ENVIRONMENTAL SUPPORTS AND POST-HOSPITAL ADJUSTMENT: A PILOT STUDY

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ABSTRACT

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By

Keith Lyon

Studies done in the area of community and hospital adjustment have found several specific variables that appear to be related to the adjustment an individual will make both in an institution and in the community. They may be formal or informal, positive or negative, but the relationship between an individual's environment and his mental health is clearly shown. The present study is designed to provide information on the specific environmental support variables at work in producing improved post-hospital behavior and to assist in the development of a questionnaire and measurement scale which will be useful in further study in this area. In particular, factors relating to the immediate, day-to-day life of the ex-patient, (e.g. amount and quality of contact with relatives and friends; employment experiences), rather than hospital related activities --such as outpatient therapy--were examined.

Three hypotheses guided our inquiry. They were (1) that the extent of environmental support given an individual after his stay in the hospital will be positively related to good relative adjustment after three months; (2) evidence of an adequate pre-hospitalized adjustment (e.g. marriage) will correlate positively with relative adjustment and absolute adjustment at three months; and (3) adult socioeconomic class will

be positively correlated with both measures of adjustment. Measures of adjustment were based on a self-administered symptom checklist using (1) absolute symptomatology at three months and (2) the difference in symptomatology comparing scores on the checklist administered on the ward with those at three months. Environmental supports were measured by an Environmental Support Questionnaire developed for the study and scored blindly on 13 criteria by two raters. Interrater reliabilities ranged from .62 to 1.00.

Subjects were approached initially while hospitalized and were given the Symptom Checklist. After discharge they were interviewed by phone monthly for three months. At these contacts, they were given the Environmental Questionnaire. Three months after discharge they were mailed a second Symptom Checklist and the Activity Checklist.

In terms of the original hypotheses, no individual items were found to relate significantly to improvement over three months. Also, social class differences were not found in the data. This could be due to the preponderance of lower-middle SES individuals in the inpatient unit and in the sample. Evidence was found of the relationship between an adequate pre-hospitalization adjustment and measures of pathology after hospitalization.

A cluster analysis was performed and a stable home life (marriage, high home living involvement, older age, and many home activities) was linked with low three months symptomatology ($p < .01$) and improved symptom change to three months

($p < .10$). The presence of benign visitors (high visitor involvement, little pressure from visitors, and a positive perception of visitors) was also related to low three months symptomatology ($p < .05$). These two clusters were independent ($r = -.06$).

The study has provided an initial trial for a measure of a series of environmental support variables that may be useful in the rehabilitation of the ex-patient. The ease with which these variables divide into clusters would imply that the concept of "environmental support" is not unitary. In addition, the presence of two clusters related to symptomatology is suggested, though these results must be viewed as tentative given the state of development of the environmental support instrument and the small sample size.

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Robert A. Zucker

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CHAPTER I

INTRODUCTION

Most research in mental illness can be placed in one of two broad categories. Much work has been done to reach an understanding of the origins of specific problems and of psychopathology in general. Though these efforts are made from many different theoretical camps and may include methodology ranging from case histories to community surveys, they all have one factor in common--the accent on origin rather than continuation of disorder. Any mention of the continuation of symptoms is handled in a "more of the same" approach--more of the same unresolved conflicts, pressures, or schedules of reinforcement depending on the theoritical framework utilized.

The second category includes studies that follow the individual during or after a treatment program. Here, the major emphasis is on the comparison of treatment effectiveness, and data is gathered with this goal in mind. Variability of other factors is either defended against by randomization or matching or ignored. Thus, the results obtained differentiate between programs at the expense of any other factors that may relate to adjustment. And this makes it very difficult to generate a broad theory about the forces present in the post-hospitalization environment and their effect on the former patient.

It is with this difficulty in mind that the present study was designed. Unlike work in the first category, we will be focusing exclusively on a post-hospitalization population, but our study will not be accenting hospital related activities either. We will be examining influences present in the individual's own non-institutionalized environment and relating them with his ability to adjust upon his return home, with the proposition that environmental supports in the form of peer group and family contact will be crucial in an individual's success or failure after hospitalization. As no instrument designed to tap this area of the ex-patient's life currently exists, one had to be developed for the study, making this research a pilot study for the new instrument.

REVIEW OF THE LITERATURE.

Environmental Factors Related to Continuation or Discontinuation of Psychopathology in the Community. There is little evidence in the recent literature of attempts to examine directly the forces active in continuing pathological behavior. But some work has been done, such as the Midtown Study (Langner and Michael, 1963) which examined mental illness in a community setting through a survey technique. Specifically, they were looking at social class differences in the duration of pathology. What they found was quite different response styles between classes, with the lower classes utilizing much less adaptive ways of dealing with problems. Thus, the ability of the response to allieviate the stress (as in the middle class compulsive response to job oriented worries) and avoid hospitalization (a common result of a lower class acting out response) will determine the psychopathology's duration.

Leff, Roach and Bunney (1970) found unfavorable life events prior to hospitalization in the depressive patients they studied. This was true for both the acute and endogenous depressives. While at first glance this may seem unrelated to the maintenance of symptoms, it must be remembered that most individuals involved in short-term hospitalization return to essentially the same environment they experienced previously. In such a situation, high stress levels could "maintain" a chronic picture of periodic hospitalizations.

Sometimes at lower stress levels the mere suggestion of help can produce a marked change. Kellner and Scheffield (1971)

found that, with patients in both anxious, depressed and psychophysiological categories, improvement was noted during a waiting period before treatment. This effect was greater than the effect of subsequent brief therapy, and was felt to be due to the "impact of the clinic" or the response to the "symbols of competent care."

Dohrenwend and Dohrenwend (1969) approach the question of the role of social factors in the maintenance of mental illness directly. In discussing the relationship between stressful events and psychological symptoms (p. 129), they note that whether the symptom disappears or is maintained after the stress is allieviated depends upon the presence or absence of secondary gain. In other words, if the rewards for the symptom produced in response to the stress are sufficiently great (e.g. compensation payments, removal of responsibility, etc.) the symptom will be maintained by these rewards after the original need for it is removed.

Social classes differ in the number of adequate resources present to cope with stressful situations. Lower class husbands and wives provide little mutual support (Rainwater, 1965) and a lower class individual is less likely to be involved in voluntary organizations (Cohen and Hodges, 1963). As a group, they are less able to purchase adequate medical care (Langer, 1966) and are dealt with less favorably by social agencies (Dohrenwend, 1961).

The above class differences, when combined with the higher level of symptomatology present in the lower class (Hollingshead

and Redlich, 1968, Dohrenwend and Dohrenwend, 1969), and the other evidence presented in this section, provide strong support for the Dohrenwends' hypothesis that the absence of adequate resources with which to cope with stressful situations is a factor in the continuation of symptomatology.

Thus, the studies cited seem to point to two general conditions which may lead to the continuation of symptomatology. First, the stress level that produced the original response may continue unabated with no hope for the pt. of relief in sight. And, second, the symptom may be reinforced by the social milieu to such an extent that it is not relinquished once the stress is removed. Either condition seems to relate directly to the environmental support picture in the individual's environment.

Institutional Forces in Psychopathology. In a hospital setting, and using a participant-observer role, Goffman (1961) has noted the institutional pressures to force the patient into a "sick" role. Deviations from this expected behavior are firmly dealt with because they are threatening to the whole system. The forces are so intense that an entire subculture develops among the patients in an attempt to salvage some autonomy.

Stillman, (1971) in a study of the relationship between social interaction and health--sickness of patients in the Exit Unit of a Veterans Administration hospital, focuses on the patient rather than the staff environment. He reported a

positive correlation between staff and patient evaluation of mental health status and peer group popularity. While this leaves the question of causality unanswered, it seems clear that there is strong social support for "well" behavior among the patients on the ward. Thus, we find a paradox in which the institutional structure pressures patients into a "sick" role, while the peer group supports "well" behavior.

