concerning marital status, a t-test revealed that married subjects had a significantly higher adjustment score than unmarried subjects, as hypothesized. The other three factors from this factor analysis - community supports, friend supports, and relative supports - confirmed the distinction of these three sources of support, which had been one of the underlying concepts behind the development of the SDSSI. Also, in Study 2, correlations were computed between adjustment and the composite measures developed from the factor structures of the SDSSI variables and the 16 individual supports. These results indicated a positive correlation between satisfaction with supports and adjustment, as had been consistently found in previous research. Concerning number of supports, for Study 2 subjects, number of relatives used was positively correlated with adjustment, while other number of supports (i.e., friends and relatives) were negatively related to adjustment. Previous research had indicated a mix of findings between number of supports and criterion measures (i.e., some positive findings and some negative ones). Perhaps the distinction between relative

supports and other sources of support is important to keep in mind in future research concerning the sources of supports, especially for subjects like those of Study 2 who were not undergraduate students.

Overall, the somewhat clear-cut factor analyses of Studies 1 and 2 indicate that the SDSSI has met the structural component requirement of construct validity as set forth by Loevinger (1957). Also, the predominantly positive correlations between the SDSSI variables and adjustment mean that the external component of construct validity has been satisfied.

To test the discriminant as well as the convergent validity of the SDSSI (Campbell & Fiske, 1959), correlations between the SDSSI variables and the two measures of social desirability and one measure of acquiescence were computed in Study 2. Only 2 of the 17 correlations obtained were significantly correlated with social desirability scores obtained from the Crowne-Marlowe Scale and only 4 were significant for the social desirability scores obtained from the Bem Sex-Role neutral adjectives for the total subject pool. Most correlations obtained were quite low (less than .1). Concerning acquiescence, there were only 2 significant correlations (one positive and one negative) out of 17

between SDSSI variables and the measure of acquiescence, also obtained from the Bem Sex-Role Inventory. Once again most correlations were quite low (less than .1). Also, correlations between the composite measures derived from the factor analyses of the SDSSI variables and individual support sources and the measures of social desirability and acquiescence were computed. These correlations revealed a small to moderate, yet significant, correlation between number of relative supports and social desirability (about .2), and a small, marginally significant negative correlation between number of friend supports and social desirability (about -.15). No significant or approaching significant results were obtained between social desirabilty and either satisfaction ratings or any SDSSI measures involving community supports. Also, no significant correlations were obtained between acquiescence and any composite measure.

Thus, from the results of Study 2, the SDSSI appears to possess appropriate psychometric properties by its having satisfied the substantive, structural, and external components of construct validity, and by its having exhibited both convergent and discriminant validity (from Study 2) and appropriate test-retest reliability (from Study

1). There are only two recommended changes to the inventory at this time. The first would be to change the column headed by "None" in question 1 to "None or Deceased." (Subjects of Study 2 were told to treat this column as "None or Deceased" in their instructions.) Second, space should be provided to indicate an answer to question 3 for the case when no sources had gone to a subject for help with a personal problem. Seven subjects (4.6%) of Study 2 placed no check marks to the left of any of the sources listed in question 2 and it was not clear whether in fact no sources had gone to them, or they had simply omitted or misinterpreted question 3. A copy of the Shaw-Denmark Social Support Inventory (SDSSI) with these changes is given in Appendix E.

One additional point for consideration in future research involves the definition of a personal problem. One subject of Study 2 asked after the research had been completed exactly what was meant by a personal problem. To provide specific information about this question, students of one of the classes used for Study 2 were asked how they defined a personal problem. While there was some variation in the total of responses, when the two definitions of students given below were read, most subjects agreed that

these definitions described what they had been thinking of when they had completed the questionnaries.

1. "A situation that you are facing that interferes with your ability to conduct your life without distraction or concern."

2. "A conflict, decision, or concern about something affecting you about which you cannot speak openly to just anyone."

If it is desired that subjects be perfectly clear about the meaning of a personal problem in future studies, it is recommended that these two definitions be included on a cover page of instructions to be used along with the SDSSI.

Some Other Results Worthy of Discussion

The Distinction Between Number and Quality of Supports, the Different Effects of the Different Sources of Support, and the Importance of Reciprocity

Interestingly enough, as stated in Chapter 9, for the overall subjects in Study 1, all correlations between SDSSI variables which involve number of supports and adjustment were negative with the one exception of NWREL where the correlation was virtually 0 (.008) (see Table 3). Of these negative correlations the ones involving community supports

were strongest, for NWCOM (r=-.174, p<.05) and NUCOM (r=-.133, p-.12, n.s.). In Study 2, again for all subjects, three correlations between SDSSI variables which concerned number of supports and adjustment were negative and significant - for NWCOM, NUFRD, and NUCOM - while two correlations involving this same set of SDSSI variables were significant and positive - for NWREL and NUREL (see Table 8). Also, in Study 2, the composite variables NUMREL and INDREL, which indicate number of relatives used, were positively and significantly correlated with adjustment, while the composite variables OTHNUM, INDCOM, and INDFRD, representing number of friends and community sources of support, were negatively and significantly correlated with adjustment. Thus, the results of both studies taken together indicated for both studies' subjects a negative relationship between number of community supports and adjustment, and for Study 2 subjects, both a negative relationship between number of friend supports and adjustment and also a positive relationship between number of relative sources and adjustment.

The negative findings for friend supports in Study 2 were somewhat surprising as previous research (e.g., Mitchell, 1982; Lewis & Jones, 1980) had indicated the

positive importance of friend supports. The question remains as to whether the results of the present research are specific to the type of subjects used in Study 2. A few of these subjects, in talking informally about the research, commented in a half-joking manner that they had no time for social supports in their lives. Perhaps, for persons with full-time jobs and also in M.B.A. programs, this is true, except for persons with extreme adjustment problems, who may be forced to call on friends. If those persons of Study 2 subjects with extreme problems are most likely to use friend supports, this would explain the negative correlations between number of friend supports and adjustment in Study 2.

The positive findings for relative supports for Study 2 subjects were also somewhat surprising, as some previous research had indicated negative relationships between family supports and health (e.g., Tolsdorf, 1976; Mueller, 1980; Mitchell, 1982; Kobasa & Puccetti, 1983), though in other cases, the relationship was in fact positive (e.g., Froland et al., 1979; Procidano & Heller, 1983). For Study 2 subjects, the positive importance of relative supports applies not only to the number of such supports, but also to satisfaction ratings for such support, as was seen in Table 9 where satisfaction ratings for all but one of the six

relative supports (other relative being the omitted one) were positively and significantly corelated with adjustment. In fact, overall Table 9 indicates the importance of those supports which one would expect to be most important, or core supports, for persons - mother, father, sister or brother, spouse, and best friend. Once again, these results are open to the question of generalizability. For example, previous research has shown that persons who have experienced an extremely stressful event, like the homocide of a loved one, have actually often received more beneficial support from those close to them, because the closest supports were too involved (Bard, Arnone, & Nemiroff, in press).

The results of the present research concerning satisfaction ratings seem more clear-cut. For all subjects in Study 1, both of the significant results between satisfaction ratings and adjustment are positive, and in Study 2, of the four results reaching or approaching significance all are positive. Examining the subsample results, for both studies together, 12 positive correlations are significant with another 4 approaching significance; only 1 negative correlation approaches significance. Also, the composite variable, SATIS, indicating satisfaction with

supports, is positively correlated with adjustment for all subjects and for each of the four subgroups of subjects, with one of these correlations reaching significance and two more approaching significance. Thus it seems quite clear from these results that greater satisfaction with supports appears to be related to higher adjustment.

The results of Study 2 concerning the variable ARECIP, satisfaction with reciprocal relationships, seem of particular interest. This variable had a correlation of .29 with adjustment, the highest of any of the 17 SDSSI variables. Also, this was the only variable in Studies 1 or 2 to have had significant or approaching significant correlations for all four of the subgroups of subjects (again see Table 8). Perhaps the fostering of satisfactory reciprocal relationships where help can be both provided or received is a key to establishing higher levels of adjustment.

The Use of the Four Subgroups of Subjects

The use of the four subgroups - males who had not used community resources in the past, males who had utilized community sources in the past, and females who had either used or not used past community resources - seems to have been quite an important feature of the present research. In

Study 1, while there were no significant differences between males and females on any of the SDSSI variables, significant differences were found between past community resources users and non-users. These significant differences may indicate the idea of a "support-oriented personality," that users of community resources are more likely to utilize relative sources of support as well. These same results were obtained again in Study 2, but this time for friend sources as well as for relative supports. In addition, in Study 2, some significant differences were found for male versus female subjects, with females scoring significantly higher on the variables NWTOT, NWFRD, NUFRD, NGONTU, and NRECIP. The last two of these variables, the number of persons who have gone to you with a problem and the number of reciprocial relationships, had not been included in Study 1.

With regard to the correlations between the SDSSI variables and adjustment, we saw in Study 1 that the pattern of correlations was quite different for each of the four subgroups of subjects. Of particular interest were the significant negative correlations for the males who had not used any community resources in the past. These negative correlations were not replicated in Study 2, though once

again there were some differences in the correlation patterns for the four subgroups. The possible explanation for the Study 1 finding, that males who had not used community resources in the past may be responding according to social desirability, was thus not borne out by the correlation values obtained for this subgroup in Study 2. In addition, this subgroup did not exhibit stronger correlations than the other three subgroups between the SDSSI variables and the response style measures in Study 2. One interesting finding of Study 2, however, was that males who had not used community resources in the past had a somewhat lower number of supports compared to the other three subgroups for friends and relatives as well as community sources (see Table 10), indicating that this subgroup, as in Study 1, provided a contrast to the other three subgroups.

In any event, the differences in results among the four subgroups of this study appear to call for more than a mere examination of male-female differences. The idea of possible interaction effects between sex and other relevant variables, such as use or non-use of community resources, should be considered in future research. Previous research on interaction effects found in social support research were

discussed in Chapter 2. Some significant interaction effects found in the past were between sex and age by Cauce, Zelner, & Primavera (1982), in which younger high school males and older high school females reported their families to be more helpful, and by Biegel, Naparstek, & Kahn (1980), who found differential correlational patterns depending upon the age, ethnicity, socio-economic status, and stress level of subjects.

