

## **Environmental Adaptation of the Mental Patient<sup>1</sup>**

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*An ecological model suggests looking at the hospitalized mental patient in terms of how well the resources available in the environment fit his individual needs. This study explores the relationship between the environmental fit of patients while they are in the hospital and their adaptation to the community once they have left. Data on individual needs and evaluations of environmental resources were obtained through a series of structured interviews. Results indicate that the more a patient feels the hospital environment is a good fit, the longer he stays there. Hospital fit is positively related to fit in the community, but the latter is related only to the degree of symptomatology exhibited by the expatient in the community and not to how long he is able to remain out of the hospital. Implications of the findings and the model are discussed.*

The ecological model for the study of human behavior has gained ready acceptance in community psychology (Barker, 1968; Klein, 1965; Lehmann, 1971; Sells, 1966; Weinstein & Frankel, 1974). It is, of course, highly appropriate for the study of behavior that must be viewed in a systems context. On the other hand, the practical implications of such a model are often less than immediately apparent. The working definition of ecology tends to be diffuse: "Ecology is a

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field of study concerned with the relationship between the environment and living organisms . . . [It] involves a reciprocal relationship between an organism and its environment" (Knight, 1965, p. 2). More specifically, it deals with the functional arrangement between the needs of the organism and the resources available in the environment. It replaces the traditional cause-and-effect model with one based on mutual reciprocities. The survival of an ecosystem is dependent upon the mutual adaptation of the individuals within the system to the environment and to each other. This viewpoint has been variously applied to conceptions of mental health and illness. Kelley (1966; 1968) has suggested that psychopathology may be the analogue of bad fit between an individual and his environment. Social psychological conceptions of psychotherapy have stressed the importance of socializing the mental patient to meet the demands of the everyday environment (Jones, 1953, 1968; Schwartz & Schwartz, 1964). Alternative views of mental illness have implicated the inability of the social system to provide adequate resources for the stricken individual (Laing, 1968; Szasz, 1961).

The concept of environmental fit poses a number of questions regarding hospitalization of mental patients. The mental hospital can be seen as a protective retreat where the patient has the opportunity to recuperate free from the stresses that may have contributed to his condition. Since the hospital is conceived to be different from the patient's community, successful adaptation to that setting may have little relevance to the requirements for posthospital adjustment. Indeed, Ellsworth, Foster, Childers, Arthur, and Krockner (1968), and Polak (1971) have observed that there is little relationship between hospital adjustment and that which follows release. Treatment procedures like the therapeutic milieu and the halfway house recognize the problem and apply the principle of successive approximation to lead the patient successfully from a protected to an unprotected environment. Other complications exist, however. It is likely that, for some patients, the appeal of the sick role (Parsons, 1951; 1958) may make the hospital so appealing as to impede adjustment to another milieu. Coser (1962) found that medical patients who endorsed the sick role remained convalescent longer and were more prone to return to the hospital on lesser pretexts. Braginsky, Braginsky, and Ring (1969) in a series of provocative studies indicate that some mental patients will manipulate their circumstances so as to remain in the hospital longer and may even invite their friends to join them.

The concept of environmental fit may provide a good predictor of eventual adjustment and may help to answer the question whether adjustment is specific to particular settings or whether there is a general adjustive potential that is characteristic of the individual. The measurement of environmental fit, however, is not without its problems. For human behavior, the relatively precise measures of bioecology which utilize energy exchange and production/respiration ratios are not appropriate. In fact, the measure of environmental fit that is relevant to

behavior may be the individual's subjective evaluation of his situation. It is his satisfaction as he sees it that motivates his behavior.

This study was designed to assess the effects of environmental fit on the hospital and posthospital careers of mental patients. Fit was measured by the congruence between needs that were generally agreed to be prominent and the individual's assessment of how well a particular environment met these needs. Patients were followed through the hospital and back into the community, and fit was measured both in the hospital and in the community. Initial expectations were that patients with above average fit to the hospital would remain there longer and report poorer fit to the community. These patients should demonstrate their poorer fit in the community by a higher incidence of pathological symptoms and a more rapid return to the hospital. This should be especially true of those patients who report a good fit to the hospital but a poor fit to the community.

## METHOD

### *Procedure*

A community mental health center emphasizing intensive therapy and early release was selected as the site of the study. It represents a good example of progressive social psychiatry so that any findings of this study should be relevant to current practice. The inpatient unit is devoted to acute crises intervention and the total length of stay is arbitrarily limited to 90 days a year for each patient. This made it possible to follow each patient through the course of hospitalization and back into the community on release. Informal, prestudy interviews with patients established a short list of needs for which there was almost 100% consensus. The list provided the basis for the measure of fit which compared the subjective evaluation of need to that of the available resources appropriate to meet that need.