Post-hospitalization Adjustment. Several factors in the post-hospitalization environment have been correlated with community adjustment by prior studies. Though these dealt primarily with the chronic, institutionalized patient they are suggestive of forces more generally present in persons following hospitalization. Specifically, Kardiner and Spiegel (1947) examined soldiers suffering from war neuroses and found that the neurosis seemed to be prolonged by the presence of direct disability compensation, (p. 392). This factor was made more intense by the role of the therapist in making the decision relating to compensation eligibility.

Silverstein (1968) points to the need for agency aftercare facilities such as medication monitoring, day treatment centers, counseling, and psychotherapy. He feels that services of this sort were needed by 9 out of 10 of the patients who left the 18 state hospitals of Pennsylvania during his study. Further support for the need for aftercare facilities was suggested by the fact that 44.3% of the patients who returned to the hospital did not utilize any of the available assistance.

Unfortunately, data was gathered only on those who failed. This study, along with the others presented in this section, makes the need for post-hospitalized help and support for successful readjustment clear.

Lucas (1959) found that group support in the form of an ongoing therapy group was beneficial in increasing the self-confidence of the former patient. This was felt to be of special importance to the person labeled schizophrenic who must struggle with his oversensitivity and feelings of lack of belonging.

Life stress has already been mentioned as a factor affecting mental health status (Dohrenwend and Dohrenwend, 1969) in the community. The difference between momentary symptoms and more chronic problems was felt to depend in part on the availability of stress alleviating community resources and also on the secondary gain afforded the symptom in the social setting. This point is supported by Silverstein's finding that 35% of all his subjects who failed in the community did so because of an inability to cope with stressful situations.

The guided autonomy and social supports of a live-in "Lodge" situation was found to be more successful in preventing rehospitalization than completely independent attempts at community readjustment (Fairweather, Sanders, Cressler, and Maynard, 1969). Here, peer interaction was felt to be most beneficial in stabilizing the former patient.

Table 1 summarizes the studies done in the area of community and hospital adjustment. It presents the specific

variables found to be related to adjustment by each researcher and the date of publication of each study. It can be seen that several different types of environmental support have been linked to the adjustment an individual will make both in an institution and in the community. They may be formal or informal, positive or negative, but the relationship between an individual's environment and his mental health is clearly shown.

The above research tends to support the theoretical model advocated by Caplan (1964). He assumes that in order to avoid mental disorder a continual source of "supplies" is needed by the individual. These supplies can be grouped into three general areas: physical, psychosocial and sociocultural and a lack in any one area can be very detrimental. Physical supplies include food, shelter, sensory stimulation and other things necessary for bodily health and development. Psychosocial supplies relate to the "stimulation of a person's cognitive and affective development through personal interaction with significant others..." (p. 32). And sociocultural supplies are those influences exerted by the culture and the social structure in terms of enhancing or blocking challenge or opportunity as well as in the degree of stability present in the society.

These three groupings are, of course, interrelated, and it is felt that a lack in any area of supplies would greatly affect the individuals' ability to cope with a crisis situation. Caplan's use of the term "supplies" parallels what we mean by environmental supports, but the present study is not intended as an all inclusive assessment in this area, but instead narrows

down on those supply aspects that were felt to be most salient to the patient's immediate post-hospital adaption.

TABLE 1

RESEARCH ON COMMUNITY AND HOSPITAL ADJUSTMENT

STUDY	DATE	VARIABLES AFFECTING ADJUSTMENT
COMMUNITY		
Lagner and Michael	1963	Ability of response to allieviate stress.
Dohrenwend and Dohrenwend	1969	Secondary gain; Coping resources.
Leff, Roach and Bunney	1970	Unfavorable life events.
Kellner and Sheffield	1971	The promise of help (screening interview).
INSTITUTIONAL		
Goffman	1961	Institutional pressures into the "sick" role.
Stillman	1971	Patient peer group support of "well" role.
POST-HOSPITALIZED		
Kardiner and Spiegel	1947	Direct disability compensation (secondary gain).
Lucas	1959	Ongoing therapy group.
Silverstein	1968	Agency aftercare facilities.
Fairweather, Sanders, Cressler and Maynard	1969	Guided autonomy (live-in facilities).

STATEMENT OF THE PROBLEM.

As has been noted above, a number of investigators have pointed to environmental supports (including compensation), both formal and informal, as the deciding factors in successful community adjustment. The present study is designed as a pilot to develop an instrument capable of measuring the amount of social support present in the ex-patient's environment and also to provide information on the specific environmental support variables at work in producing improved post-hospital behavior. In particular, factors relating to the immediate, day-to-day life of the ex-patient, rather than hospital related activities such as outpatient therapy were examined, focusing primarily on Caplan's psychosocial supplies with a secondary emphasis on physical supplies.

Our outcome measure of symptomatology is compared to three sets of variables: Pre-Hospitalization Adjustment, Post-Hospitalization Adjustment, and Social Class.

HYPOTHESES.

The following operational definitions are used in the primary hypotheses: (A) RELATIVE ADJUSTMENT is defined operationally as the patient's score on a symptom checklist (Appendix A) (Michaux, William, Katz, Martin, Kurland, Albert, and Gansereit, Kathleen, 1969) self administered on the ward, subtracted from his score on the same checklist filled out 3 months after discharge. (B) ABSOLUTE ADJUSTMENT is the patient's score on the symptom checklist at three months. (C) ENVIRONMENTAL SUPPORTS are operationally defined by the 13 rating scales listed in Appendix B. These items will be further described in "Method".

The hypotheses for the study are as follows:

1. The extent of environmental support given an individual after his stay in the hospital will be positively related to good relative adjustment after three months. In other words, if an individual has had a great deal of contact with help since he left the hospital, his condition will have a greater tendency to improve than will that of another subject with less contact.

Support for this hypothesis comes from the studies on post-hospitalization treatment programs. These programs were found to be quite important in the adjustment of the individuals studied, and, as has been mentioned previously, aftercare treatment seems to be a formalized, structured case of what we mean by environmental support.

This hypothesis also grows out of the literature on stress and mental illness cited previously. For a large number of people in contact with the former patient will make it much more likely that he will be able to find the help he needs when faced with a crisis.

Also, meaningful participation in a social network is, itself, rewarding. Its absence, and the accompanying feeling of alienation from those around one can precipitate a neurosis (Maddi, 1967). This would seem especially traumatic to the individual who has just experienced the close, intense relationships present in a closed institution such as a hospital (Goffman, 1961).

2. Evidence of an adequate pre-hospitalized adjustment (e.g. marriage) will correlate positively with both measures of adjustment after discharge. Individuals with adequate interpersonal relationships prior to admittance will be less impaired on an absolute scale. They should also show less deterioration over the course of the study (i.e. a situational crisis in a better functioning person has a better prognosis).

Support for the absolute difference is grounded in the work previously done relating good vs. poor pre-morbid adjustment to symptomatology (Zigler and Phillips, 1960). The longitudinal prediction was based on the belief that individuals who enter the hospital from a functioning social network will return to essentially the same milieu after a short-term absence. The effect of this environment, as expressed in Hypothesis 1, will be to aid in the ex-patient's readjustment. These

individuals also will have more resources within themselves and will be more likeable.

3. Adult socioeconomic status will be positively correlated with both measures of adjustment. Higher SES individuals will be less impaired on an absolute sense and will also show a decrease in symptomatology after their return to the community.

