

Sociopsychologic Aspects of Psychiatric Treatments  
in a Voluntary Mental Hospital

Duration of Hospitalization, Discharge Ratings, and Diagnosis

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## **Sociopsychologic Aspects of Psychiatric Treatment in a Voluntary Mental Hospital**

*Duration of Hospitalization, Discharge Ratings, and Diagnosis*

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The increasing studies of the sociopsychological aspects of psychiatric treatment in recent years have primarily been concerned with treatment patterns in the community,<sup>12</sup> private practice,<sup>29</sup> and outpatient clinics.<sup>24,28</sup> In the studies reported by Hollingshead, Redlich, and their co-workers<sup>12,27</sup> it was found that social class was a major determinant of the type of psychiatric treatment in the New Haven community. Patients from the upper classes were more frequently treated with psychotherapy, while somatic or custodial care was commoner among the lower classes. They summarized their results by noting: "It was found that treatment does not depend on psychological and medical determinants alone, but on the status position of the patient as well."<sup>27</sup> Weinstock,<sup>29</sup> reporting the results of a poll of the American Psychoanalytic Association, observed that the patients being treated by their members in private practice came disproportionately from the better-educated, high-income population.

Similar findings have been noted in studies of outpatient facilities. Myers and Schaffer<sup>24</sup> showed that the higher a person's social class the more likely he was to be accepted for psychotherapy, treated by more highly trained personnel, and treated intensively over a long period of time. In another study Rosenthal and Frank<sup>28</sup>

found almost a linear relationship between educational level and frequency of referral for psychotherapy.

A more critical test of the importance of sociopsychologic factors in relation to psychiatric treatment would be in a setting where the same therapeutic techniques and services were equally available to all patients. This requirement is met at Hillside Hospital, which is a nonprofit institution for the treatment of voluntary patients with "early and curable symptoms,"<sup>11</sup> who are admitted regardless of their ability to pay. One of the main criteria for accepting patients is their "ability to participate profitably in psychotherapy."<sup>11</sup> Individual psychoanalytically oriented psychotherapy is regarded as the primary method of treatment, with psychodynamic therapies available when needed. The average length of hospital stay is seven months, although some patients stay for more than a year.

In a previous study of the Hillside Hospital population,<sup>14</sup> it was shown that the factors of age, education, place of birth, and degree of stereotypy, as measured by the California F Scale,<sup>1</sup> were related to the selection of therapy. Those patients who were older, had less education, were foreign-born, and had high scores on the F Scale were more likely to receive convulsive therapy. In contrast, patients who were younger, better-educated, and native-born and obtained low scores on the F Scale received psychotherapy as their sole form of treatment.

The purpose of the present study was to determine the relation of sociopsychological

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factors to (1) the duration of hospitalization, (2) the clinical evaluations at time of discharge, and (3) the final diagnosis.

### Method

*Population.*—The entire inpatient adult population of Hillside Hospital on March 7, 1957, was studied. This consisted of 171 patients, 57 male and 114 female, ranging in age from 16 to 68 years, with a mean of 35 years.

*Procedure.*—The patients were divided according to the duration of hospitalization, clinical response to treatment, and diagnosis. The duration was determined by the number of complete months in the hospital. The clinical response and the diagnosis were determined by the medical director at a staff evaluation conference, usually held just prior to the patient's discharge. Each patient was rated as recovered, much improved, improved, or unimproved on the basis of the reports of the therapist, supervising psychiatrist, and milieu staff. The discharge diagnoses were divided into four major groups: involuntional psychosis, manic-depressive psychosis, schizophrenia, and psychoneurosis. These diagnostic categories included all but three patients in the population.