### *Subjects*

Sixty subjects were drawn from incoming patients over a period of 3 months during the late Spring and early Summer. There are approximately 30 admissions a month from a catchment area population of 115,000, the majority of whom are Italian and Jewish lower middle-class families. The sample was drawn from a total of 93 successive admissions. Patients were omitted from the sample because they left before the first interview (12), did not speak English (9), refused (9), or were too disturbed to be interviewed within the scheduled

interval (3). There were a variety of diagnostic categories within the sample. Almost half (29) were classified psychotic, one-fourth (15) were classified neurotic, and the rest scattered among drug addiction (7), personality disorder (4), organic (4) and mental retardation (1). Age ranged from 15 to 75, and the number of previous admissions from 0 to 9. Those included in the sample were not significantly different from those excluded in any of these characteristics. This does not, however, eliminate the possibility that the sample is biased in some other, undetermined way. The inclusion of such a variety of individuals which represents the usual population of the inpatient ward was, of course, intentional.

### *Measures*

Six needs were chosen as the measured variables for the study on the basis of prestudy interviews. There was almost complete agreement among the patients about the salience of these needs and self reports of them revealed that they were largely orthogonal.<sup>3</sup> The needs are as follows:

- Social contact: The need to be with others;
- Responsibility: The need to be autonomous and take on obligations;
- Social support: The need to engage in close supportive personal relationships;
- Protection: Reliance on others to control impulsive behavior and external pressures;
- Dependence: Reliance on others for decisions and initiation of activities; and
- Isolation: The need to be by oneself.

The needs of patients were assessed by a series of direct questions included in a structured interview. The questions were all of the type; "Do you like being with other people . . . , having responsibility . . . , being alone," etc. Six similar questions were developed for each need to provide a scaled score for every need. Identical items, except for a change in wording, were used to obtain the patient's assessment of the relevant resources of the hospital: "Is this hospital a good place to be with other people . . . , for having responsibilities . . . , for being alone," etc. The same items with appropriate changes in wording were used in the community phase of the study. Since the need and the resource evaluation scales consist of essentially the same items, the discrepancy between item pairs gives a measure of fit. The reported fit scores will be a reversal of the discrepancies so as to be consistent with the concept.

A 21-item symptom scale adapted from Freeman and Simmons (1963) was administered orally to a close family member or friend of the patient once he had returned to the community. The scale contains a range of behaviors from

<sup>3</sup>The poststudy analysis indicates some relationships among the self-reported needs. The magnitude of these correlations varies from .01 to .51 but the average correlation is only .11.

“appears nervous” to “tries to commit suicide” and “cannot dress or take care of himself.” The respondent could indicate that this behavior occurred never, occasionally, or frequently.

### *Interviews*

Each patient was interviewed within a week after entering the hospital, or as soon as he was sufficiently lucid. Only three subjects were eliminated from the sample because of this stricture, but differential responses to each treatment with psychoactive drugs could have influenced the interview. There was noticeably greater variability among responses during this interview, and this could attenuate the results of the study. A part of the interview was directed toward obtaining the patient's perception and endorsement of the sick role. The results indicate that no clear perceptions of the sick role emerged, and this aspect of the study will not be treated further in this paper. Embedded in this structured interview was the 36-item need scale. The corresponding 36-item hospital evaluation scale was administered several days thereafter. Each patient remaining in the hospital was reinterviewed approximately 3 weeks after admission. This interval was chosen because about half (47%,  $n = 28$ ) of the original patients were still in the hospital at this time. The final hospital interview was conducted 1 month after the second interview, but only 10% of the patients ( $n = 6$ ) were still in the hospital. All interviews were roughly identical.

Each expatient was interviewed at home within 2 weeks of his release from the hospital. While all patients were scheduled for outpatient visits with their former therapists, the interviews were conducted at the patient's home to emphasize the community context of the interview. Forty-two of the original patients received the first home interview; 18 did not because they had been transferred to other facilities rather than being sent home (7), moved or could not be located (4), were rehospitalized before the interview could take place (4), or refused (3). Each of the expatients received the need and evaluation scale pertaining to the community, while a collateral rated the incidence of symptoms. A second home interview was conducted 1 month after the first. By this time, six more patients had been rehospitalized, one had moved out of the state and five refused the second interview. The remaining 30 subjects repeated the procedures of the first home interview. There were no further interviews but all respondents were followed for 1 year to ascertain if and when rehospitalization took place.