The greater incidence and the more serious nature of disorders in the lower classes is well documented (Hollingshead and Redlich, 1958; Dohrenwend and Dohrenwend, 1969). This should lead to an absolute difference in impairment. Also, differences in the resources available to the different classes with which to alleviate stress would suggest a less adequate post-hospitalization adjustment in the lower class. Finally, the lower SES patient is less likely to find sympathetic, understanding individuals in his immediate environment (Hollingshead and Redlich, 1958).

CHAPTER II

METHOD

INSTITUTION.

The Inpatient Unit at the St. Lawrence Community Mental Health Center provides several services to its coverage area. It is designed to deal with acute, short term mental upsets which can not be handled on an outpatient basis, but which do not require extended absences from the community. To prevent "acute" from becoming chronic, the maximum stay for Community Mental Health patients without private physicians in attendance is 30 days.

This limitation leads directly to the second major function of the unit. Patients who show no signs of improvement as a result of their stay, or have a history of prior hospitalizations, are referred for committment to state institutions directly from the Inpatient Unit. Thus, the unit is actively involved with a population precariously balanced between community life and institutionalization.

SUBJECTS.

Forty three individuals entering the Inpatient Unit at the St. Lawrence Community Mental Health Center, without organic damage or drug addiction nor under committment orders to another institution were included in the sample. All patients who qualified were approached, and participation in the study

was voluntary. Though no data was kept on the number of refusals within the total population contacted, approximately 60-70% of those approached agreed to participate in the study. No general trends were discernible among those refusing. Permission was also obtained from private physicians where they were involved. Demographic data and formal diagnoses for these individuals are presented in Appendix C.

Of the original 43, two refused to complete the final evaluation after responding reluctantly to each of the phone contacts. Three others were rehospitalized during the three months follow-up period. These subjects for whom data would be either incomplete or contaminated by institutionalization were removed from the sample. A review of the incomplete date obtained from these individuals revealed no discernable trends except that the two who refused to cooperate were women. Social supports among those who were rehospitalized were within the lower-middle range.

INSTRUMENTS.

The study may be conceptualized as a comparison of measurement made at three points along a time dimension: Long-Term Life History Variables vs. In-Hospital Variables vs. Post-Hospitalization Variables.

Life history variables include facts relating to the social experiences of the patient prior to hospitalization. Information on employment, marital status, age, sex, education and number of previous hospitalizations was gathered. Socio-economic status was also determined from the history data.

The in-hospital variable consisted of the results of the symptom checklist (Appendix A, Michaux, Katz, Kurland, and Gansereit, 1969), administered on the ward as explained in "Procedures."

The third group of variables constitutes the major focus of the study, the post-hospitalization environment in which the patient finds himself. We examined the social, work, and therapeutic encounters of the former patient after his release and his role within each. As part of the examination of role we obtained a measure of the locus of motivation for the individual patient.

In particular, we focused on such aspects as the living arrangements experienced by the former patient in the community as well as the interaction patterns present in the living unit, whatever it may be. For, here is found the potential for the most intense support or alienation experienced by the individual. Questions have been devised to tap the many aspects of

the home environment--including task, entertainment, and general interactional factors. For each factor, data on motivation and enjoyment was collected (see Appendix D).

But family "support" to the exclusion of all others can be at least as damaging as no support at all. It is with this in mind that our questions also focus on phone or personal contacts outside the home. Thus, contact outside the home is seen as a crucial variable in adjustment, both for its own sake and in terms of determining the effect of family interaction patterns.

Another area of major concern in the adjustment process is that of employment. The number of weeks spent on a job has been shown to be of little utility in a study of chronic mental patients (Fairweather, et. al., 1969), largely because of the difficulty in securing jobs. The measure was effective for those involved in the treatment program including joint operation of a small business, but for those individuals in the control group the rate of employment was well below a statistically useful level.

Even though the population we are concerned with is composed of acute, short-term cases, it was felt that the above findings, combined with the short time span of the study, would invalidate employment records as a measure of adjustment. For, given the realities of the job market today, employment during the three months after discharge would seem to relate more closely to such factors as pre-hospitalization status on the job, the employer's personal reaction to mental upsets, and company

policy.

But, even though we can not depend on employment to measure a wellness-illness dimension, it does give an indication of the number and quality of social contacts experienced by the subject. For those not working, questions about the extent of job hunting and the involvement of significant others in the process tap a very important source of environmental support. At the same time, the locus of motivation can be discovered in this crucial, practical area of the subject's life.

Agency and therapist contact was included in the study in the belief that it will prove helpful to the client as an additional social contact. And medication levels are also important because of the effect drugs can have on the symptoms recorded as well as on the personality and motivation of the client.

The Environmental Support Questionnaire (Appendix D), used to measure the subject's post-hospitalization environment, was scored on 13 criteria described in Appendix B by four raters. Scoring was done on 5 point scales, and the scores of the two raters who correlated best with each other were pooled for further analysis.

Adjustment was measured in two ways: (1) on an absolute scale using Katz's Symptom Checklist (see Appendix A, Michaux, et. al., 1969) after three months in the community, and (2) on a relative basis, comparing scores on the Symptom Checklist administered in the hospital and at 3 months after discharge

(i.e. a measure of symptomatology change). This instrument was self-administered.

PROCEDURE.

TABLE 2

STUDY PROCEDURES AND TIMING OF MEASUREMENTS

	In Hospital	Post-Discharge	Termination
TIME	Off Step A	Discharge plus 30, 60 and 90 days	90 days
ACTIVITY	Interview	Phone Interview	Mail Questionnaire
FORMS	Background Questionnaire Release Form Symptom Checklist	Environmental Support Questionnaire	Symptom Checklist Activity checklist

Demographic and history data were gathered upon arrival on the Inpatient Unit. Each patient was contacted and permission obtained when the staff removed him from Step A (the initial, restricted category). It was felt that at this point acute, presenting symptoms would have subsided, but the patient would not yet begin anticipating release. Both of these conditions could have greatly affected the Symptom Checklist administered on the ward.

Upon release, subjects were approached monthly for the next three months. Contact was by phone, directly to the former patient. At three months, a questionnaire was mailed to the individual in addition to the phone contact.

As outlined in Table 2, subjects were given the background interview mentioned above and the Symptom Checklist (Michaux, et. al., 1969) (Appendix A) when they were removed from Step A. (See Appendix E for mean symptom values in the sample). At monthly intervals, the Environmental Support Questionnaire (Appendix D) was administered by phone, with direct contact if no phone was available. At three months, a questionnaire combining the Symptom Checklist and an activity checklist (Michaux, et. al., 1969) (Appendix F) was mailed to the subject. This was timed to arrive just prior to the final phone contact.

The Environmental Support Variables (Appendix B) have been designed to measure the frequency, duration and the dynamics involved in social contacts after release. It was felt that these contacts would be crucial to the success of a former patient.

As three months is too short a time to obtain good recidivism data (Fairweather, 1967), the primary instrument for measuring post-hospitalization status was the Symptom Checklist. Scores from the final evaluation were compared with those obtained on the ward before discharge to determine each patient's status.

Table 3 presents the variables utilized in the study. The two outcome variables were correlated with the variables indicated, focusing on each of three points in time; pre-hospitalization, discharge, and post-discharge. Each of these variables is correlated with each other variable as well in the final analysis.

TABLE 3

VARIABLES UTILIZED IN THE STUDY

DEPENDENT VARIABLES	INDEPENDENT VARIABLES		
	(1)	(2)	(3)
(A) Post-hospital Adjustment at Three Months	Pre-Hospital & Demographic History	Symptomatic Status at Discharge	Environmental Support After Discharge
(B) In vs. Post-Hospital Adjustment Change Score	Socioeconomic Status Marital and Family Status Education	Symptom Checklist on Ward	Environmental Support Variables Activity checklist

COMPARISONS

(1) vs. (A)
(1) vs. (B)
(1) vs. (2)
(1) vs. (3)

(2) vs. (A)
(2) vs. (B)
(2) vs. (3)

(3) vs. (A)
(3) vs. (B)

CHAPTER III

RESULTS

CORRELATIONS WITH OUTCOME MEASURES.