The Importance of Relative Supports Versus Friend Supports

As previously stated in Chapter 4 some past studies (Mueller, 1980; Mitchell, 1982; Kobasa & Puccetti, 1983) have indicated a positive relationship between family or relative supports and possible negative outcomes of stress. In Study 1 of the present research, evidence for the importance of friends over relative sources of support was provided by the higher overall satisfaction rating for friends (3.94 average) as opposed to relatives (3.70 average). However, the correlation between relative satisfaction and adjustment in Study 1 was positive and significant (r=.175, p<.05) while that for satisfaction with friends was not significant (r=.052). In Study 2, carried out with older subjects, overall levels of satisfaction for

friends (3.97 average) and relatives (3.96 average) were almost the same, but once again only the satisfaction rating for relatives was significantly correlated with adjustment (r=.22, p<.01, as opposed to r=.07, n.s., for satisfaction with friends). Also, in Study 2, the two variables concerning number of supports, NWREL and NUREL, were positively and significantly correlated with adjustment, r=.21, (p<.01) and r=.17 (p<.03) respectively, while the corresponding measures for friend supports were negatively correlated, r=-.12 (p<.08) for NUFRD, and r=-.04 (n.s.) for NWFRD. Further evidence for the positive importance of relatives for Study 2 subjects was obtained from the correlations between the satisfaction ratings for the individual sources of support and adjustment. Significant positive correlations were obtained for mother and father (both r's =.19, p<.02), sister or brother (r=.15, p<.05), and spouse (r=.38, p<.01). The positive significant correlation between best friend and adjustment (r=.19, p<.02) provides evidence of the positive importance of friend supports.

The only finding of Study 2 which appeared to provide evidence of the importance of friend supports over relative supports was the significantly higher adjustment ratings for

those subjects who cited friends as their most often used support (3.71 average) as opposed to those who used a relative (3.53 average) ($p<.04$). For the most part, however, the present research provides evidence of the positive importance of relative supports especially for Study 2 subjects.

The Use of the Bem Sex-Role Neutral Adjectives as a Measure of Social Desirability Response Styles

Both the Crowne-Marlowe Social Desirability Scale and the Bem Sex-Role Inventory neutral adjectives were used as measures of social desirability response styles in Study 2 of the research. The Crowne-Marlowe Scale has the advantage of having been used extensively in previous research, of being somewhat balanced as to keying (19 items keyed true and 14 keyed false) and including both of the two factors of social desirability - need for social approval and impression management (Damarin & Messick, 1965). A disadvantage of the Crowne-Marlowe Scale is that the purpose of the questions may be somewhat obvious, especially to sophisticated subjects. The Bem Sex-Role neutral adjectives, on the other hand, can serve as a covert measure of social desirability and also are completely balanced as to keying (10 socially desirable and 10 undesirable

adjectives). The disadvantages of this measure are that it has not been used for this purpose in previous research and that there is no evidence as to whether it represents either or both of the two factors of social desirability cited above.

In the present research the Bem Sex-Role adjectives appeared to be a more sensitive measure of social desirability than the Crowne-Marlowe Scale with 4 SDSSI measures significantly correlated with the Bem adjectives as opposed to only 2 with the Crowne-Marlowe Scale. In addition, when results were broken down according to subgroups, 17 results reached or approached significance for the Bem adjectives while only 13 did so for the Crowne-Marlowe Scale. Finally, overall there was a .30 correlation between the Crowne-Marlowe Scale score and the social desirability score from the Bem adjectives. These results seem to imply that the Bem Sex-Role Inventory neutral adjectives could certainly be a very reasonable candidate for use as a measure of social desirability in future research, but further investigations concerning this matter should be carried out. Of particular concern in this future research would be the question of whether the content of the Bem adjectives reflects either or both of the two factors of

social desirability as cited by Damarin & Messick (1965). In addition, further research should be carried out on use of the Bem Sex-Role adjectives as a measure of acquiescence, as only 2 of the 17 SDSSI measures correlated significantly with this measure.

Some Limitations of the Present Research and Possible Directions for Future Research

While it is believed that the development of the SDSSI provides the most extensive psychometric examination of any inventory in the area of social support systems to this time, some of the limitations of the present research should be noted. First, testing of the inventory has so far been carried out only on two subject populations both of which have student status in some form or another. It is hoped that future research will involve testing of the SDSSI on other groups, in particular, on a general population and a clinical group. Second, the only moderating variables between support and adjustment considered in the present research were sex and past use or non-use of community resources. Other possible moderating variables to be considered in future research include socioeconomic status, race, religion, nationality, and even level of intelligence.

Another limitation of the present research is that the SDSSI asks only whether each source of support has been used or gone to. (For the purposes of this research the terms "used" and "gone to" have been considered synonymous.) The extent to which each of these sources have been used (e.g., how often, how intensely) and the content areas discussed with each of these sources of support (e.g., money, love, health matters) were not considered in the present research. One interesting future study could involve concurrent examination of the source of support, the type or category of support received, and the content area discussed.[11] Also, support other than those sources actively sought out should be considered. As we saw from the Bard et al. (in press) work, at times those who are less close can provide the most helpful support. Also, the work of Cowen (1982) indicates that support can come from sources whom we may happen upon in our daily undertakings, rather than from those we actively seek out.

Finally, additional longitudinal studies are necessary to help investigate further to what extent measured relationships between outcome variables and social supports are the <u>result</u> of different levels of social supports affecting the outcomes of stress and to what extent stress

and its aftereffects lead to changes in one's social supports. Only longitudinal studies are capable of unraveling the confounding of social support as both an independent and dependent variable.

Last, the present research on social support systems and much of the recent work on social supports is in accord with two recent directions in social and community psychology - (1) a greater concern for more practical real-world problems, and (2) an emphasis on primary prevention. Primary prevention is defined, according to Caplan (1964), as the lowering of new cases of disorder by counteracting harmful circumstances before they have had a chance to produce illness. These two recent directions are complimentary to one another, as put succinctly by Cowen, that "primary prevention seeks to prevent dysfunction and/or to promote health."

Recent work focusing on more practical, real world problems includes the research on Type A behavior and heart disease, weight control, and stress management. With respect to primary prevention, the question remains as to whether the fostering of support can actually lead to meaningful changes in persons' support systems. It is hoped that such changes can be effected, at least for some groups,

including groups most in need of additional support. Howwever, as we see from both past work and the present research, the relationships among stress, social support, and relevant criterion measures can be extremely complex, involving interaction effects and differing results for different groups and subgroups. Therefore, before appropriate intervention strategies can be designed, much further work on the role of different sources and types of support for different subject groups must be explored.

Up to now, there has been a lack of social support inventories with the psychometric properties to permit their continued use in future research. It is hoped that the present development of the SDSSI is sufficient to now allow for its use in future research on the relationship between stress, social supports, and physical and psychological health, with the ultimate goal of designing intervention strategies to help foster and strengthen the supports which are most likely to promote increased psychological or physical health.

FOOTNOTES

1. The reason for this breakdown between users and non-users of community resources is to provide some information concerning whether social supports might differ between a clinical and non-clinical population. In this case the users of community resources would more likely reflect a clinical group and the non-users of such resources a non-clinical group. It is hoped that in a future study that the SDSSI can be used to examine the social support systems of an actual clinical group and that such support systems can be compared with an equivalent non-clinical group.

2. In analyzing the results of this study, two-tailed tests were always utilized.

3. The cutoff point of six for the most often utilized types of support was chosen because after the sixth most often used source, other friend (65.0% usage), a large gap occurred before the seventh most often used source, other relative (35.8%). The cutoff point of eight for the satisfaction ratings was utilized because of the closeness in ratings (3.67 to 3.64) of the sixth, seventh and eighth most highly rated sources according to satisfaction - therapist or counselor, other friend, and brother or sister.

4. One might at first be surprised by the relatively favorable showing of religious leader on the satisfaction ratings. These satisfaction ratings are based on averages only from subjects who actually used each individual source of support. Conceivably those persons who would go to a religious leader with a personal problem probably have a prior positive impression about that leader. For a therapist, however, the prior impression is likely to be more of an unknown, as the therapist is usually someone who has not been met before by the person seeking help with a problem.

5. Factor analyses carried out in conjunction with Study 2 of the present research utilized both orthagonal and oblique rotations. In all cases, the factor structure of both rotations were quite similar. Because of the very clear factor structure obtained in Study 1, only an orthagonal rotation was carried out.

6. The 101 of 137 subjects who took the SDSSI twice represent 74% of the total subjects. The 74% figure implies a presence rate of about 91% (or absenteeism rate of about 9%) at each of the two administrations, a rate which is quite common in the classes at the universities where testing took place.

7. The reason for this procedure was that the increased length of the research instrument precluded using class time in most cases.

8. Subtracting out the number for community supports seems justified by the fact that these sources, much more so than friend or relative supports, are likely to be unidirectional in nature, involving only the provision of support to the subject, and not being the recipient of support from the subject.

9. As in Study 1, two tailed tests were always used here.

10. An oblique rotation was also attempted, but the result failed to converge.

11. An interesting initial attempt at developing a questionnaire concurrently measuring the source, type, and content area of the support received has been developed by some students at the Graduate Center in conjunction with their course in personality measurement with Professor Messick.)