Each patient was tested with a 10-item modification of the California F Scale.<sup>20</sup> The F Scale is a questionnaire which has been related to such factors as authoritarianism, acquiescence, ethnocentrism, and rigidity.<sup>1</sup> The subject reads 10 statements and indicates to what extent he agrees or disagrees with each, i.e., "a little," "pretty much," or "very much." The score for each item ranges from 1 to 7, and the total score range is 10 to 70. High scores indicate greater agreement with the statements. These are extreme, uncritical, or stereotyped expressions. For example, one statement is this: "If people would talk less and work more, everybody would be better off."

### Results

1. *Length of Hospitalization.*—In this population the duration of hospitalization ranged from 1 to 16 months, with a median of 7 months. For the purpose of analysis, the population was divided into three groups: 49 patients who were hospitalized for 1 to 5 months; 64, for 6 to 9 months, and 58 for 10 or more months.

The relation of sociopsychological factors to the length of hospitalization is shown in Table 1. The group of patients who were hospitalized for the shortest period had

TABLE 1.—Duration of Hospitalization: Total Population

Months in Hospital	No.	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
1 to 5	49	43.9	45.5	10.0	41%
6 to 9	64	40.1	32.5	11.9	19%
10 or more	58	31.0	27.9	12.8	10%
					$\chi^2=15.0 \dagger$
		Mean Differences	Mean Differences	Mean Differences	
1 to 5 vs. 6 to 9		3.4	13.0 §	1.9 †	
1 to 5 vs. 10 or more		12.9 §	17.6 §	2.8 §	
6 to 9 vs. 10 or more		9.5 §	4.6 *	0.9	

\*  $P < 0.05$ .

†  $P < 0.02$ .

‡  $P < 0.01$ .

§  $P < 0.001$ .

the highest mean F scores, were oldest, and had the least education and the largest percentage of foreign-born. Conversely, the group in the hospital for 10 months or more had the lowest F scores, were youngest, and had the most education and the smallest percentage of foreign births. Patients who were hospitalized for an intermediate period fell in between these two groups for each of the factors.

When the data for those patients who received convulsive therapy (Table 2) and those who received psychotherapy (Table 3) as their only form of treatment were analyzed separately, similar relationships between sociopsychological factors and length of hospitalization were found within each group.

In the psychotherapy group there was an increase in mean years of education with greater months of hospitalization, but the differences fail of significance. It may be noted, however, that many of the patients who were in the hospital for 10 months or more were under 19 years of age and were thus unable to achieve more than a limited number of years of schooling.

These same relationships of sociopsychological factors to length of hospitalization were found when the patients were classi-

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TABLE 2.—Duration of Hospitalization: Patients Receiving Convulsive Therapy

Months in Hospital	No.	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
1 to 5	15	58.2	51.7	6.5	67%
6 to 9	17	45.6	42.2	12.3	24%
10 or more	25	34.9	32.1	13.2	16%
$\chi^2=12.0 \ddagger$					
		Mean Differences	Mean Differences	Mean Differences	
1 to 5 vs. 6 to 9		12.6 †	9.5 *	5.8 ‡	
1 to 5 vs. 10 or more		23.3 §	19.6 §	6.7 §	
6 to 9 vs. 10 or more		10.7 *	10.1 †	0.9	

\*  $P<0.05$ .  
 †  $P<0.02$ .  
 ‡  $P<0.01$ .  
 §  $P<0.001$ .

fied according to four major diagnostic groups (Table 4). For each diagnostic class, the lowest F scores, youngest mean ages, most years of education, and least percentages of foreign-born were characteristic of patients hospitalized for the longest periods. As a group, patients diagnosed as schizophrenic were the most homogeneous in relation to time in the hospital, showing major differences only in the F score, without a consistent trend for the factors of education or place of birth.