## **RESULTS**

Goodness of fit to the hospital was expected to predict how long a patient would remain in the hospital. This expectation was met. The correlation between

Table I. Comparison of Patients on the Basis of Hospital Fit

	Below median ( <i>n</i> = 30)	Above median ( <i>n</i> = 30)
Hospital stay (mean days)	22.33	34.53
Community stay (mean days)	231.5	266.4
Community fit (mean score)	2.48	4.68
Symptomatology (mean rating)	6.91	6.53
Previous admissions	2.10	2.00
Age	33.10	36.10
Reported needs: (mean ratings)		
Social contact	5.17	4.70
Responsibility	4.97	4.33
Social support	5.27	4.87
Protection	4.17	4.40
Dependence	2.40	1.66
Isolation	3.63	3.33

reported hospital fit and length of stay in the hospital was .26 ( $p < .05$ ).<sup>4</sup> Patients with the highest fit scores, however, stayed disproportionately longer in the hospital so that the correlation ratio, which allows for nonlinear relationships, is a better measure for association. The measure was highly significant,  $eta^2(60) = .40$ ,  $p < .001$ . The correlation between hospital fit and length of stay in the community was negligible<sup>5</sup> as was the correlation between hospital fit and symptom ratings once the patient had returned to the community. Thus the hospital fit score did not seem to predict the posthospital career of the patient. On the other hand, hospital fit was positively related to community fit,  $r(42) = .28$ ,  $p < .05$ , possibly indicating that the ability to adapt generalizes across situations.

A closer look at the data is given in Table I where patients have been dichotomized at the median fit score. It can be seen that patients above the median fit stayed in the hospital an average of 50% longer than those below the median fit,  $t(58) = .280$ ,  $p < .01$ . Patients who report above median fit to the hospital report better fit to the community,  $t(41) = 2.10$ ,  $p < .05$  and also stay out of the hospital longer, although this is not a significant difference. None of the other comparisons showed substantial differences. Hospital fit was not related to age, number of previous admissions, incidence of symptoms in the community nor, contrary to expectation, was it related to any particular set of expressed needs of the patients. Diagnostic category was not related to any of the variables of this study.

<sup>4</sup>The fit scores used for these data all come from the first hospital interview. The use of fit scores from later interviews either attenuates or eliminates the relationships because patients selectively left the hospital on the basis of fit and hence the range of scores becomes seriously restricted.

<sup>5</sup>The inclusion of the 11 patients who were rehospitalized before the home interview could take place enhances the relationship (from  $r(42) = .04$  to  $r(53) = .08$ ) but it remains, nonetheless, negligible.

An analysis of trends over time in the hospital gives some evidence that specific needs are not entirely immaterial to the patients' well-being. It should be noted at the outset that the changes over time are mostly due to patients selectively returning to the community and not, as can be demonstrated by intra-individual comparisons, because individuals are changing with respect to time. As a result of this process, fit tends to be greater for patients who have been longer in the hospital, though this trend is short of conventional significance. The needs for social contact and responsibility show a significant increase with time in the hospital,  $F(2.91) = 3.70$  and  $6.06, p < .02$  and  $.005$ , respectively, and social support shows a similar trend. If these needs can be considered social needs, in contrast to the sick-role related needs of protection, dependence, and isolation which show no consistent trends, it is clear that the social resources of the hospital are important for many patients. Providing support for this view, the hospital was evaluated as better than the community as a place to satisfy the needs of social contact and social support,  $t(40) = 3.47$  and  $3.99$ , respectively,  $p < .005$ . The community was not rated superior to the hospital in respect to any needs and, in fact, mean community fit was significantly lower than mean hospital fit,  $t(40) = 2.31, p < .05$ .

Fit, as measured in the community, however, did not have the predictive power of hospital fit. Community fit was related to the rating of symptoms taken in the community,  $r = .41, p < .01$ , but not to length of community stay nor were symptom ratings related to length of stay in the community. To test the possibility that the relationship between hospital and community fit might be a better predictor than community fit alone, the sample was dichotomized at the median on both these measures as shown in Table II. The group that is below median fit in the hospital but above median fit in the community conforms perfectly to expectations, but it is the only one. This group has the lowest incidence of reported symptoms, stayed in the hospital the least amount of time, and remained longest in the community. The only variable, however, that varies significantly with relative fit is symptom rating,  $F(3.40) = 3.10, p < .05$ . Although those who fit well in the hospital and poorly in the community tend to show more serious and more frequent symptoms, it should be noticed that the

**Table II.** Differences Associated with Relative Adaptation to the Hospital vs. the Community

Adaptation above (+) or below (-) median fit		n	Symptom rating	Hospital stay (days)	Community stay (days)
Hospital	Community				
-	+	8	4.75	22.25	304.3
+	+	14	6.28	31.57	263.2
-	-	11	6.82	24.70	225.8
+	-	9	9.11	29.00	286.8

incidence of symptoms in this sample is consistently low with a mean of 6.74 out of a possible 42 on the symptom checklist. The majority of the patients tend to be consistently either above or below median fit in both settings, and this accounts for the correlation between the two fit scores. The group of patients that is below the median fit in both settings spends the least amount of time in each of them. This suggests that these may be the typical "revolving door" patients who find it difficult to adapt to any environment.