TABLE 1

Average Ratings of the Fourteen Independent Variables for All Subjects, and for Subjects Broken Down by Sex and by Use of Community Resources[1]

Variable	All Subjects (n=137)	Males (n=64)	Females (n=70)	Community (n=70)	No Community (n=61)
NWTOT	3.06	2.83	3.29	3.50***	2.51
NWREL	1.36	1.23	1.47	1.53*	1.14
NWFRD	1.36	1.31	1.42	1.41	1.30
NWCOM	.34	.28	.39	.57***	.07
NUTOT	6.47	6.34	6.53	7.89***	4.69
NUREL	2.99	2.88	3.09	3.36***	2.54
NUFRD	2.28	2.28	2.27	2.38	2.14
NUCOM	1.18	1.16	1.17	2.13	----
AUTOT	3.79 (n=135)	3.73 (n=62)	3.85 (n=70)	3.72 (n=76)	3.88 (n=59)
AUREL	3.70 (n=132)	3.62 (n=60)	3.79 (n=69)	3.62 (n=76)	3.83 (n=56)
AUFRD	3.94 (n=129)	3.89 (n=60)	4.00 (n=66)	3.94 (n=74)	3.94 (n=55)
AUCOM	3.52 (n=76)	3.56 (n=32)	3.49 (n=41)	3.52 (n=76)	----
NRATE	3.47	3.47	3.49	3.54	3.39
WRATE	3.88 (n=93)	3.84 (n=43)	3.94 (n=47)	4.06 (n=50)	3.67 (n=43)

*** differs from no community group, $p<.001$

* differs from no community group, $p<.05$

[1] Average satisfaction ratings are based on only the subjects who used each type of support in the past. For example the (n=129) under the figure for AUFRD for all subjects indicates that this figure is based only on the 129 subjects who indicated they had gone to friends for help in the past. Similarly the number of subjects for WRATE, the work satisfaction rating, excludes those who indicated that they did not work.

TABLE 2

Proportion of Persons Going to Most Used Sources of Support Along with Highest Satisfaction Ratings

Proportion of Persons	Satisfaction Ratings
1. Best Friend (86.1%)	1. Best Friend (4.16)
2. Mother (83.2%)	2. Spouse (4.06)
3. Brother or Sister (73.0%)	3. Boyfriend/Girlfriend (4.05)
4. Father (69.3%)	4. Mother (3.89)
5. Boyfriend/Girlfriend (65.7%)	5. Religious Leader (3.73)
6. Other Friend (65.0%)	(tie) 6. Therapist/Counselor (3.67)
	(tie) 6. Other Friend (3.67)
	8. Brother or Sister (3.64)

TABLE 3
Correlations of Independent Variables
and Age with Adjustment[1,2]

Variable	All Subjects (n=137)	Males No Community (n=32)	Females No Community (n=29)	Males Community (n=32)	Females Community (n=41)
NWTOT	-.069	-.229	.420*	-.085	-.112
NWREL	.008	-.084	.213	.135	-.076
NWFRD	-.015	-.339+	.205	-.251	.032
NWCOM	-.174*	.239	.207	-.139	-.156
NUTOT	-.077	-.545**	.339+	.247	.089
NUREL	-.022	-.535**	.325+	.349*	-.022
NUFRD	-.004	-.358*	.158	-.165	.225
NUCOM	-.133	----	----	.137	-.001
AUTOT	.108	.194	-.179	-.001	.454**
AUREL	.175*	.150	-.250	.240	.415*
AUFRD	.052	.120	.034	-.045	.200
AUCOM	-.087	----	----	-.032	-.056
NRATE	-.015	-.324+	-.066	-.179	.262
WRATE	.274**	.047	.213	.444*	.634**
AGE	.295**	.373*	.261	.012	.425**

**$p<.01$
*$p<.05$
+$p<.10$

[1] As in Table 1, the figures in this table for the satisfaction ratings (AUTOT to AUCOM) are based on only those subjects who utilized each type of support. Also the correlations involving WRATE, the work satisfaction rating, exclude those subjects who indicated that they did not work.

[2] Because of the reduced sample sizes for the four sub-samples used in this table, it was decided to indicate results which approached significance ($p<.10$) as well as those which reached significance.

TABLE 4

Factor Analysis of the SDSSI Items

Variable	Factor I	Factor II	Factor III	Factor IV	
NWREL	.175	-.072	**.537**	-.106	
NWFRD	.174	**.926**	-.120	.084	
NWCOM	.014	.074	-.045	.543	
NUREL	-.084	-.140	**.915**	.060	
NUFRD	.045	**.664**	-.074	.121	
NUCOM	-.205	.060	.264	.552	
AUREL	**.724**	.019	**.333**	-.013	
AUFRD	**.599**	**.317**	-.185	-.110	
AUCOM	**.645**	-.202	.087	.441	
NRATE	**.340**	.223	-.026	-.018	
WRATE	.110	.052	-.176	.406	
Total Variance	21.5	18.1	14.6	11.4	65.6

TABLE 5

Test-Retest Correlations of SDSSI Variables

Variable	All Subjects (n=101)	Undergraduates (n=52)	Graduates (n=49)
NWREL	.690	.748	.642
NWFRD	.699	.707	.691
NWCOM	.424	.325	.518
NUREL	.710	.724	.714
NUFRD	.636	.642	.630
NUCOM	.675	.702	.651
AUREL	.522	.293	.715
AUFRD	.480	.317	.645
AUCOM	.617	.652	.537
NRATE	.815	.805	.820
WRATE	.464	.616	.330
Median	.636	.652	.645
Mean	.612	.594	.627

TABLE 6

Average Ratings of SDSSI Variables for all Subjects and for Subjects Broken Down by Sex and use of Community Resources[1]

Variable	All (n=151)	Males (n=67)	Females (n=84)	Community (n=85)	No Community (n=66)
NWTOT	3.53	3.13	3.85[a]	4.05***	2.86
NWREL	1.56	1.45	1.65	1.67	1.42
NWFRD	1.60	1.36	1.79[a]	1.74[+]	1.41
NWCOM	.37	.33	.40	.64***	.03
NUTOT	7.81	7.46	8.10	9.27***	6.00
NUREL	3.23	3.28	3.20	3.41*	3.02
NUFRD	3.44	3.18	3.64[a]	3.81***	2.98
NUCOM	1.14	1.00	1.25	2.05	----
AUTOT	3.95 (n=150)	4.00 (n=66)	3.91 (n=84)	3.95 (n=84)	3.94 (n=66)
AUREL	3.96 (n=146)	4.08 (n=62)	3.87 (n=84)	3.91 (=82)	4.03 (n=64)
AUFRD	3.97 (n=146)	3.93 (n=62)	4.00 (n=84)	4.04 (n=84)	3.88 (n=62)
AUCOM	3.92 (n=84)	3.97 (n=32)	3.88 (n=52)	3.92 (n=84)	----
NRATE	3.93	3.85	4.00	3.80	4.11
WRATE	3.63 (n=136)	3.62 (n=60)	3.63 (n=76)	3.73 (n=73)	3.51 (n=63)
NGONTU	5.97 (n=144)	5.48 (n=63)	6.36[a] (n=81)	6.50*** (n=78)	5.35 (n=66)
NRECIP	5.22 (n=143)	4.73 (n=62)	5.60 (n=81)	5.96 (n=77)	4.36 (n=66)
ARECIP	4.03 (n=143)	4.01 (n=62)	4.04 (n=81)	3.99 (n=77)	4.06 (n=66)

[+]differs from non-community group, $p<.10$
*significantly different from non-community group, $p<.05$
***significantly different from non-community group, $p<.001$
[a]significantly different from male group, $p<.05$

[1] As in Table 1, the figure in this table for the satisfaction ratings (AUTOT to AUCOM) are based only on those subjects who utilized each type of support. Also the values for WRATE include only those subjects who indicated that they worked at least 20 hours per week. Finally the results for NGONTU, NRECIP, and ARECIP exclude those few subjects who omitted questions 2 or 3 of the SDSSI.

TABLE 7

Proportion of Persons in Study 2 Going to Each Individual Source of Support Along with Satisfaction Ratings for Each Source

Proportion of Persons	Satisfaction Ratings
1. Best Friend(90.1%)	1. Spouse(4.28)
2. Mother (86.8%)	2. Boyfriend/Girlfriend(4.27)
3. Brother or Sister(78.9%)	3. Best Friend(4.25)
4. Father (76.8%)	4. Therapist/Counselor(3.91)
5. Other Friend(72.2%)	tie 5. Mother(3.89)
6. Boyfriend/Girlfriend(68.9%)	tie 5. Brother or Sister(3.89)
7. Co-Worker(63.6%)	7. Father(3.83)
8. Boss or Supervisor(45.0%)	8. Teacher(3.79)
9. Other Relative(43.0%)	9. Other Relative(3.75)
10. Spouse(33.1%)	10. Other Friend(3.74)
tie 11. Therapist/Counselor(30.5%)	11. Doctor(3.61)
tie 11. Doctor(30.5%)	12. Religious Leader(3.58)
13. Teacher(27.8%)	13. Co-Worker(3.53)
14. Religious Leader(21.9%)	14. Child(3.50)
15. Community Group(5.3%)	15. Boss or Supervisor(3.46)
16. Child/Grandchild(2.6%)	16. Community Group(2.63)

TABLE 8

Correlations of SDSSI Variables and Age with Adjustment - Study 2[1]

	All Subjects (n=151)	Males, No Community (n=34)	Females, No Community (n=32)	Males, Community (n=33)	Females, Community (n=52)
NWTOT	.04	.39*	-.04	.13	.19+
NWREL	.21**	.08	.14	.28+	.22+
NWFRD	-.04	.08	-.17	.02	.17
NWCOM	-.19*	-.24+	-.04	-.16	-.08
NUTOT	-.02	.07	.04	.18	.06
NUREL	.17*	.25+	.36*	.33*	.01
NUFRD	-.12+	-.11	-.28+	-.09	.21+
NUCOM	-.21**	----	----	.00	-.09
AUTOT	.18*	.29*	.10	.17	.19+
AUREL	.22**	.16	-.08	.20	.28*
AUFRD	.07	.24+	.14	.17	.02
AUCOM	.04	----	----	-.03	.07
NRATE	.17*	.32*	.22	.36*	.00
WRATE	.11+	.37*	.23	-.10	.07
NGONTU	-.06	-.09	.37*	-.18	.08
NRECIP	-.07	-.17	.21	.01	.13
ARECIP	.29***	.38*	.24+	.28+	.33**
AGE	.01	.05	.23	-.15	.04

+p<.10
*p<.05
**p<.01
***p<.001

[1] As in Table 1, the figures in this table for the satisfaction ratings (AUTOT to AUCOM) are based only on those subjects who utilized each type of support, and the average work satisfaction rating, WRATE, is based only on those subjects who indicated that they worked at least 20 hours per week.