2. *Results of Treatment.*—The relation of sociopsychological factors to evaluation on discharge is shown in Table 5. There

TABLE 3.—Duration of Hospitalization: Patients Receiving Psychotherapy Only

Months in Hospital	No.	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
1 to 5	33	40.2	43.2	11.4	30%
6 to 9	43	38.6	29.1	11.7	16%
10 or more	26	27.8	24.8	12.4	8%
$\chi^2=5.4$					
		Mean Differences	Mean Differences	Mean Differences	
1 to 5 vs. 6 to 9		1.6	14.1 *	0.3	
1 to 5 vs. 10 or more		12.4 *	18.4 *	1.0	
6 to 9 vs. 10 or more		10.8	4.3	0.7	

\*  $P=0.001$ .

is a definite, almost linear, relationship between the ratings of improvement and these factors. Patients in the recovered group had the highest F scores, were oldest, least educated, and showed the highest incidence of foreign birth. In contrast, patients in the unimproved group had the lowest F scores, were younger, better educated, and were mostly native-born. Because of the wide variability within each group, however, only the factor of age reached a level of statistical significance. Education also significantly differentiated the groups when dichotomized according to those who had less than eight years of education and those who had eight years or more. Of the recovered patients, 29% had less than eight

TABLE 4.—Duration of Hospitalization in Patients Classified According to Diagnosis

Diagnosis	Months in Hospital	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
Involuntal psychosis.....	1-5	58.2	58.8	7.1	57%
	6-9	50.9	54.5	9.6	43%
	10+	35.0	52.3	16.0	0
Manic-depressive psychosis.....	1-5	40.0	46.8	11.0	39%
	6-9	46.1	39.1	11.7	23%
	10+	33.1	35.5	12.3	0
Psychoneurosis.....	1-5	40.1	41.0	8.7	50%
	6-9	36.6	27.1	12.5	19%
	10+	36.1	27.1	12.5	13%
Schizophrenia.....	1-5	36.3	27.8	13.3	10%
	6-9	38.5	27.8	12.3	8%
	10+	27.6	24.1	12.9	12%

TABLE 5.—Discharge Evaluation

Evaluation	No.	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
Recovered.....	17	42.9	44.5	10.7	41%
Much improved.....	82	39.0	35.6	11.2	22%
Improved.....	63	36.1	31.2	11.2	16%
Unimproved.....	9	31.1	31.1	13.2	11%
					$\chi^2=6.1$
		Mean Differences	Mean Differences	Mean Differences	
Recovered vs. Much Improved.....		3.9	8.9 *	0.5	
Recovered vs. Improved.....		6.8	13.3 †	0.5	
Recovered vs. Unimproved.....		11.8	13.4 *	2.5	
Much Improved vs. Improved.....		2.9	4.4 †	0.0	
Much Improved vs. Unimproved.....		7.9	4.5	2.0	
Improved vs. Unimproved.....		5.0	0.1	2.0	

\*  $P < 0.05$ .  
 †  $P < 0.02$ .  
 ‡  $P < 0.01$ .

years' education, while all of the unimproved patients had more than eight years' education; the much improved and improved patients were in between. By  $\chi^2$ -analysis these results were significant at the 5% level of confidence.

When the data were analyzed for the patients treated with convulsive therapy, the trends noted for the population as a whole were intensified (Table 6). Analysis of the patients who received psychotherapy as their only form of treatment (Table 7), however, failed to show any statistically significant pattern. The recovered patients were oldest and had the highest percentage of foreign births, but education and F score did not show any clear trend.

3. *Diagnosis.*—The relation of sociopsychological factors to diagnosis is shown in Table 8. Those patients classified as showing involuntal reactions had the highest F scores, the oldest mean age, the least years of education, and the highest incidence of foreign birth. In contrast, patients classified as schizophrenic had the lowest F scores, the youngest mean age, the most years of education, and the least number of foreign-born. Patients classed in manic-depressive psychosis and psychoneurosis categories were in between with regard to these social factors.