## DISCUSSION

The study provides some tentative answers for the questions posed at the beginning of the paper. There is a marked tendency for some mental patients to find the atmosphere of the mental hospital congenial to their needs and, in general, those who find it most congenial stay longest. Successful adaptation to this hospital environment was not related to remaining out of the hospital, although patients who reported good adaptation to the hospital tended also to report above average adaptation to the community as well. This reflects the lack of any found relationship between reported community adjustment and post-hospital length of stay in the community. There was no evidence that an adaptive predisposition to the hospital was related to any particular set of needs, though there was some evidence that social needs were more important than needs associated with a sick role for those who remained in the hospital the longest. As a group, patients endorsed the hospital as more satisfying to their needs than the community, especially in respect to social needs. Expressed adaptation to the community was generally poorer than that to the hospital.

The picture that emerges suggests that the mental patient is a person who has difficulty in adequately gratifying his needs in his usual environment. His greatest deficits appear to occur in the area of interpersonal relationships. Many of the patients, like those reported by Braginsky et al. (1969), found the hospital more satisfactory in this respect and some were apparently motivated to remain there longer for this reason. Equally as many, however, left the hospital early in spite of this advantage. Predilection for remaining in the hospital did not interfere with posthospital adjustment to the community, and there is reason to believe that those who adapt well to the hospital tend also to adapt better to the community, as though they possess a general proclivity for adaptation. It could also be that it is this group that profits most from hospitalization. In this study, adaptation was allied with mitigation of symptoms but not with eventual return of the patient to the hospital. The group which seems most at risk, that which did not adapt well to the hospital, also did not adapt well to the community, for their short hospital stay was matched by a relatively short stay in the community. It has been noted that length-of-stay statistics are of dubious value in evaluating outcome (Erickson, 1975), especially in short-stay settings.



The current practice of short-term stays may make it easier to return; 43% of this sample returned within a year to spend additional time in the hospital, and 20% returned within a month. Thus length-of-stay statistics may be a better indication of process than of outcome.

The community phase of the study produced less of predictive value than did the hospital phase. There are several reasons for this. The hospital is more of a circumscribed environment where the measured variables are possibly more inevitably related to outcome. There were also some procedural deficiencies in the community part of the study. Symptom ratings were found to be unrelated to length of stay in the community, contrary to the findings of a number of other studies (Angrist, Dinitz, Lefton, & Pasamanick, 1961; Freeman & Simmons, 1963; Michaux, Katz, Jurland, & Gransereit, 1969). One difference here is that symptoms were measured only during a 6-week posthospital interval, whereas rehospitalization could take place as long as 11 months later. Community fit and the incidence of symptoms were measured at the same time and did show the expected relationship. More extensive measures over time might have uncovered a relationship with rehospitalization as well. Other factors are also likely to affect the relationship. In a further analysis of their data, Angrist, Lefton, Dinitz, and Pasamanick (1968) found that tolerance of deviance by significant others in the community played a role in determining who would return to the hospital. Another consideration is the fact that the particular needs assessed during the study were elicited by interviews in the hospital context. It is quite possible that other needs are more salient in the community and, if these had been included, the outcomes could have been better predicted.

The use of ecological concepts to analyze complex behavioral systems has highlighted a number of relationships that can contribute to the understanding of the processes involved. It helps to avoid the arid oversimplification of cause-and-effect models without necessarily falling into a teleological trap. This study represents a beginning, but more sophisticated concepts are required. Effective adaptation is probably made up of two components: an individual propensity for adaptation in general and a component specific to the situation. Thus predictions across situations may be only modestly successful at best. In the mental health field this means that socialization or social support for the individual is only part of the treatment. The specific context of the situation that the individual will inhabit must be examined in light of the resources it offers and the needs that it inspires. The "revolving door" patient may be caught in the circumstance where there is no meeting between the demands and resources of the intramural and extramural situations so his position remains untenable and his ability to cope negligible. Whatever the causes of mental illness, these forces constitute powerful influences on behavior. The model used for this research has provided a heuristic means for exploring a part of the process. It is hoped that it will encourage others to develop more incisive methods to further understanding in an area badly in need of it.

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