TABLE 9

Correlations of Each Individual Source of Support with Adjustment

Mother	.19*
Father	.19*
Brother/Sister	.15*
Child/Grandchild[1]	.89+
Spouse	.38**
Other Relative	-.09
Boyfriend/Girlfriend	.00
Best Friend	.19*
Boss or Supervisor	.02
Co-Worker	-.06
Other Friend	-.15+
Teacher	-.09
Doctor	-.01
Religious Leader	-.11
Therapist	-.09
Community Group[2]	-.63*

[1]n= 4 for this group
[2]n= 8 for this group

+p<.10
*p<.05
**p<.01

TABLE 10

Average Values of SDSSI Variables and Adjustment for Subjects Broken Down Acccording to Sex and Past-Use or Non-Use of Community Resources[1]

Variables	Males No Community (n=34)	Females No Community (n=32)	Males Community (n=33)	Females Community (n=52)
NWTOT	2.44	3.31	3.85	4.17
NWREL	1.26	1.59	1.64	1.69
NWFRD	1.15	1.69	1.58	1.85
NWCOM	.03	.03	.64	.63
NUTOT	5.65	6.38	9.45	9.15
NUREL	2.97	3.06	3.61 (n=31)	3.29
NUFRD	2.68	3.31	3.74 (n=31)	3.85
NUCOM	0.00	0.00	2.10 (n=31)	2.02
AUTOT	3.95 (n=34)	3.93 (n=32)	4.05 (n=32)	3.89 (n=52)
AUREL	4.03 (n=32)	4.02 (n=32)	4.13 (n=30)	3.78 (n=52)
AUFRD	3.86 (n=30)	3.89 (n=32)	4.00 (n=32)	4.07 (n=52)
AUCOM	----	----	3.97 (n=32)	3.88 (n=52)
NRATE	4.06	4.16	3.64	3.90
WRATE	3.55 (n=33)	3.47 (n=30)	3.70 (n=27)	3.74 (n=46)
NRECIP	3.79	4.97	5.86	6.02
ARECIP	4.06	4.07	3.94	4.02
NGONTU	4.71	6.03	6.38	6.17
ADJ	3.82	3.67	3.75	3.31

[1] As in Table 1, the figures in this table for the satisfaction ratings (AUTOT to AUCOM) are based only on those subjects who utilized each type of support, and the average work satisfaction rating, WRATE, is based only on those subjects who indicated that they worked at least 20 hours per week.

TABLE 11

Factor Analysis of the Eleven Independent Variables of the SDSSI - Study 2

Variable	I	II	III	IV	V
NWREL	.236	**.773**	-.121	**.007**	.068
NWFRD	-.028	-.040	.208	.071	**.823**
NWCOM	.054	.030	-.004	**.827**	.045
NUREL	-.135	**.672**	.096	.083	-.131
NUFRD	.031	.101	**.864**	-.021	.289
NUCOM	-.073	.372	**.381**	**.426**	.098
AUREL	**.752**	.120	-.076	-.191	-.038
AUFRD	**.527**	-.108	-.127	.084	.206
AUCOM	**.742**	**-.361**	-.189	.226	-.092
NRATE	.184	.128	-.240	-.048	.027
WRATE	.102	.028	.006	.004	-.016
Total Variance	21.0	16.1	14.2	10.6	9.3

Total: 71.2%

TABLE 12

Factor Analysis of Individual Supports of the SDSSI

	Factor 1	Factor 2	Factor 3	Factor 4
Mother	-.116	-.023	**.608**	.093
Father	.013	.054	**.598**	-.043
Sister or Brother	.107	-.069	**.381**	-.058
Spouse	.125	**.681**	.000	-.014
Other Relative	**.300**	-.077	.072	.125
Boyfriend/Girlfriend	.158	**-.791**	.048	-.010
Best Friend	-.065	-.103	.043	.532
Boss or Supervisor	**.314**	.056	.119	.284
Co-Worker	.151	.052	-.054	**.542**
Other Friend	-.002	.030	-.024	**.757**
Teacher	**.766**	-.127	-.038	.083
Doctor	**.637**	-.099	-.052	.086
Religious Leader	**.612**	.082	.014	-.106
Therapist	**.392**	.076	.032	.010
TOTAL VARIANCE	23.3	12.8	10.6	7.8
			Total:	54.5%

TABLE 13

Correlations of Composite Measures with Adjustment

	All Subjects	Males No Community	Females No Community	Males Community	Females Community
SATIS	.16+	.33*	.03	.15	.20+
NUMREL	.22**	.43**	.29+	.33*	.17
OTHNUM	-.20**	-.11	-.28+	-.05	.08
COM	-.08	-----	----	-.15	-.05
FRD	-.03	.13	-.21	.04	.23*
INDCOM	-.25***			-.06	-.13
INDREL	.21**	.17	.15	.53***	.22+
INDFRD	-.15**	-.11	-.12	-.17	.21+

+p<.10

+p<.05

**p<.01

***p<.001

TABLE 14

Correlations of SDSSI Variables with Response Style Measures

	SDPCMS	SDBSRI	ACBSRI
NWTOT	.09	.06	-.02
NWREL	.15*	.22**	.08
NWFRD	-.04	-.08	-.07
NWCOM	.04	-.11+	-.09
NUTOT	.02	.05	-.03
NUREL	.17*	.09	.07
NUFRD	-.13+	-.04	-.08
NUCOM	-.01	-.05	.02
AUTOT	.04	.07	.00
AUREL	.03	.21**	.11+
AUFRD	.04	-.03	-.04
AUCOM	.00	-.08	-.07
NRATE	.03	.19*	.12+
WRATE	-.08	.04	-.08
NCONTU	.01	-.02	-.14*
NRECIP	-.06	-.01	-.09
ARECIP	.11+	.21**	.15*
ADJ	.25***	.38***	.00
AGE	-.15*	-.01	-.08

+p<.10
*p<.05
**p<.01
***p<.001

TABLE 15

Significant or Approaching Significant Correlations between SDSSI Variables and Response Style Measures for the 4 Subgroups of Subjects

	Males without Prior Community Resources Use (n=34)			Females without prior Community Resources Use (n=34)		
	SDPCMS	SDBSRI	ACBSRI	SDPCMS	SDBSRI	ACBSRI
NWTOT		.34*				
NWREL		.39*				
NWFRD					-.24+	
NWCOM				.28+		.24+
NUTOT						
NUREL	.36*			-.32*		
NUFRD				-.37*		
NUCOM						
AUTOT		.30*	-.33*			-.27+
AUREL			-.52***			.26+
AUFRD						.24+
AUCOM						
NRATE	.34*	.52***				.33*
WRATE						
NGONTU			-.31*	.34*	.44**	-.33*
NRECIP		.23+				
ARECIP			-.23+			
AGE					.29+	-.26+
ADJ	.41**	.53**		.26+	.53**	

TABLE 15 Con't

	Males with Prior Community Resource Use (n=33)			Females with Prior Community Resource Use (n=52)		
	SDPCMS	SPBSRI	ACBSRI	SDPCMS	SDBSRI	ACBSRI
NWTOT	.31*					
NWREL	.42*				.27*	.19+
NWFRD						
NWCOM	.34*	-.34*				
NUTOT			-.25+			
NUREL	.36*				.19+	.21+
NUFRD						
NUCOM						.25*
AUTOT						
AUREL		.24+			.32*	.28*
AUFRD						
AUCOM						
NRATE		.33*		-.32**		
WRATE						
NGONTU		-.27+				
NRECIP						
ARECIP	.52**	.30+	-.24+		.29*	.30*
ADJ			-.35*		.34**	
AGE				-.24*		

+ $p<.10$
* $p<.05$
** $p<.01$
*** $p<.001$

TABLE 16

Correlation of Composite Measures with SDPCMS, SDBSRI, and ACBSRI-All Subjects

	SDPCMS	SDPSRI	ACBSRI
SATIS	.07	.06	.01
NUMREL	.19*	.18*	.09
OTHNUM	-.08	-.05	-.03
COM	.07	-.09	.04
FRD	-.05	-.05	-.10
INDCOM	.01	-.05	.04
INREL	.15*	.25***	.11+
INDFRD	-.19**	-.12+	-.08

+$p<.10$

*$p<.05$

**$p<.01$

***$p<.001$

TABLE 17

Significant or Approaching Significant Correlations Between Composite Measures and Response Style Measures for the 4 Subgroups of Subjects

	Males Without Prior Community Resource Use			Females Without Prior Community Resource Use		
	SDPCMS	SDBSRI	ACBSRI	SDPCMS	SDBSRI	ACBSRI
SATIS			-.39*			.34*
NUMREL	.30*	.26+				
OTHNUM				-.37**		
COM						
FRD			-.30+		-.25+	
INDCOM						
INDREL	.26+		-.38*	-.33*		
INDFRD				-.41**		

	Males With Prior Community Resource Use			Females With Prior Community Resource Use		
	SDPCMS	SDBSRI	ACBSRI	SDPCMS	SDRSRI	ACBSRI
SATIS						
NUMREL	.42**				.30*	.25*
OTHNUM						
COM		-.39*				
FRD						
INDCOM	.35*					.25*
INDREL	.44**	.28+		.25*	.44**	.31*
INDFRD	-.24+					

+$p<.10$
*$p<.05$
**$p<.01$

TABLE 18

Correlations between SDBSRI, ACBSRI and SDPCMS

All Subjects	(1) SDPCMS	(2) SDBSRI	(3) ACBSRI
(1) SDPCMS	1.0		
(2) SDBSRI	.30***	1.0	
(3) ACBSRI	-.02	.49***	1.0
Males-No Prior Community Resources			
	(1)	(2)	(3)
(1)	1.0		
(2)	.41**	1.0	
(3)	-.18	-.23^{+}	1.0
Females-No Prior Community Resources			
	(1)	(2)	(3)
(1)	1.0		
(2)	.38*	1.0	
(3)	-.17	-.15	1.0
Males-Prior community Resources			
	(1)	(2)	(3)
(1)	1.0		
(2)	.19	1.0	
(3)	.01	-.11	1.0
Females-Prior Community Resources			
	(1)	(2)	(3)
(1)	1.0		
(2)	.30*	1.0	
(3)	.03	.74***	1.0