**Comment**

The present study has demonstrated that sociopsychological factors, in addition to

TABLE 6.—Discharge Evaluation in Patients Receiving Convulsive Therapy

Evaluation	No.	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
Recovered.....	8	53.1	51.6	9.4	50%
Much improved.....	26	41.8	43.8	10.6	35%
Improved and unimproved.....	23	39.7	32.3	12.3	17%
					$\chi^2=3.5$
		Mean Differences	Mean Differences	Mean Differences	
Recovered vs. much improved.....		11.3	7.8	1.2	
Recovered vs. improved and unimproved.....		13.4 *	19.3 †	2.9 *	
Much improved vs. improved and unimproved.....		2.1	11.5 †	1.7	

\*  $P < 0.05$ .  
 †  $P < 0.02$ .  
 ‡  $P < 0.001$ .

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TABLE 7.—Discharge Evaluation in Patients Receiving Psychotherapy Only

Evaluation	No.	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
Recovered.....	9	32.6	38.2	12.3	33%
Much improved.....	54	38.1	32.2	12.0	15%
Improved and unimproved.....	39	33.5	31.9	12.2	18%
					$\chi^2=1.8$
		Mean Differences	Mean Differences	Mean Differences	
Recovered vs. much improved.....		5.5	6.0	0.3	
Recovered vs. improved and unimproved.....		0.9	6.3	0.1	
Much improved vs. improved and unimproved.....		4.6	0.3	0.2	

their previously determined importance in the selection of treatment, are also significantly related to the duration of treatment, the evaluation of the results of treatment, and the psychiatric diagnosis. If such results were obtained in a survey of private practitioners, as in the Weinstock report,<sup>29</sup> it could be concluded that the limitation of the number of practitioners and the expense of treatment served to select preferred persons from the upper social classes who could afford the treatment in terms of time and money. The present results, however, were obtained in an institution where the various kinds of treatment were equally available to all patients and where the ability to pay was not a factor in the management of the patient. We postulate, therefore, that

the observed relationships are not due merely to mechanically selective aspects, such as income or the prestige status of the patient. Social factors are important because they are also related to psychological processes, such as the habitual patterns of communication, modes of expression, and symbolic values. We shall attempt to evaluate these processes and their effect on the psychiatric relationships studied in terms of the influence of sociopsychological factors on the attitude and behavior of the therapist, the patient, and the therapist-patient interaction.

Current data both from this laboratory<sup>14</sup> and from others<sup>12,24,27,28</sup> have demonstrated that psychotherapy is most likely to be sustained with those persons who most

TABLE 8.—Diagnosis

Diagnosis	No.	F Score, Mean	Age, Mean Yr.	Education, Mean Yr.	Foreign-Born
Involuntal psychosis.....	24	52.3	56.7	8.9	46%
Manic-Depressive psychosis.....	39	40.8	41.9	11.5	26%
Psychoneurosis.....	37	36.9	29.4	11.9	22%
Schizophrenia.....	68	32.8	26.1	12.7	10%
					$\chi^2=14.2 \ddagger$
		Mean Differences	Mean Differences	Mean Differences	
Involuntal vs. Manic-depressive psychosis.....		11.5 †	14.8 §	2.0 *	
Involuntal psychosis vs. psychoneurosis.....		15.4 †	27.3 §	3.0 †	
Involuntal vs. schizophrenia.....		19.5 §	30.6 §	4.5 §	
Manic-depressive psychosis vs. psychoneurosis.....		3.9	12.5 §	0.4	
Manic-depressive psychosis vs. schizophrenia.....		8.0 †	15.8 §	1.6	
Psychoneurosis vs. schizophrenia.....		4.1	3.1	0.8	

\*  $P < 0.05$ .  
 †  $P < 0.02$ .  
 ‡  $P < 0.01$ .  
 §  $P < 0.001$ .

closely resemble the therapists with regard to cultural background, systems of value, and communication patterns. With stress at Hillside Hospital on psychoanalytically oriented psychotherapy, it is consistent that those patients who are most like the therapists with regard to these factors would be kept in the hospital for the longest period. This was true for patients receiving convulsive therapy or psychotherapy and for all diagnostic groups.