Interrater reliability correlations for Environmental Support Variables are presented in Table 4. For each item, a Pearson Product-Moment Correlation (r) was computed comparing each of four raters' scores with those of each other rater. Raters had been trained using the descriptions of the scale items given in Appendix B; monitoring of their scoring on the first 20 questionnaires revealed no real discrepancies between their ratings and those of the researcher on each item. The scores of the two raters with the best overall pattern of correlations were selected for further analysis and pooled. Reliability coefficients are all adequate, with the possible exception of Employment Pressure and Visitor Pressure.

Correlations of each of the environmental support and background variables used in the study are presented in Table 5. In this table (as well as in all the succeeding ones) the number of significant relationships is greater than 5 per cent of the total number examined--i.e., the correlations we discuss here and in the following sections are by the large not random. Missing data for any individual subject was handled by substituting the mean across all subjects for that particular item.

As can be seen in the table, high Discharge Symptomatology and subject's negative Perception of Visitors were significantly correlated at the .01 level with high Three Month Symptomatology. At the .05 level, more Pressure from Visitors correlated significantly with 3 month symptomatology level. There were also trends ($p. < .10$), with high Living Involvement, increased age, positive Perception of Home Responsibilities and being male related to low Three Month Symptomatology.

Less pressure for home responsibilities, being married, and being older were related at the .05 level to higher activity level at three months.

High Symptom Change during the three months follow-up period was found to correlate with high Discharge Symptomatology (.01 level), a positive Perception of Employment (.10 level) and a greater number of previous hospitalizations (.10 level). This meant that being discharged with a large number of symptoms, enjoying one's job, and having been hospitalized previously were linked to remission of symptoms over three months.

Table 6 presents the intercorrelations among the three outcome variables. Those who improved over the three month follow-up period had fewer symptoms at three months and were engaged in more activities. Low three month symptomatology and low three month activity levels were directly correlated as well. All correlations between outcome variables were significant at the .01 level.

An analysis was performed comparing the five individuals with the highest positive symptom change with the five exhibiting the greatest negative symptom change (over three months) on sixteen dependent variables. Mann-Whitney U's were computed and none were found to be significant. Results are presented in Appendix G.

TABLE 4

INTERRATER RELIABILITY OF ENVIRONMENTAL SUPPORT VARIABLES

(Calculated on 38 Subjects)

Environmental Support Variables	Interrater Reliability
Residential Living Involvement	.91
Residential Living Pressure	1.00
Employment Involvement	.83
Employment Pressure	.66
Employment Perception	.83
Responsibility Involvement	.89
Responsibility Pressure	.80
Responsibility Perception	.83
Visitor Involvement	.83
Visitor Pressure	.62
Visitor Perception	.84
Professional Involvement	.91
Medication Involvement	1.00

TABLE 5

CORRELATION OF ENVIRONMENTAL SUPPORT VARIABLES AND BACKGROUND FACTORS WITH POST-HOSPITALIZATION ADJUSTMENT MEASURES AT 3 MONTHS (N = 38)

Independent Variables	Post-Hospital Adjustment Measures. Symptom Change to 3 Months	Amount of Symptomatology at 3 Months	Amount of Activity at 3 Months
Residential Living Involvement	.11	-.30^{x}	.22
Residential Living Pressure	.00	.00	.00
Employment Involvement	-.01	.06	-.02
Employment Pressure	.26	-.11	.07
Employment Perception	.31^{x}	-.20	.23
Responsibility Involvement	-.05	-.05	.24
Responsibility Pressure	.02	.26	-.37*
Responsibility Perception	-.06	-.29^{x}	.22
Visitor Involvement	.12	.04	.06
Visitor Pressure	-.17	.39*	-.11
Visitor Perception	.24	-.42**	.23
Professional Involvement	-.05	.20	-.07
Medication Involvement	-.18	.14	-.08
Discharge Symptoms	.47**	.42**	-.17
Marital Status	.22	-.26	.37*
Socioeconomic Status	.06	.04	.11
Age (in years)	.13	-.31^{x}	.33*
Sex (M=1; F=2)	-.23	.27^{x}	-.15
Years Education	-.15	.11	-.16
No. Previous Hospitalizations	.31^{x}	-.06	.20

^{x} $p < .10$

* $p < .05$

** $p < .01$

TABLE 6

INTERCORRELATIONS AMONG OUTCOME VARIABLES

($\underline{N}$ = 38)

	3 Month Symptoms	3 Month Acitivity	Sympt. Chg. To 3 Months
3 Month Symptoms	-	-	-
3 Month Activity	-.55	-	-
Symptom Change To Three Months	-.58	.43	-

Note: All $\underline{p}$'s $< .01$

CLUSTER ANALYSIS PROCEDURE.

The above analysis--and a rough cluster analysis generated by hand using squared correlations as a measure of the variance accounted for by each relationship between items--suggested the possibility of clusters being present in the data. To investigate this further, a formal cluster analysis was performed using PACKAGE, a system of computer routines designed in part to generate a cluster analysis on correlational data (Hunter and Cohen, 1969). The effectiveness of this program in forming clusters was demonstrated in a comparison with clusters formed by hand. In the example cited, the same clusters were produced with a time saving of 75% (Hunter, 1972, p. 11).

This program generates a matrix of similarity coefficients which are then ordered from the highest absolute correlation on down to the least correlated item in the matrix. Using the ordered matrix and item content as guides, preliminary clusters were formed and these were run as a "multiple groups analysis." This run formed groups of each cluster by summation and correlated them with each other as well as with each original item. Cluster descriptions can be found in Figure 1.

INTERCORRELATIONS AMONG CLUSTERS.

Table 7 presents the intercorrelations among the clusters. Stable Home Life correlated with Home Responsibilities and Outcome at the .01 level and with low Professional and Medicine

Involvement at the .05 level.

Home Responsibility also was negatively related to Discharge Symptomatology (.05 level), and Pro & Med Involvement correlated negatively with Employment (.05 level).

Stable Home Life	- High Residential Involvement, Home Activities, Marriage, Age.
Home Responsibilities	- Home Responsibility Involvement, Positive Perception of Responsibilities, Lack of Pressure on Responsibilities.
Pro & Med Involvement	- Professional Involvement, Medication.
Employment	- Employment Involvement, Positive Perception of Employment, Lack of Employment Pressure.
Visitors	- Visitor Involvement, Positive Perception of Visitors, Lack of Visitor Pressure.
Low Social Class	- Low SES, Little Education, Many Previous Hospitalizations.
Outcome	- Symptom Change to 3 Months, Few 3 Month Symptoms, Many 3 Month Activities.

FIGURE 1. INDIVIDUAL ITEMS IN ENVIRONMENTAL SUPPORT CLUSTERS.

TABLE 7

INTERCORRELATIONS AMONG ENVIRONMENTAL SUPPORT CLUSTERS.

	HOME LIFE	HOME RESPONS.	PRO & MED	EM-PLOY-MENT	VISI-TORS	SES	DISCH SYMP.	OUT-COME
HOME LIFE	-							
HOME RESPON-SIBILITIES	.46**	-						
PROFESSIONAL & MEDICATION	-.38*	-.02	-					
EMPLOYMENT	-.01	.03	-.34*	-				
VISITORS	-.06	-.01	.07	.08	-			
SES	.22	.23	-.18	-.02	-.13	-		
DISCHARGE SYMPTOMATOLOGY	-.24	-.35*	.02	.05	-.09	.15	-	
OUTCOME	.54**	.22	-.18	.04	.31	.18	-.05	-

* $p < .05$

** $p < .01$

CLUSTERS X OUTCOME VARIABLES.