$^{+}p<.10$
$^{*}p<.05$
$^{**}p<.01$
$^{***}p<.001$

TABLE 19

Types of Support Received from
Most Often Used and Most Helpful Source of Support[1]

	Most Often Used		Most Helpful	
	Yes	No	Yes	No
1. Made me feel that I was loved and cared for.	122 (80.8)	29 (19.2)	121 (80.7)	29 (19.3)
2. Allowed me to express my emotional feelings.	138 (91.4)	13 (8.6)	131 (87.5)	19 (12.5)
3. Gave me information concerning what to do about the problem.	108 (71.5)	43 (28.5)	116 (77.3)	34 (22.7)
4. Gave me advice on what to do about the problem.	126 (83.4)	25 (16.6)	123 (82.0)	27 (18.0)
5. Gave me praise or criticism for the way I was handling the problem.	113 (74.8)	38 (25.2)	111 (74.0)	39 (26.0)
6. Did some task for me to help make things easier.	73 (48.3)	78 (51.6)	78 (52.0)	72 (48.0)
7. Gave me financial help.	43 (28.5)	108 (71.5)	47 (31.3)	103 (68.7)
8. Spent time with me socially.	101 (66.9)	50 (33.1)	87 (58.0)	63 (42.0)
9. Helped my just by knowing he or she would be there if needed.	130 (86.1)	21 (13.9)	129 (86.0)	21 (14.0)

[1] % figures are given in parentheses

TABLE 20

Number of Categories Cited by Subjects for Most Often Used and Most Helpful Source of Support[1]

Number of Categories	Number of Subjects	Number of Subjects[2]
1	3 (2.0)	4 (2.7)
2	1 (0.7)	2 (1.3)
3	13 (8.6)	14 (9.3)
4	15 (9.9)	12 (8.0)
5	23 (15.2)	18 (12.0)
6	15 (9.9)	21 (14.0)
7	28 (18.5)	26 (17.3)
8	28 (18.5)	30 (20.0)
9	25 (16.6)	23 (15.3)
TOTALS	151 (100.0)	150 (100.0)

[1] % figures are given in parentheses

[2] total number of subjects for most helpful source of support was 150 as one subject omitted this question.

TABLE 21

Correlations between Adjustment and Number of Categories of Support Provided by the Most Often Used and Most Helpful Sources of Support[1]

Number of Categories	All Subjects	No Previous Community Resources		Previous Community Resources	
		Males	Females	Males	Females
Most Often Used Source	-.04	-.23+ (.10)	.27+ (.07)	.01	.01
Most Helpful Source	.03	-.26+ (.08)	.21 (.13)	.03	.06

[1] p levels are given in parentheses

+ $p<.10$

FIGURE 1

Overall Model of Stress

Overall Model of Stress

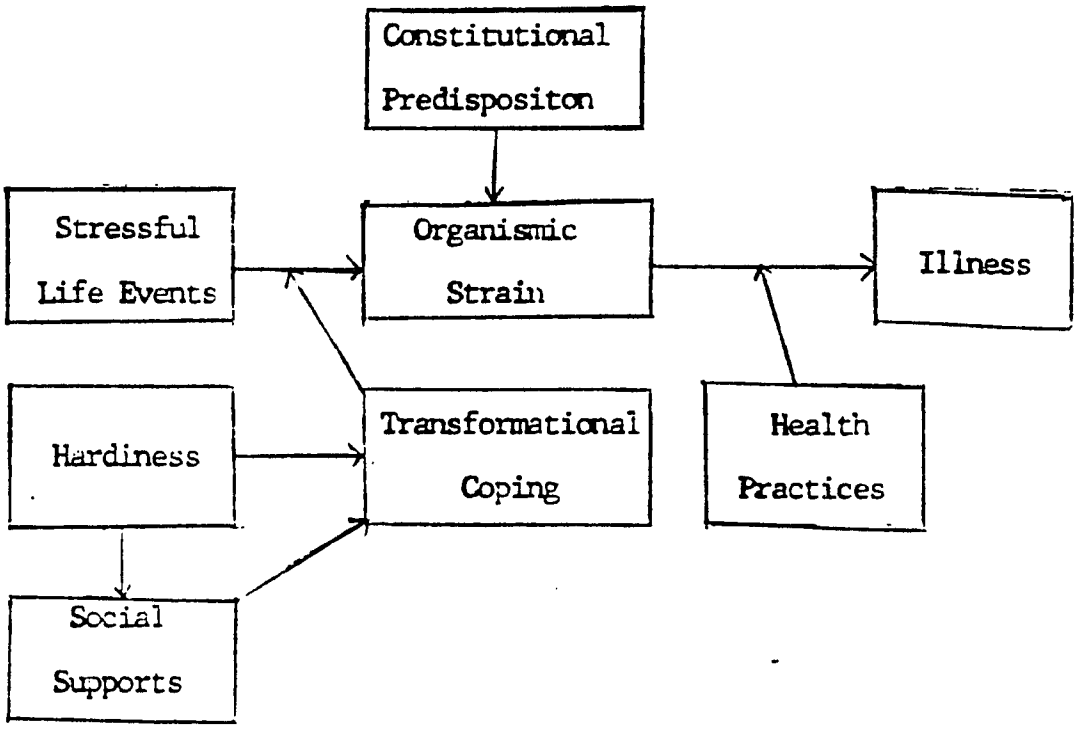

FIGURE 2

Dohrenwend & Dohrenwend (1981)

Vulnerability Model of Stress

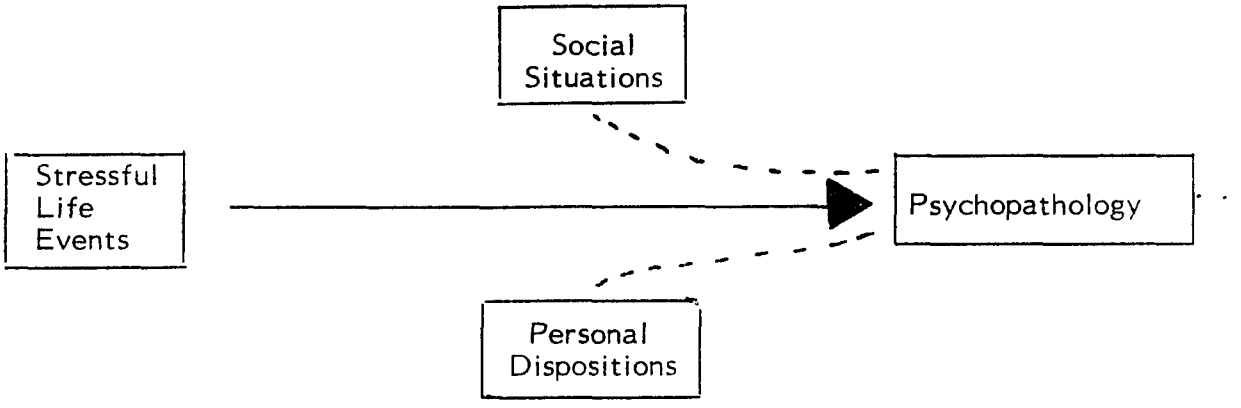
Social
Situations
Stressful
Life
Events
Psychopathology
Personal
Dispositions

FIGURE 3

The Interaction Effect of Stress
and
Social Supports on Health

STRESS

Social Supports		High	Low
	Adequate	High Level of Health	High Level of Health
	Inadequate	Low Level of Health	High Level of Health

APPENDIX A

The Shaw-Denmark Social Support Inventory (SDSSI) Used in Study 1

1. If you had a personal problem, how likely is it that you would go to each of the following persons for help with the problem?

	None	Definitely Not	Probably Not	Maybe	Probably	Definitely
Mother	___	___	___	___	___	___
Father	___	___	___	___	___	___
Sister or Brother	___	___	___	___	___	___
Spouse	___	___	___	___	___	___
Other Relative	___	___	___	___	___	___
Boyfriend or Girlfriend	___	___	___	___	___	___
Best Friend	___	___	___	___	___	___
Other Friend	___	___	___	___	___	___
Teacher	___	___	___	___	___	___
Doctor	___	___	___	___	___	___
Religious Leader	___	___	___	___	___	___
Therapist or Counselor	___	___	___	___	___	___
Community Group	___	___	___	___	___	___
Other, please specify						
_____	___	___	___	___	___	___

2. In the past, when you have gone to each of the following persons for help with a personal problem, how satisfied were you with the help you received?