The length of time a patient remains in a psychiatric facility is related to the particular function and philosophy of the institution. In studies of outpatient clinics which have a psychoanalytic orientation<sup>24,28</sup> it has been observed that persons from the higher social classes, determined by education or income, are treated for a longer period. In contrast, in state mental hospitals, patients with the least education are kept longer and form a higher proportion of the chronically hospitalized group.<sup>6,17,23</sup> The state-hospital therapist, viewing the institution primarily as a custodial facility,<sup>12</sup> is evidently oriented toward the more rapid discharge of those patients who come from a background most like his own.

The observation of the relation between sociopsychological factors and improvement rating, particularly in those patients receiving convulsive therapy, may also be related to differences in communication patterns between therapist and patient that result in referral for convulsive therapy. The therapist may set different criteria for improvement for the older, less educated patients than he does for the younger, more sophisticated ones. In the patient with little education and with modes of expression different from his own, he may regard, for example, the manifestation of denial or minimization of symptoms as improvement.<sup>15</sup> But in patients culturally like himself, the expression of denial is regarded as a defensive operation, and the patient is considered unimproved.

Ratings of improvement are also related to the base line of premorbid functioning.

Thus, the rating of recovered is defined at Hillside Hospital as "the reasonable expectation that the patient will be able to return to his community and function as well, or better, than he did before he became ill."<sup>11</sup> The therapist's perception of the patient's premorbid functioning may be influenced by the distance between his value system and that of the patient's. The greater the social distance between therapist and patient the less rigorous the requirements for behavioral change may be. For example, for older, lower-class patients the ability to resume work may be the major criterion of improvement. For better-educated patients work adjustment may be one of many criteria, including such intangible aspects of behavior as insight, work gratification, and ease of sociability. The patient's expectancy not only of the type of psychiatric treatment but of improvement is also dependent upon social background.<sup>12</sup>

While the same trends were shown in the psychotherapy patients, the results did not reach the level of statistical significance. This may have been due to the greater homogeneity of these patients for the factors studied, in contrast to the convulsive group. The outpatient study by Rosenthal and Frank<sup>28</sup> also failed to find a relation between social factors and improvement rating in the patients who received psychotherapy. This observation, also, was obtained in a population that was more homogeneous after the initial admission selection process and after the spontaneous screening effected by the patient's willingness to attend treatment after he had been accepted.

The marked relationship between sociopsychological factors and diagnosis is not surprising. Certainly, the relationship of age and diagnosis is an established concept in clinical psychiatry. In the involutional disorders and in dementia precox the names themselves have a chronological connotation. Landis and Page,<sup>19</sup> in 1938, stated that age was the "most important *single* deter-

mining factor that we can know about mental disease." They asserted that, given the age distribution of a group of patients, they could accurately predict the number in each diagnostic group, as well as the probable outcome with respect to recovery and the length of hospital residence. More recently, Frumkin,<sup>8</sup> reporting the median ages of first admissions to a mental hospital in Ohio, observed data similar to our own with regard to the ages for the various diagnostic groups.

In the present study, however, we have also shown that education, place of birth, and F score significantly differentiate the major diagnostic groups in the hospital. In view of these findings, we have postulated that a psychiatric diagnosis is not just a one-to-one reflection of a specific type of behavior pattern but is also a value judgment in terms of social interaction. Thus, both in our own studies and in the work of others<sup>12</sup> it has been noted that patients with similar symptoms will receive different diagnoses, depending on their social background.

An additional hypothesis relating sociopsychologic factors to diagnosis may be based on the concept that persons from different social backgrounds acquire different habitual modes of adaptation, communication, and expression. Accordingly, under conditions of stress, altered brain function, or states associated with the onset of mental illness, a person will show those behavior patterns or symptoms which are similar to his habitual patterns. Thus, persons from a lower-class social background are more apt to communicate in nonverbal, physical terms, while upper-class people are more likely to do so in ideational and verbal modes. Thus, anger may be expressed by lower-class people by physical violence, while persons from the upper classes are more likely to resort to exhortation or argument.