The correlations of clusters with individual outcome measures is presented in Table 8. Only Home Life was found to be significantly related to Symptom Change to Three Months, (.10 level).

The Home Life cluster was also related to low symptomatology at three months (.01 level), as was the Visitor cluster (.05 level).

The three month activity measure was related to both Home Life (.01 level) and Home Responsibility (.05 level).

TABLE 8

CORRELATIONS OF CLUSTERS WITH INDIVIDUAL OUTCOME VARIABLES

Clusters	Improved Symptom Change To Three Months	Low 3 Month Symptomatology	3 Month Activity	Low Discharge Symptomatology
Home Life	.27[x]	.47**	.61**	.24
Home Responsibility	-.05	.25	.35*	.35*
Professional & Medication	-.14	-.22	-.09	-.02
Employment	.02	.02	.06	-.05
Visitors	.24	.35*	.18	.09
SES	.21	.05	.18	-.15

[x] $p < .10$

* $p < .05$

** $p < .01$

CHAPTER IV

DISCUSSION

BASIC HYPOTHESES.

In terms of the original hypotheses on environmental support, only the individual's perception of employment, that is, whether he liked his job situation, was related to improvement over three months. As will be discussed in more detail later, the three month time limit could have been too short to obtain good data on the change in symptomatology.

The correlation of the stable home life cluster, especially age and marital status items, with each of the outcome measures as well as with the outcome cluster lends strong support to the hypothesis relating adequate pre-hospitalization adjustment with measures of pathology after hospitalization. That is, individuals who had been able to make an at least overtly adequate response to others--prior to hospitalization --i.e. getting married and functioning as an adult within a family unit--showed fewer symptoms and were more active at the end of the follow-up period.

Social class differences did not appear on the data. This is probably due to the preponderance of lower-middle and lower class individuals included in the study. Research has suggested that a large proportion of upper class individuals utilize private treatment facilities or enter public facilities

under the care of a private physician. Our sample of patients for whom the community mental health center had primary responsibility reflected that trend.

PREDICTION OF OUTCOME.

Symptom Change. Only one independent variable was significantly correlated with Symptom Change to Three Months, high Discharge Symptomatology. (Table 5). Thus, we find a situation in which those with the most symptoms on discharge had the greatest tendency toward improvement.

This finding could relate to the different types of symptoms represented in the Checklist. Certain symptoms (e.g. feeling blue, feeling you were not functioning as well as you could, nervousness and shakiness under pressure, etc.) do not necessarily prevent discharge. Thus, an individual would be released from the unit with a great many symptoms--or strong scores on a moderate amount of symptoms--providing the symptoms involved were not considered serious.

These data show that, when that's true, these symptoms have a tendency to drop out or reduce their pressure on the individual. So, this finding must be considered a description of a discharge decision based on an analysis of impairment to which our measuring instrument was insensitive.

The fact that these highly symptomatic individuals do show improvement after discharge would serve to support the concept of a drive for health inherent in the individual and independent of environmental factors.

In addition to the above, trends were discovered linking positive Employment Perception and a greater number of Previous Hospitalizations to high Symptom Change. It is felt that these relationships are measurement artifacts as the Previous Hospitalizations item is very heavily skewed (over 1/2 the sample had no previous hospitalizations) and data on Employment Perception could be gathered only from those who were currently working--about 1/2 the sample. This essentially based the correlation on the mean score because of so much missing data.

3 Month Symptomatology. The positive correlation of 3 Month Symptomatology with Discharge Symptomatology (Table 5), essentially a pre-post test situation, was expected. Thus, while changes in symptomatology did occur over 3 months, one of the best predictors of final level of symptoms remained our measure of pathology at discharge. This relationship, when combined with that relating Discharge Symptomatology and Symptom Change, implies that much of the change in scores is due to the phenomenon of discharge decision making mentioned previously.

The correlation with 3 month Symptomatology of a positive Perception of Visitors and little Visitor Pressure led to the creation of a Visitors cluster, adding the amount of Visitor Involvement. This entire unit seems to suggest a benign contact, positively perceived, that relates to lower post-hospitalization symptomatology. The fact that no significant

relationship was found with reduction of symptoms implies that the cause-effect nature of this relationship is not clear. It could be that the effect is a long term one, not revealed in so short a time, or it could be that the relationship is merely correlational.

Another cluster was formed utilizing the variables of Living Involvement and higher Age as a base. These items were placed with Marital Status and Home Activities, forming a picture of a stable, or at least intact, home life which was related to low symptomatology and a lot of activity at three months.

Thus, two general groupings of environmental support variables were discovered which were related to 3 Month Symptomatology (Table 8) and yet are independent of each other ($r = -.06$) (Table 7). Both a stable home life and the presence of friends and neighbors in the former patient's environment can effectively influence the level of disturbance in the patient.

The trend for women to have more symptoms than men may be explained in terms of each sex's role within the culture. It is much more acceptable for a woman to admit weakness and ask for help than it is for a man (for example, women typically score higher on anxiety and neuroticism scales than do men). To the extent that the Checklist was interpreted as an admission of weakness, men would be less inclined to admit their symptoms than women.

Activity Level. Being married and of older age both

relate to more activity at three months. Marriage apparently opens up the individual to new responsibilities and involvement with others, but it must be remembered that only those willing to become active would get married. Thus, no causation direction can be implied. It is felt that older age is related to activity level through its correlation with marriage as well as its relationship to maturity.

From the original Activity Checklist, activities relating to the house and household chores (shopping, training of other household members, budgeting, etc.) were gathered into a Home Activities index. It is an indication of the strong relationship between a stable home life and activity level that this subscale, Home Activities, was included in the Home Life cluster during the statistical analysis.

Pressure from others in the area of home responsibilities shows a negative relationship to activity level. Thus, those individuals who receive more pressure to perform at home are less active generally. The effect seems to be interactional, an hypothesis supported by the fact that the strongest positive correlation between Pressure for Home Responsibilities and activity level is with Home Activities. In other words, while pressure to perform at home may be detrimental to the individual, it must be kept in mind that those individuals not functioning well in the first place tend to call forth the greatest amount of pressure.

CHAPTER V

SUMMARY AND CONCLUSIONS

The contribution of the present study to the field of mental health procedures lies mainly in its providing an initial trial for a measure of a series of environmental support variables that may prove useful in the rehabilitation of the ex-patient. More work needs to be done, but the feasability of measuring environmental supports by means of a questionnaire has been established.

In addition, the ease with which these variables divide into clusters would imply that the concept of environmental support is not unitary.

Though the results are only tentative given the state of development of the environmental support instrument and the small sample size, two general clusters were discovered which tentatively were related to a more benign post-hospital adjustment.

The first of these clusters, and the more powerful, is that of a stable home life. It was found that an intact kinship network does have a strong relationship to patient condition. The only qualification that must be added is that the individual must be in a "parent" rather than a "child" position in the system.

The other cluster involves the presence of benign visitors,

either friends or relatives. These individuals must exert a minimum of pressure on the patient to be really effective.

Thus, this study suggests that either one of the above groupings in the patient's external environment indicates a more positive prognosis than might otherwise be the case. Both clusters were found to be significantly related to the level of symptomatology at three months. But in the section of the study dealing with actual change in symptomatology, only the results in terms of a stable home life appear, and then only as a trend. This suggests a direction of movement--for this variable--which might have been stonger had there been a longer follow-up period.