	Did not go to for help	Very Dissatisfied	Somewhat Dissatisfied	Neither	Somewhat Satisfied	Very Satisfied
Mother	___	___	___	___	___	___
Father	___	___	___	___	___	___
Sister or Brother	___	___	___	___	___	___
Spouse	___	___	___	___	___	___
Other Relative	___	___	___	___	___	___
Boyfriend or Girlfriend	___	___	___	___	___	___
Best Friend	___	___	___	___	___	___
Other Friend	___	___	___	___	___	___
Teacher	___	___	___	___	___	___
Doctor	___	___	___	___	___	___
Religious Leader	___	___	___	___	___	___
Therapist or Counselor	___	___	___	___	___	___
Community Group	___	___	___	___	___	___
Other, please specify						
_____	___	___	___	___	___	___

3. How would you rate your satisfaction with the neighborhood in which you live?

Very dissatisfied___ Somewhat dissatisfied___ Neither___

Somewhat satisfied___ Very satisfied___

4. How would you rate your satisfaction with your work or job?

Very dissatisfied___ Somewhat dissatisfied___ Neither___

Somewhat satisfied___ Very satisfied___ Do not work___

APPENDIX B

The 26 Item Subset of the PERI (Psychiatric Epidemiology Research Interview)

Please answer each of the follwoing questions by placing one of the numbers 1, 2, 3, 4, or 5 in the space provided where

1 = very often
2 = fairly often
3 = sometimes
4 = almost never
5 = never

1. In the past twelve months how often have you felt that nothing was worthwhile? ____

2. In the past twelve months how often have you felt that nothing turns out for you? ____

3. In the past twelve months how often have you felt completely helpless? ____

4. In the past twelve months how often have you felt completely hopeless? ____

5. In the past twelve months how often have you felt like you were going crazy? ____

6. In the past twelve months how often have you felt panicky? ____

7. In the past twelve months how often did you feel that something terrible was going to happen? ____

8. In the past twelve months how often have you felt confused? ____

9. In the past twelve months how often have you had trouble concentrating? ____

10. In the past twelve months how often have you been bothered by sadness or depression? ____

11. In the past twelve months how often have you been in low spirits? ____

12. In the past twelve months how often have you felt like crying? ____

13. In the past twelve months how often have you felt lonely? ____

14. In the past twelve months how often have you had frightening dreams? ____

15. In the past twelve months how often have you feared getting physically sick? ____

16. In the past twelve months how often have you felt anxious? ____

17. In the past twelve months how often have you experienced restlessness? ____

18. In the past twelve months how often have you felt abandoned? ____

19. In the past twelve months how often have you been bothered by a painful stomach? ____

1 = very often
2 = fairly often
3 = sometimes
4 = almost never
5 = never

20. In the past twelve months how often have you had a poor appetite? ____

21. In the past twelve months how often have you broken out in cold sweats? ____

22. In the past twelve months how often hve your hands trembled? ____

23. In the past twelve months how often have you had headaches? ____

24. In the past twelve months how often have you had constipation? ____

25. In the past twelve months how often have you been bothered by other kinds of physical ailments? ____

For the last question use the number 1, 2, 3, 4, or 5 where

1 = very much like you
2 = much like you
3 = somewhat like you
4 = very little like you
5 = not at all like you

26. Think of a person who worries a lot. How much like you is this person? ____

APPENDIX C

The Entire Research

Instrument Used in Study 2

Could you please fill out the attached questionnaires concerning some research I am carrying out for my Ph.D. in Psychology at City University. The information obtained is completely confidential and cannot be traced back to you. You are not asked to give your name. Please try to be as honest as possible in all of your answers.

After you hand in the questionnaires, I will give you a brief explanation of the study. If you would like to receive a copy of the overall results after they are obtained, please submit your name and address on a separate sheet of paper when you hand in the completed questionnaires and I will arrange for these results to be sent to you.

It should take between 15 and 30 minutes to complete all of the questionnaires. IT IS IMPORTANT THAT AS MANY PERSONS AS POSSIBLE RETURN THE QUESTIONNAIRES TO ASSURE THE VALIDITY OF THE RESULTS.

Thank you very much.

PLEASE NOTE: In question #1 on the following page, if the person referred to is deceased, please check off the column headed by "none."

1. If you had a personal problem, how likely is it that you would go to each of the following persons for help with the problem?

	None	Definitely Not	Probably Not	Maybe	Probably	Definitely
Mother	___	___	___	___	___	___
Father	___	___	___	___	___	___
Sister or Brother	___	___	___	___	___	___
Child or Grandchild	___	___	___	___	___	___
Spouse	___	___	___	___	___	___
Other Relative	___	___	___	___	___	___
Boyfriend or Girlfriend	___	___	___	___	___	___
Best Friend	___	___	___	___	___	___
Boss or Supervisor	___	___	___	___	___	___
Co-Worker	___	___	___	___	___	___
Other Friend	___	___	___	___	___	___
Teacher	___	___	___	___	___	___
Doctor	___	___	___	___	___	___
Religious Leader	___	___	___	___	___	___
Therapist or Counselor	___	___	___	___	___	___
Community Group	___	___	___	___	___	___
Other, please specify						
_____	___	___	___	___	___	___

2. In the past, when you have gone to each of the following persons for help with personal problen, how satisfied were you with the help you received?

	Did not go to for help	Very Dis-satisfied	Somewhat Dissatisfied	Neither	Somewhat Satisfied	Very Satisfied
___ Mother	___	___	___	___	___	___
___ Father	___	___	___	___	___	___
___ Sister or Brother	___	___	___	___	___	___
___ Child or Grandchild	___	___	___	___	___	___
___ Spouse	___	___	___	___	___	___
___ Other Relative	___	___	___	___	___	___
___ Boyfriend or Girlfriend	___	___	___	___	___	___
___ Best Friend	___	___	___	___	___	___
___ Boss or Supervisor	___	___	___	___	___	___
___ Co-Worker	___	___	___	___	___	___
___ Other Friend	___	___	___	___	___	___
___ Teacher	___	___	___	___	___	___
___ Doctor	___	___	___	___	___	___
___ Religious Leader	___	___	___	___	___	___
___ Therapist or Counselor	___	___	___	___	___	___
___ Community Group	___	___	___	___	___	___
___ Other, please specify						
_____	___	___	___	___	___	___

3. Please place a check mark to the left of each of the above persons who have gone to you for help with a personal problem.

4. How would you rate your satisfaction with the neighborhood in which you live?

Very dissatisfied ____ Somewhat dissatisfied ____ Neither ____

Somewhat satisfied ____ Very satisfied ____

5. Do you work 20 or more hours per week? Yes ____ No ____

If yes, how would you rate your satisfaction with your work or job?

Very dissatisfied ____ Somewhat dissatisfied ___ Neither ____

Somewhat satisfied ____ Very satisfied ____

6. Who is the person you go to most often for help with a personal problem? (Check only one)

Mother ____	Co-Worker ____
Father ____	Other Friend ____
Sister or Brother ____	Teacher ____
Child or Grandchild ____	Doctor ____
Spouse ____	Religious Leader ____
Other Relative ____	Therapist or Counselor ____
Boyfriend or Girlfriend ____	Community Group ____
Best Friend ____	Other, please specify
Boss or Supervisor ____	_____ ____

7. For the person you go to most often, put a circle around the letter "O" for each kind of help you have received with a personal problem. (Circle as many as apply.)

O	H	Made me feel that I was loved and cared for.
O	H	Allowed me to express my emotional feelings.
O	H	Gave me information concerning what to do about the problem.
O	H	Gave me advice on what to do about the problem.
O	H	Gave me praise or criticism for the way I way handling the problem.
O	H	Did some task for me to help make things easier.
O	H	Gave me financial help.
O	H	Spent time with me socially; for example, went to the movies.
O	H	Helped me just by knowing he or she would be there if needed.
O		Other, please specify _____
		_____
	H	Other, please specify _____
		_____

8. Of the persons listed in question 6, who is the most helpful to you when it comes to obtaining help with a personal problem? (List only one)

_____

9. If the person listed in question 8 is different from the one you chose for question 6, go back to question 7 and put a circle around the letter "H" for each kind of help you received from the person who is most helpful to you. (Again circle as many as apply.)

Please answer each of the follwoing questions by placing one of the numbers 1, 2, 3, 4, or 5 in the space provided where

1 = very often
2 = fairly often
3 = sometimes
4 = almost never
5 = never

1. In the past twelve months how often have you felt that nothing was worthwhile? ____

2. In the past twelve months how often have you felt that nothing turns out for you? ____

3. In the past twelve months how often have you felt completely helpless? ____

4. In the past twelve months how often have you felt completely hopeless? ____

5. In the past twelve months how often have you felt like you were going crazy? ____

6. In the past twelve months how often have you felt panicky? ____

7. In the past twelve months how often did you feel that something terrible was going to happen? ____

8. In the past twelve months how often have you felt confused? ____

9. In the past twelve months how often have you had trouble concentrating? ____

10. In the past twelve months how often have you been bothered by sadness or depression? ____

11. In the past twelve months how often have you been in low spirits? ____

12. In the past twelve months how often have you felt like crying? ____

13. In the past twelve months how often have you felt lonely? ____

14. In the past twelve months how often have you had frightening dreams? ____

15. In the past twelve months how often have you feared getting physically sick? ____

16. In the past twelve months how often have you felt anxious? ____

17. In the past twelve months how often have you experienced restlessness? ____

18. In the past twelve months how often have you felt abandoned? ____

19. In the past twelve months how often have you been bothered by a painful stomach? ____

1 = very often
2 = fairly often
3 = sometimes
4 = almost never
5 = never

20. In the past twelve months how often have you had a poor appetite? ____

21. In the past twelve months how often have you broken out in cold sweats? ____

22. In the past twelve months how often hve your hands trembled? ____

23. In the past twelve months how often have you had headaches? ____

24. In the past twelve months how often have you had constipation? ____

25. In the past twelve months how often have you been bothered by other kinds of physical ailments? ____

For the last question use the number 1, 2, 3, 4, or 5 where

1 = very much like you
2 = much like you
3 = somewhat like you
4 = very little like you
5 = not at all like you

26. Think of a person who worries a lot. How much like you is this person? ____

Your age please _____

Your sex _____

Occupation _____

Please read each of the following statements and decide whether it is true or false as it applies to you personally.