It has long been assumed that family and friends can be very helpful in the rehabilitation of the hospitalized mental patient. It was the aim of this study to help devise ways to examine this assumption systematically and begin to clarify the conditions under which improvement could be expected. We feel that this has been done on a limited basis, and that further research should involve both a larger, more representative sample of patients and a more extensive follow-up period to allow the trends to become clearer.

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APPENDICES

APPENDIX A

SYMPTOM CHECKLIST

SYMPTOM CHECKLIST

The items listed below are complaints that you may or may not have had in the past few weeks. Each item can be responded to in four ways. Please check the one which best describes your own experience. An example is given below:

A. Feeling Thirsty

1	2	3	4
Have not had this complaint	Bothers me a little	Bothers me quite a bit	Bothers me almost all the time
_____	_____	_____	_____

If you often feel thirsty, you should check number 3, "Bothers me quite a bit."

Today or during the past few weeks

		1 Have not had this complaint	2 Bothers me a little	3 Bothers me quite a bit	4 Bothers me almost all the time
1.	Headaches	_____	_____	_____	_____
2.	Pains in the heart or chest	_____	_____	_____	_____
3.	Heart pounding or racing	_____	_____	_____	_____
4.	Trouble getting your breath	_____	_____	_____	_____
5.	Constipation	_____	_____	_____	_____
6.	Nausea, vomiting or upset stomach	_____	_____	_____	_____
7.	Loose bowel movements	_____	_____	_____	_____

		Today or during the past few weeks			
		1 Have not had this complaint	2 Bothers me a little	3 Bothers me quite a bit	4 Bothers me almost all the time
8.	Twitching of the face or body	_____	_____	_____	_____
9.	Faintness or dizziness	_____	_____	_____	_____
10.	Hot or cold spells	_____	_____	_____	_____
11.	Itching	_____	_____	_____	_____
12.	Frequent urination	_____	_____	_____	_____
13.	Pains in the lower part of your back	_____	_____	_____	_____
14.	Difficulty in swallowing	_____	_____	_____	_____
15.	Skin eruptions or rashes	_____	_____	_____	_____
16.	Soreness of your muscles	_____	_____	_____	_____
17.	Nervousness and shakiness under pressure	_____	_____	_____	_____
18.	Difficulty in falling asleep or staying asleep	_____	_____	_____	_____
19.	Sudden fright for no apparent reason	_____	_____	_____	_____
20.	Bad dreams	_____	_____	_____	_____
21.	Blaming yourself for things you did or failed to do	_____	_____	_____	_____

		Today or during the past few weeks			
		1 Have not had this complaint	2 Bothers me a little	3 Bothers me quite a bit	4 Bothers me almost all the time
22.	Feeling generally worried or fretful	_____	_____	_____	_____
23.	Feeling blue	_____	_____	_____	_____
24.	Being easily moved to tears	_____	_____	_____	_____
25.	A need to do things very slowly in order to be sure you were doing them right	_____	_____	_____	_____
26.	Feeling like you have to do the same thing over and over again, like touching, counting, hand-washing, etc.	_____	_____	_____	_____
27.	Unusual fears	_____	_____	_____	_____
28.	Thoughts or impulses which you don't like keep pushing themselves into your mind	_____	_____	_____	_____
29.	Your "feelings" being easily hurt	_____	_____	_____	_____
30.	Feeling that people were watching or talking about you	_____	_____	_____	_____
31.	Preferring to be alone	_____	_____	_____	_____
32.	Feeling lonely	_____	_____	_____	_____

		Today or during the past few weeks			
		1 Have not had this complaint	2 Bothers me a little	3 Bothers me quite a bit	4 Bothers me almost all the time
33.	Feeling like you have to ask others what you should do	_____	_____	_____	_____
34.	People being unsympathetic with your need for help	_____	_____	_____	_____
35.	Feeling easily annoyed or irritated	_____	_____	_____	_____
36.	Severe temper outbursts	_____	_____	_____	_____
37.	Feeling critical of others	_____	_____	_____	_____
38.	Frequently took medicine to make you feel better	_____	_____	_____	_____
39.	Difficulty in speaking when you were excited	_____	_____	_____	_____
40.	Feeling you were not functioning as well as you could, feeling blocked or unable to get things done	_____	_____	_____	_____
41.	Having an impulse to commit a violent or destructive act, for example, desire to set a fire, stab, beat or kill someone, mutiliate an animal, etc.	_____	_____	_____	_____

		Today or during the past few weeks			
		1 Have not had this complaint	2 Bothers me a little	3 Bothers me quite a bit	4 Bothers me almost all the time
42.	Blurring of vision	_____	_____	_____	_____
43.	Feeling thirsty	_____	_____	_____	_____
44.	Pains in arms or legs	_____	_____	_____	_____
45.	Loss of strength	_____	_____	_____	_____
46.	Dry mouth	_____	_____	_____	_____
47.	Pain in belly	_____	_____	_____	_____
48.	Feeling hungry	_____	_____	_____	_____
49.	Getting tired easily	_____	_____	_____	_____
50.	Feeling sleepy much of the time	_____	_____	_____	_____
51.	Keyed up and jittery	_____	_____	_____	_____
52.	Having no interest in things	_____	_____	_____	_____
53.	Having trouble keeping your mind on what you were doing	_____	_____	_____	_____
54.	Loss of appetite	_____	_____	_____	_____
55.	Having strange sexual ideas	_____	_____	_____	_____

APPENDIX B

ENVIRONMENTAL SUPPORT VARIABLES

ENVIRONMENTAL SUPPORT VARIABLES

LIVING INVOLVEMENT. Judgement of Healthiness or Responsibility in the living situation. (e.g. 5 = meals and other interaction with family daily, 1 = living alone).

LIVING PRESSURE. Amount of pressure from others to maintain or change living involvement. (e.g. 5 = constant suggestion or push to change, become more active, 1 = no mention of dissatisfaction).

EMPLOYMENT INVOLVEMENT. Independent judgement of healthiness, responsibility and involvement in employment. (e.g. 5 = good attendance record at a full time job, 1 = no employment).

EMPLOYMENT PRESSURE. Amount of pressure from others to maintain or change employment involvement. (e.g. 5 = constant push from others to find job, or stay on present one, 1 = no mention of others dissatisfaction).

EMPLOYMENT PERCEPTION. Subject's global negative to positive perception of his employment situation (Involvement and Pressure combined). (e.g. 5 = very happy about all aspects, 1 = totally displeased.

RESPONSIBILITY INVOLVEMENT. Independent judgement of healthiness, responsibility, and involvement in home responsibilities. (e.g. 5 = performs more than normative amount of tasks, 1 = no involvement in household tasks).

RESPONSIBILITY PRESSURE. Amount of pressure from others to maintain or change home responsibility involvement. (e.g. 5 = constant push from others, 1 = no mention of encouragement or pressure--self-motivated).

RESPONSIBILITY PERCEPTION. Subject's global negative to positive perception of his home responsibility situation (Involvement and Pressure combined). (e.g. 5 = very happy about all aspects, 1 = totally displeased).

VISITOR INVOLVEMENT. Independent judgement of healthiness, responsibility, and involvement in visits from others and trips outside the house (contact with the larger world). (e.g. 5 = many contacts by several people, much activity with others, 1 = no contacts outside the home).

VISITOR PRESSURE. Amount of pressure from others to maintain or change involvement with visitors and visits. (e.g. 5 = most contacts, suggestions from others, invitations, etc., 1 = no contacts from others with suggestions).

VISITOR PERCEPTION. Subject's global negative to positive perception of his relationships with others outside the immediate family (Involvement and Pressure combined). (e.g. 5 = very happy about all aspects, 1 = totally displeased).

PROFESSIONAL INVOLVEMENT. Contact on a structured basis with a mental health professional or agency program designed as therapeutic (individual therapy, groups, day centers, etc.). (e.g. 5 = contact 2 x per week or more, 1 = no contact).

MEDICATION. The presence or absence of prescribed medication. (e.g. 2 = yes, 1 = no).

APPENDIX C

CHARACTERISTICS OF THE SAMPLE POPULATION

CHARACTERISTICS OF THE SAMPLE POPULATION.

PT.	AGE	SEX	MARITAL STATUS	YEARS EDUCAT.	PREV. HOSPIT.	FORMAL DIAGNOSIS
1	34	F	M	7	1	Chronic Schiz.
2	28	F	Div.	12	0	Anxiety Neurosis
3	35	F	M	12	0	Acute Schiz.
4	42	F	Div.	12	0	Hysterical Personality
5	22	M	S	3 yr.coll.	1	Schiz.
6	48	F	Div.	9	4	Chronic Schiz.
7	25	F	Div.	7	2	Chronic Schiz.
8	36	F	M	12	0	Inad. Pers.
9	48	F	M	12	3	Neurosis
10	58	M	Div.	8	4	Alcoholic
11	29	F	S	9	0	Schiz.
12	23	M	S	2 yr.coll.	0	Schiz.
13	35	F	M	9	0	Inad. Pers.
14	47	F	M	12	1	Schiz.
15	48	M	Sep.	8	1	Chronic Schiz.
16	25	F	S	3 yr.coll.	0	Paranoid Schiz.
17	52	F	Div.	12	1	Inad. Pers. and Alcoholism
18	36	F	Div.	12	5	Depression
19	50	M	M	2 yr.coll.	0	Acute Schiz.
20	25	F	Sep.	9	7	Depression
21	67	F	M	12	1	Inad. Pers. and Alcoholism
22	31	F	S	3 yr.coll.	0	Inad. Pers. and Depr. and Hyst.
23	45	F	M	7	1	Depression
24	22	F	S	2 yr.coll.	0	Adj. react. to Adulthood
25	56	F	M	12	0	Acute Psychotic episode
26	24	M	Div.	12	1	Anxiety Neurosis
27	47	F	M	12	1	Depression
28	39	M	M	11	2	Alcoholism and passive agg. pers.
29	24	F	S	BA	0	Schiz.
30	49	F	M	1 yr.coll.	0	Depressive react.
31	23	F	S	BA	0	Depression
32	46	F	Div.	12	0	Depression
33	23	F	M	12	0	Passive agg. pers.
34	46	M	M	BA	0	Depression

PT.	AGE	SEX	MARITAL STATUS	YEARS EDUCAT.	PREV. HOSPIT.	FORMAL DIAGNOSIS
35	34	F	M	1 yr.coll.	1	Hysterical Neurotic.
36	29	F	Wid.	12	0	Depression
37	51	F	M	12	0	Neurosis
38	28	F	Sep.	12	0	Inad. Pers.

APPENDIX D

ENVIRONMENTAL SUPPORT QUESTIONNAIRE

ENVIRONMENTAL SUPPORT QUESTIONNAIRE

Hello, this is _____. I spoke with you last about a month ago at St. Lawrence when you agreed to help us in our follow-up of how things are going for you these days.

(RESISTANCE) Perhaps I should explain that any information given by you will be considered strictly confidential. We hope to be better able to help future patients at St. Lawrence by talking with former patients after their return home....

(REFUSAL) CONTACT IN PERSON. Mr. _____, you decided not to participate in our study after first agreeing to it. I was wondering if you could tell me what changed your mind?

_____

A) How have things been going in general? Would you say

very well, pretty well, fair, or poorly?

B) I'd like to ask you a few more questions now about what's been happening for you.

I. First, where are you now living?

What type of house is this?

A. Who else is living there? (names-to 1, 0-to II)

Name Relationship to you? Age How often do you see them

Do you share meals with the other household members?

How often/week?

II. Are you currently employed? (Yes-to A, No-to B)

A. Where are you employed?

What do you do?

1. How did you find this job? Who helped?

2. Do you find your co-workers friendly?

Which ones? In what ways? (to III)

B. Have you worked at all in the last four weeks? (Yes-to 1, No-to C)

1. What happened?

C. Has anyone suggested that you find a job? (No-to III)

1. Who?

2. Has anyone offered to help you look for work?

a. How have they helped?

b. How do you feel about this?

III What regular duties or responsibilities do you have at home these days? (#-toA, None-to B)

A. What are they?

Anything else?

Anything else?

1. Was this your own idea, or has anyone encouraged you to do these tasks?

Who? How?

2. Do you enjoy them or not?

What do you enjoy about them? What not?

B. Are there any areas at home in which you help out periodically?

1. Was this your own idea, or has anyone encouraged you to do these tasks?

Task	Who encouraged	How encouraged	How do you feel about this?

2. Do you enjoy them or not?

What do you enjoy about them? What not?

C. What kinds of things do you do around the house?

What kinds of things? With whom do you do them?

IV. Who has visited you or called you on the phone in the last week? (#-to A, 0-to V)

A. How often was each person in contact with you?

B. What did you talk about?

What else?

What else?

C. Did you suggest doing anything together?
Did you do it?
How was it?

D. Did they suggest doing anything together?
Did you do it?
How was it?

V. In the past week, where have you gone outside the <u>home</u>?

(#-to A, 0-to B) <u>With whom</u>?

A. Was this your own idea, or did someone else suggest it?

Where Who suggested it Did you enjoy it or not?

What did you enjoy about it? What not?

B. In the past month, where have you gone outside the home? With whom?

1. Was this your own idea, or did some else suggest it?

Where? Who suggested it? Did you enjoy it or not?

What did you enjoy about it? What not?

VI. What have you done for entertainment in the past month? (0-to C)

Entertainment	Where did you go for this?	Who did you go with?

What else?

What else?

A. Were you invited out at any time in the past month when you decided not to go?

Entertainment	Where?	Who invited you?	Why didn't you go?

VII. Have you had any contact with a clinic, agency, or office during the past month? (Example of needed: St. Lawrence outpatient unit) (Yes-to A, No-to VIII)

A. How often?

B. What kind of treatment are you getting?

VIII Have you had any contact with any therapist during the past month? (Yes-to A, No-to IX)

A. How often?

B. What do you do there?

IX. Are you currently taking any medication?

How often?

A. Who prescribed this?

B. Was any prescribed by the doctor when you left the hospital?

C. Have you seen anyone recently about this?

Is there anything that you would like to add to what you have already told me?

Do you have any questions?

Thank you very much for your time. I'll be in touch with you again next month. When would be a good time of day to call?