	True	False
1. Before voting I thoroughly investigate the qualifications of all of the candidates.	____	____
2. I never hesitate to go out of my way to help someone in trouble.	____	____
3. It is sometimes hard for me to go on with my work if I am not encouraged.	____	____
4. I have never intensely disliked anyone.	____	____
5. On occasion I have had doubts about my ability to succeed in life.	____	____
6. I sometimes feel resentful when I don't get my way.	____	____
7. I am always careful about my manner of dress.	____	____
8. My table manners at home are as good as when I eat out in a restaurant.	____	____
9. If I could get into a movie without paying and be sure I was not seen I would probably do it.	____	____
10. On a few occasions, I have given up doing something because I thought too little of my ability.	____	____
11. I like to gossip at times.	____	____
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.	____	____
13. No matter who I'm talking to, I'm always a good listener.	____	____
14. I can remember "playing sick" to get out of something.	____	____
15. There have been occasions when I took advantage of someone.	____	____
16. I'm always willing to admit it when I make a mistake.	____	____
17. I always try to practice what I preach.	____	____
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.	____	____
19. I sometimes try to get even rather than forgive and forget.	____	____
20. When I don't know something I don't at all mind admitting it.	____	____
21. I am always courteous, even to people who are disagreeable.	____	____
22. At times I have really insisted on having things my own way.	____	____

	True	False
23. There have been occasions when I felt like smashing things.	____	____
24. I would never think of letting someone else be punished for my wrongdoings.	____	____
25. I never resent being asked to return a favor.	____	____
26. I have never been irked when people expressed ideas very different from my own.	____	____
27. I never make a long trip without checking the safety of my car.	____	____
28. There have been times when I was quite jealous of the good fortune of others.	____	____
29. I have almost never felt the urge to tell someone off.	____	____
30. I am sometimes irritated by people who ask favors of me.	____	____
31. I have never felt that I was punished without cause.	____	____
32. I sometimes think when people have a misfortune they only got what they deserved.	____	____
33. I have never deliberately said something that hurt someone's feelings.	____	____

Please describe yourself by placing the appropriate number (1 through 7) next to each description.

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Moody _____	Truthful ____	Friendly ____
Theatrical ____	Jealous ____	Inefficient ____
Helpful ____	Sincere ____	Solemn ____
Unpredictible ____	Secretive ____	Unsystematic ____
Conscientious ____	Likable ____	Tactful ____
Happy ____	Adaptable ____	Conventional ___
Reliable ____	Conceited ____	

APPENDIX D

Explanation of Study 2

EXPLANATION OF STUDY

This study primarily involves the development and testing of the first questionnaire you filled out. It measures our social support systems, the persons we go to for help with a personal problem and how satisfied we are with the help we receive. Before a questionnaire can be used widely on a general population, it must be tested on many subjects to make sure that it is clear, complete, and that it is measuring what it is supposed to be measuring.

Most of the previous research in this area has shown positive relationships between support systems and measures of adjustment. In a previous study I carried out, with day undergraduate and graduate students as subjects, such positive relationships were obtained except for one subset of students, males who had never availed themselves of any community resources in the past. These negative relationships may have been due to some desire to respond in a socially desirable way (i.e. "I have no problems and need no supports.") In the present study in which you were subjects, tests for socially desirable responding have been provided in the questions and adjective descriptors found on the last two pages of the set of questionnaires.

For all those of you who took the time to complete the questionnaire, I very much appreciate your assistance. A summary of the major results of this study will be provided by the end of the semester. If you would like a copy of this summary, please leave your name and address with your professor and I will send it to you. Also, if there is anything you would like to discuss with me regarding the study, please feel free to leave me a note in the Statistics/Operations Department (10th Floor, Merrill Hall) or contact me by telephone on 285-6180.

Thanks again.

Jeff Shaw
Instructor, Statistics and
Operations Research
Doctoral Candidate,
City University

APPENDIX E

The Most Recent Version

of the Shaw-Denmark

Social Support Inventory (SDSSI)

Shaw-Denmark Social Support Inventory

1. If you had a personal problem, how likely is it that you would go to each of the following persons for help with the problem?

	None or Deceased	Definitely Not	Probably Not	Maybe	Probably	Definitely
Mother	___	___	___	___	___	___
Father	___	___	___	___	___	___
Sister or Brother	___	___	___	___	___	___
Child or Grandchild	___	___	___	___	___	___
Spouse	___	___	___	___	___	___
Other Relative	___	___	___	___	___	___
Boyfriend or Girlfriend	___	___	___	___	___	___
Best Friend	___	___	___	___	___	___
Boss or Supervisor	___	___	___	___	___	___
Co-Worker	___	___	___	___	___	___
Other Friend	___	___	___	___	___	___
Teacher	___	___	___	___	___	___
Doctor	___	___	___	___	___	___
Religious Leader	___	___	___	___	___	___
Therapist or Counselor	___	___	___	___	___	___
Community Group	___	___	___	___	___	___
Other, please specify						
_____	___	___	___	___	___	___

2. In the past, when you have gone to each of the following persons for help with personal problem, how satisfied were you with the help you received?

	Did not go to for help	Very Dissatisfied	Somewhat Dissatisfied	Neither	Somewhat Satisfied	Very Satisfied
___ Mother	___	___	___	___	___	___
___ Father	___	___	___	___	___	___
___ Sister or Brother	___	___	___	___	___	___
___ Child or Grandchild	___	___	___	___	___	___
___ Spouse	___	___	___	___	___	___
___ Other Relative	___	___	___	___	___	___
___ Boyfriend or Girlfriend	___	___	___	___	___	___
___ Best Friend	___	___	___	___	___	___
___ Boss or Supervisor	___	___	___	___	___	___
___ Co-Worker	___	___	___	___	___	___
___ Other Friend	___	___	___	___	___	___
___ Teacher	___	___	___	___	___	___
___ Doctor	___	___	___	___	___	___
___ Religious Leader	___	___	___	___	___	___
___ Therapist or Counselor	___	___	___	___	___	___
___ Community Group	___	___	___	___	___	___
___ Other, please specify						
_____	___	___	___	___	___	___

3. Please place a check mark to the left of each of the above persons who have gone to you for help with a personal problem. If none of the above persons have gone to you for help with a personal problem, check none. None ____

4. How would you rate your satisfaction with the neighborhood in which you live?

Very dissatisfied ____ Somewhat dissatisfied ____ Neither ____

Somewhat satisfied ____ Very satisfied ____

5. Do you work 20 or more hours per week? Yes ____ No ____

If yes, how would you rate your satisfaction with your work or job?

Very dissatisfied ____ Somewhat dissatisfied ___ Neither ____

Somewhat satisfied ____ Very satisfied ____

Bibliography

Abbey, A., Abramis, D.J., & Caplan, R.D. Measuring social support: The effects of frame of reference on the relationship between social supports and strain. Paper presented at the American Psychological Association, Los Angeles, August 1981.

Andrews, G., Tennant, L., Hewson, D.M., & Vaillant, G.M. Life events, social support, coping style, and risk of psychological impairment. Journal of Nervous and Mental Diseases, 1978, 166, 307-316.

Bard, M., Arnone, H., & Nemiroff, D. Homocide survivors victims: Psychological theory and legal policy. In C. Figley, Trauma and its wake. New York: Brunner-Maisel, in press.

Bard, M., & Sangrey, D. The crime victim's book. New York: Basic Books, 1979.

Bard, M., & Sutherland, A.M. Psychological impact of cancer and its treatment. Cancer, 1955, 8, 656-672.

Barrera, M., Jr., Sandler, I.N., & Ramsay, T.B. Preliminary development of a scale of social support: Studies on college students. American Journal of Community Psychology, 1981, 9, 435-437.

Berkman, L.F., & Syme, S.L. Social networks, host resistance, and mortality: A nine-year follow-up of Alameda County residents. American Journal of Epidemiology, 1979, 109, 186-204.

Biegel, D.E., Naparstek, A.J., & Khan, M. Social support and mental health: An examination of interrelationship. Poster session presented at the American Psychological Association, Montreal, September 1980.

Brown, G.W., Bhrolchain, M.N., & Harris, T. Social class and psychiatric disturbance among women in an urban population. Sociology, 1975, 9, 225-254.

Campbell, D.T., & Fiske, D.W. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 1959, 56, 81-105.

Caplan, G. Principles of preventive psychiatry. New York: Basic Books, Inc., 1964.

Cauce, A.M., Zelner, R.D., & Primavera, J. Social support in high-risk adolescents: Structural components and adaptive impact. American Journal of Community Psychology, 1982, 10, 417-428.

Cobb, S. Social support as a moderator of life stress. Psychosomatic Medicine, 1976, 38, 300-314.

Cohen, S. & Hoberman, H.H. Positive events and social supports as buffers of life change stress. Paper presented at the American Psychological Association, Washington, D.C., August 1982.

Cooley, E.J., & Keesey, J.C. Moderator variables in the life stress and illness relationship. Journal of Human Stress, in press.

Couch, A, & Keniston, K. Yeasayers and naysayers: Agreeing response set as a personality variable. Journal of Abnormal and Social Psychology, 1960, 60, 151-174.

Cowen, E.L. The wooing of primary prevention. American Journal of Community Psychology, 1980, 8, 258-284.

Cowen, E.L. Help is where you find it: Four informal helping groups. American Psychologist, 1982, 37, 385-395.

Damarin, F., & Messick, S. Response styles as personality variables: A theoretical integration of multivariate research (Report No. RF-65-10). Princeton, New Jersey: Educational Testing Service, 1965.

Dohrenwend, B.P, Dohrenwend, B.S., Kasl, S., Warheit, G.J., Bartlett, G.S., Goldsteen, R.C., Goldsteen, K., & Martin. J.L. Report of the public health and safety task force of behavioral effects to the President's Committee on the accident at Three Mile Island, 1979. (U.S. Government Printing Office, Stock Number 052-003-00732-1).

Dohrenwend, B.S. Life events as stressors: A methodological inquiry. Journal of Health and Social Behavior, 1973, 14, 167-175.

Dohrenwend, B.S. Life events and psychopathology: A partial specification of the relationship. Paper presented at the American Psychological Association, Montreal, September 1980.

Dohrenwend, B.S., & Dohrenwend, B.P. Life stress and illness: Formulation of the issues. In B.S. Dohrenwend & B.P. Dohrenwend (Eds.), Stressful life events and their contexts. New York: Neale Watson Academic Publications, 1981.

Dohrenwend, B.S., Dohrenwend, B.P., Dodson, M., & Shrout, P.E. Symptoms, hassles, social supports, and life events: Problems of confounded measures. Journal of Abnormal Psychology, 1984, 93, 222-230.

Edwards, A.L. The social desirability variable in personality assessment and research. New York: Dryden, 1957.

Egbert, L.D., Battit, G.E., Welch, C.E., & Bartlett, M.K. Reduction of post-operative pain by encouragement and instruction of patients. New England Journal of Medicine, 1964, 270, 825-827.