APPENDIX E

MEAN VALUES OF THE SYMPTOM CHECKLIST ITEMS AT DISCHARGE

TABLE 1 A

MEAN VALUES OF THE SYMPTOM CHECKLIST ITEMS AT DISCHARGE

(Scale of 1 - 4)

Headaches	2.00
Pains in heart or chest	1.45
Heart pounding or racing	1.76
Trouble getting your breath	1.69
Constipation	1.57
Nausea, vomiting or upset stomach	1.69
Loose bowel movements	1.52
Twitching of face or body	1.43
Fainting or dizziness	1.67
Hot or cold spells	1.69
Itching	1.68
Frequent urination	1.57
Pains in lower part of body	2.21
Difficulty in swallowing	1.45
Skin eruptions or rashes	1.43
Soreness of your muscles	1.62
Nervousness or shakiness under pressure	2.67
Difficulty in falling or staying asleep	2.38
Sudden fright for no apparent reason	1.90
Bad dreams	1.70
Blaming self for things you did or failed to do	2.55
Feeling generally worried or fretful	2.55

Feeling blue	2.24
Being easily moved to tears	2.29
Need to do things slowly	2.00
Feeling you have to do the same thing over and over again	1.57
Unusual fears	1.81
Feelings being easily hurt	2.43
Feeling others were watching or talking about you	1.69
Preferring to be alone	2.07
Feeling lonely	2.45
Feeling you have to ask others what you should do	2.00
People being unsympathetic with your need for help	1.50
Feeling easily annoyed or irritated	2.07
Severe temper outbursts	1.57
Feeling critical of others	1.64
Frequently take medication to make you feel better	1.95
Difficulty in speaking when you were excited	2.02
Feeling you were not functioning as well as you could	2.45
Having an impulse to commit a violent act.	1.40
Blurring of vision	1.76
Feeling thirsty	2.00
Pains in arms or legs	1.55
Loss of strength	2.00
Dry mouth	2.24
Pain in belly	1.55
Feeling hungry	2.10
Getting tired easily	2.12
Feeling sleepy much of the time	2.05

Keyed up and jittery	2.60
Having no interest in things	1.88
Having trouble keeping your mind on what you were doing	2.17
Loss of appetite	1.50
Having strange sexual ideas	1.40

APPENDIX F

ACTIVITY CHECKLIST

ACTIVITY CHECKLIST

The statements below describe some of the things that you might be doing around the house. Each statement can be completed in five ways. Please check the one which best describes your own activities. An example is given below.

Example: I watch TV.

____Never
____Rarely
____Sometimes
____Often
____Always

If you watch the TV several times a day, you should check "Often."

1. I help with household chores.

____Always ____Often ____Sometimes ____Rarely ____Never

2. I dress and take care of myself.

____Always ____Often ____Sometimes ____Rarely ____Never

3. I help with the household budgeting.

____Always ____Often ____Sometimes ____Rarely ____Never

4. I remember to do important things on time.

____Always ____Often ____Sometimes ____Rarely ____Never

5. I get along with household members.

____Always ____Often ____Sometimes ____Rarely ____Never

6. I get along with neighbors.

____Always ____Often ____Sometimes ____Rarely ____Never

7. I help with household shopping.

____Always ____Often ____Sometimes ____Rarely ____Never

8. I help in the care and training of other household members.

____Always ____Often ____Sometimes ____Rarely ____Never

9. I help support the household.

____Always ____Often ____Sometimes ____Rarely ____Never

10. I work in and around the house.

____Always ____Often ____Sometimes ____Rarely ____Never

11. I work in the garden or yard.

____Always ____Often ____Sometimes ____Rarely ____Never

12. I shop for groceries.

____Always ____Often ____Sometimes ____Rarely ____Never

13. I visit my friends.

____Always ____Often ____Sometimes ____Rarely ____Never

14. I visit my relatives.

____Always ____Often ____Sometimes ____Rarely ____Never

15. I entertain friends at home

____Always ____Often ____Sometimes ____Rarely ____Never

16. I go to parties and other social activities.

____Always ____Often ____Sometimes ____Rarely ____Never

17. I go to church.

____Always ____Often ____Sometimes ____Rarely ____Never

18. I take up hobbies.

____Always ____Often ____Sometimes ____Rarely ____Never

19. I work on some hobby.

____Always ____Often ____Sometimes ____Rarely ____Never

20. I listen to the radio.

____Always ____Often ____Sometimes ____Rarely ____Never

21. I watch television

____Always ____Often ____Sometimes ____Rarely ____Never

22. I go to the movies.

____Always ____Often ____Sometimes ____Rarely ____Never

23. I write letters.

____Always ____Often ____Sometimes ____Rarely ____Never

24. I attend lectures, theatre.

____Always ____Often ____Sometimes ____Rarely ____Never

25. I attend club, lodge, or other meetings.

____Always ____Often ____Sometimes ____Rarely ____Never

26. I take part in community or church work.

____Always ____Often ____Sometimes ____Rarely ____Never

27. I bowl or play other sports.

____Always ____Often ____Sometimes ____Rarely ____Never

28. I play cards or other table games.

____Always ____Often ____Sometimes ____Rarely ____Never

29. I read.

____Always ____Often ____Sometimes ____Rarely ____Never

30. I take rides.

____Always ____Often ____Sometimes ____Rarely ____Never

APPENDIX G

MANN WHITNEY U VALUES FOR PATIENTS WITH 5 GREATEST INCREASES IN SYMPTOMATOLOGY VS. 5 GREATEST DECREASES

TABLE 2 A

MANN WHITNEY U VALUES FOR PATIENTS WITH 5 GREATEST INCREASES IN SYMPTOMATOLOGY VS. 5 GREATEST DECREASES

VARIABLE	U
Living Involvement	12.5
Employment Involvement	8.0
Employment Pressure	11.0
Employment Perception	7.5
Responsibility Involvement	9.5
Responsibility Pressure	12.0
Responsibility Perception	6.5
Visitor Involvement	11.0
Visitor Pressure	6.5
Visitor Perception	8.5
Professional Involvement	8.5
Medicine Involvement	6.5
Socioeconomic Status	11.5
Age	6.0
Marital Status	10.0
Sex	10.0

Note: None of the above comparisons are significant.

APPENDIX H

INTERCORRELATIONS AMONG SOCIAL SUPPORT VARIABLES AND BACKGROUND FACTORS

TABLE 3 A

INTERCORRELATIONS AMONG SOCIAL SUPPORT VARIABLES AND BACKGROUND FACTORS

Prev.	24	23	22	21	20	19	18	17	13	12	11	10	9	8	7	6	5	4	3	1
24 Hosp.	-																			
23 Educ.	-.43	-																		
22 Sex	-.05	-.08																		
21 Age	.11	-.23	-.05	-																
20 SES	.46	-.75	.12	.04	-															
19 Marital 2	.05	-.30	.06	.60	.11	-														
18 Marital 1	.15	-.44	.02	.48	.24	.80	-													
17 Disch Symp.	.27	-.01	-.01	-.22	.10	-.12	-.09	-												
13 Med.Inv.	.01	.29	.23	.00	-.18	-.12	-.13	-.08	-											
12 Pro.Inv.	.25	.09	.04	-.33	.09	-.44	-.44	.12	.30	-										
11 Vis. Percep.	.18	.04	-.22	.23	-.13	-.18	-.04	-.18	.11	-.06	-									
10 Vis. Press	.08	-.12	.37	-.22	.22	.12	.11	.21	.13	.07	-.48	-								
9 Vis.Inv.	.13	.22	-.01	-.21	-.20	-.28	-.17	.19	.32	.07	.54	.08	-							
8 Res. Percep.	.17	-.27	.20	.17	.15	.29	.17	-.41	.22	-.04	.10	.00	.01	-						
7 Res. Press	-.01	.19	.06	-.27	-.14	-.28	-.37	.30	.08	.08	-.33	-.07	-.21	-.42	-					
6 Res.Inv.	.01	-.23	.47	.19	.20	.51	.44	-.14	.06	-.15	-.22	.43	.00	.59	-.41	-				
5 Emp. Percep.	.04	-.11	-.26	.24	.02	.22	.32	.21	-.35	-.35	.31	-.19	.06	-.00	-.33	.04	-			
4 Emp. Press	-.14	.12	-.06	-.09	-.18	-.04	.02	.14	.07	.17	.04	-.14	.13	-.28	.06	-.12	-.43	-		
3 Emp.Inv.	-.13	.32	-.41	-.19	-.26	-.28	-.23	.12	-.23	-.06	.01	-.06	.10	-.37	.01	-.25	.35	-.29	-	
1 Lug Inv.	-.03	-.01	-.10	.14	-.19	.27	.22	-.17	-.03	-.40	-.06	.08	.04	.16	-.14	.09	.01	.05	-.18	-