Fontana, A.F., Hughes, L.A., Marcus, J.L., & Dowds, B.N. Subjective evaluation of life events. Journal of Consulting

and Clinical Psychology, 1979, 47, 906-911.

Froland, C., Brodsky, G., Olson, N., & Stewart, L. Social support and social adjustment: Implications for mental health professionals. Community Mental Health Journal, 1979, 15, 82-93.

Glass, D.C., Singer, J.E., & Friedman, L.N. Psychic cost of adaptation to an environmental stressor. Journal of Personality and Social Psychology, 1969, 12, 200-210.

Gore, S. The effect of social support in moderating the health consequences of unemployment. Journal of Health and Social Behavior, 1978, 19, 157-165.

Gottlieb, B.H. The development and application of a classification scheme of informal helping behaviors. Canadian Journal of Behavioral Science, 1978, 10, 105-115.

Hawkins, N.G., Davies, R., & Holmes, T.H. Evidence of psychological factors in the development of pulmonary tuberculosis. American Review of Tuberculosis and Pulmonary Diseases, 1957, 75, 768-780.

Haythornwaite, J., & Stone, A. Coping and depression in a community sample. Paper presented at the Eastern Psychological Association, Philadelphia, April, 1983.

Henderson, S., Byrne, D.G., Duncan-Jones, P., Adcock, S., Scott, R., & Steele, G.P. Social bonds in the epidemiology of neurosis: A preliminary communication. British Journal of Psychiatry, 1978, 132, 463-466.

Hirsch, B.J. Psychological dimensions of social networks: A multimethod analysis. American Journal of Community Psychology, 1979, 7, 263-277.

Hirsch, B.J. Natural support systems and coping with major life changes. American Journal of Community Psychology, 1980, 8, 159-172.

Holmes, T.H., & Rahe, R.H. The social readjustment rating scale. Journal of Psychosomatic Research, 1967, 11, 213-218.

Janis, I.L. Psychological stress. New York: John Wiley, 1958.

Joe, V.G., Miller, P.M., & Joe, J.K. Uncontrollability and psychiatric symptoms. Psychological Reports, 1979, 45, 333-334.

Johnson, H., & Sarason, I.G. Life stress, depression and anxiety: Internal-external control as a moderator variable. Journal of Psychosomatic Research, 1978, 22, 205-208.

Kanner, A.D., Coyne, J.C., Schaefer, C., & Lazarus, R.S. Comparison

of two modes of stress measurement: Daily hassles and uplifts versus major life events. Journal of Behavioral Measurement, 1981, 4, 1-39.

Kobasa, S.C. Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personality and Social Psychology, 1979, 37, 1-11.

Kobasa, S.C., Maddi, S., & Courington, S. Personality and constitution as mediators in the stress-illness relationship. Journal of Health and Social Behavior, 1981, 22, 368-378.

Kobasa, S.C., Maddi, S., & Puccetti, M.C. Personality and exercise as buffers in the stress-illness relationship. Journal of Behavioral Medicine, 1982, 5, 391-404.

Kobasa, S., & Puccetti, M.C. Personality and social resources in stress-resistance. Journal of Personality and Social Psychology, 1983, 45, 839-850.

Kraus, A., & Lilienfeld, A. Some epidemiologic aspects of the high mortality rate in the young widowed group. Journal of Chronic Diseases, 1959, 10, 207-217.

Krauss, S., & Perrotta, P. A stressor specific approach to the assessment of social support. Paper presented at the American Psychological Association, Montreal, September 1980.

LaRocco, J.M., House, J.S., & French, J.R.P., Jr. Social support, occupational stress, and health. Journal of Health and Social Behavior, 1980, 21, 202-218.

Lazarus, R.S., Averill, J.R., & Opton Jr., E.M. The psychology of coping: Issues of research and assessment. In G.V. Coelho, D.A. Hamburg, & J.E. Adams (Eds.), Coping and adaptation. New York: Basic Books, 1974.

Leavy, R.L. Social support and psychological disorder: A review. Journal of Community Psychology, 1983, 11, 3-21.

Lefcourt, H.M., Martin, R.A., & Saleh, W.E. Locus of control and social support: Interactive moderators of stress. Journal of Personality and Social Psychology, 1984, 47, 378-389.

Lefcourt, H.M., Miller, R.S., Ware, E.E., & Sherk, D. Locus of control as a moderator of the relationship between stressors and models. Journal of Personality and Social Psychology, 1981, 41, 357-369.

Lewis, J.E., & Jones, A.C. Psychological stress, social support systems, and pregnancy complications in adolescents. Poster session presented at the American Psychological Association, Montreal, September 1980.

Lin, N., Dean, A., & Ensel, W.M. Development of social support scales. Paper presented at the Third Biennial Conference on Health Survey Research Methods, Reston, Virginia, May 1979.

Lin, N., Dean, A., & Ensel, W.M. Social support scales: A methodological note. Schizophrenia Bulletin, 1981, 7, 73-87.

Lin, N., Simeone, R.S., Engel, W.M., & Kuo, W. Social support, stressful life events, and illness: A model and an empirical test. Journal of Health and Social Behavior, 1979, 20, 108-119.

Loevinger, J. Objective tests as instruments of psychological theory. Psychological Reports, 1957, 3, 635-694. (Monogr. Suppl. 9)

Marlowe, D., & Crowne, D.P. Social desirability and response to perceived situational demands. Journal of Consulting Psychology, 1961, 25, 109-115.

Marshall, W. Immunologic psychology and psychiatry. University, Alabama: University of Alabama Press, 1977.

McFarlane, A.H., Neale, K.A., Norman, G.R., & Streiner, D.L. Methodological issues in developing a scale to measure social support. Schizophrenia Bulletin, 1981, 7, 90-100.

Mehrabian, A., & Ross, M. Quality of life change and individual differences in stimulus screening in relation to incidence of illness. Psychological Reports, 1977, 41, 267-278.

Messick, S., & Barrows, T.S. Strategies for research and evaluation in early childhood education. In Yearbook of the National Society for the Study of Education, Part II, Chicago: The National Society for the Study of Education, 1972.

Mitchell, R.E. Social networks and psychiatric clients: The personal and environmental context. American Journal of Community Psychology, 1982, 10, 387-401.

Mitchell, R.E., Billings, A.G., & Moos, R.H. Stressors, coping, and social resources among adults with unipolar depression. Paper presented at the American Psychological Association, Washington D.C., August 1982.

Mueller, D.P. Social networks: A promising direction for research on the relationship of the social environment to psychiatric disorder. Social Science and Medicine, 1980, 14A, 147-161.

Mullen, B., & Suls, J. Know thyself: Stressful life changes and the ameliorative effect of private self-consciousness. Paper presented at the Eastern Psychological Association, New York, April 1981.

Nelson, D.W., & Cohen, L.H. Locus of control and control perceptions and the relationship between life stress and psychological disorder. Paper presented at the Eastern Psychological Association, Philadelphia, April 1983.

Nuckolls, K.B., Cassel, J., & Kaplan, B.H. Psychosocial assets, life crisis, and the prognosis of pregnancy. American Journal of Epidemiology, 1972, 95, 431-441.

Ouellette Kobasa, S.C. Stress resistance and health. Paper presented at City University of New York, April 1983.

Pardine, P., Napoli, A., Dytell, R.S., & Friedman, A. The stress-illness relationship mediated by negligent health behavior. Paper presented at the Eastern Psychological Association, Baltimore, April 1982.

Pearson, R.E. Support: Exploration of a basic dimension of informal help and counseling. Personnel and Guidance Journal, 1982, 60, 83-87.

Procidano, M.E., & Heller, K. Measures of perceived social support from friends and from family. Three validation studies. American Journal of Community Psychology, 1983, 11, 1-24.

Procidano, M.E., Heller, K., & Swindle, R.W. Experimental studies of the nature and effects of social support. Paper presented at the American Psychological Association, Montreal, September 1980.

Rahe, R.H., Meyer, M., Smith, M., Kjaer, G., & Holmes, T.H. Social stress and illness onset. Journal of Psychosomatic Research, 1964, 8, 35-44.

Redfield, J., & Stone, A. Individual viewpoints of stressful life events. Journal of Consulting and Clinical Psychology, 1979, 47, 147-154.

Roberts, L. & Couzzo, M. Evaluative dimensions of stressful life events. Poster session presented at the American Psychological Association, Montreal, September 1980.

Ross, C., & Mirowsky, J.A. A comparison of life-events weighting schemes: Change, undesirability and effect of proportional indexes. Journal of Health and Social Behavior, 1979, 20, 166-177.

Sarason, I.G., Levine, H.M., Bashan, R.B., & Sarason, B.R. Assessing social support: The social support questionnaire. Journal of Social and Personality Psychology, 1983, 44, 127-139.

Shaw, J.S. Psychological androgyny and stressful life events. Journal of Personality and Social Psychology, 1982, 40, 145-153.

Smith, R.E., Johnson, J.H., & Sarason, I.G. Life change, the

sensation seeking motive and psychological distress. Journal of Consulting and Clinical Psychology, 1978, 46, 348-349.

Stein, Z., & Susser, N. Social factors in the development of sphincter control. Developmental Medicine and Child Neurology, 1967, 9, 692-706.

Suls, J., & Mullen, B. Life change and psychological distress: The role of perceived control and desirability. Journal of Applied Social Psychology, 1981, 11, 379-389.

Thoits, P.A. Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. Journal of Health and Social Behavior, 1982, 23, 145-159.

Tolsdorf, C.C. Social networks, support, and coping: An exploratory study. Family Process, 1976, 15, 407-417.

Turner, R.J. Social support as a contingency in psychological well-being. Journal of Health and Social Behavior, 1981, 22, 357-367.

Weiner, H. Psychobiology and human disease. New York: Elsevier, 1977.

Wyler, A.R., Masuda, M., & Holmes, T.H. Seriousness of illness rating scale. Journal of Psychosomatic Research, 1968, 11, 363-374.

Zung, W.A. A self-rating depression scale. Archive of General Psychiatry, 1965, 12, 63-70.