Opler and Singer,<sup>25</sup> studying schizophrenic Irish and Italian patients in a Veteran's facility, found significant dif-

ferences in the types of symptoms related to cultural differences in the family backgrounds. Patients from Irish families in which the active expression of emotions were frowned upon and who had dominant, overprotective mothers, were passive, compliant, and withdrawn, and were fearful of anything which might separate them from the protection of the hospital. Patients with Italian family backgrounds that encouraged free expression of emotion and who were ruled by a dominant father, showed assaultive and destructive behavior, were difficult to manage, and were rebellious against authority.

In a comparable study, Miller and Swanson<sup>22</sup> noted that hospitalized schizophrenic patients exhibited significant social-class difference in symptomatology. Lower-class patients showed a predominance of "motoric themes," while middle-class patients exhibited "conceptual or ruminative themes."

Hollingshead and Redlich<sup>12</sup> found a marked difference in the type of neuroses shown by persons from different social classes. While hysterical reactions were found predominantly at the lowest social levels, obsessive-compulsive patterns were characteristic of the upper classes. They felt that the lower-class patient expresses his neurosis by acting out, whereas the upper-class neurotic shows his symptoms in ideational dissatisfaction with himself.

According to our hypothesis, then, we should expect that persons from lower social levels would show symptoms that are nonverbal, and are expressed predominantly in sensory or motor patterns. Among such types of symptoms would be psychomotor retardation, anorexia, catatonic stupor, muteness, hysterical blindness, and paralysis. In this connection it is noteworthy that both hysteria and manic-depressive psychosis have been reported on the wane in the general population.<sup>2,4,8,10</sup> This decrease, in our view, is related to the general increase in educational level of the country as a whole. One cannot, of course, ascribe

the decrease in hysteria to a greater freedom in sexual matters; hysteria is commonest in more poorly educated people, who are least inhibited sexually.<sup>16</sup> Rees<sup>26</sup> has reported that those British soldiers who had hysterical symptoms in World War II were mainly the mental defectives. He noted that hysterical symptoms were related to intelligence and education. Freyhan<sup>7</sup> has indicated not only that the present clinical patterns of hysteria are different from those shown at the turn of the century but that such schizophrenic manifestations as "cataleptic stupors, stereotypical motor peculiarities, grandiose excitement, and violent behavior" are difficult to find today. These observations suggest that a sociopsychological framework can lead to the prediction of future patterns of mental illness.

In our investigations of persons with depressive psychoses, we have frequently noted a pattern of premorbid behavior characterized by lack of imagination, creativity, and introspective capacity, and by conventionality and general rigidity.<sup>13</sup> Similar patterns have been reported by other authors.<sup>3,5,9,21</sup> We believe that a deprived cultural background, such as that involving little or no education, with the early years spent in an illiterate environment with meager cultural resources, is conducive to the development of such a personality pattern. When mentally disordered, such persons react with the repertoire of behavior patterns that we term "depression."

It is important to keep in mind that while the relationship between social factors and the psychiatric aspects described is probably applicable as a general principle, the specific findings may vary in different settings or institutions. For example, Hollingshead and Redlich<sup>12</sup> found that schizophrenia was a diagnosis proportionately commoner among the lower than among the upper classes, while at Hillside Hospital the schizophrenic patients had the highest education. This discrepancy may be related to differences in composition of the two populations, the Hillside patients being drawn largely from

the middle-class groups, with relatively few from the upper or lower social classes. In Hillside Hospital the diagnosis of schizophrenia may indicate an "interesting" patient, while in a state hospital population the same diagnosis may represent a patient who is "hopeless."

From the perspectives developed in this report, observations which are commonly explained in motivational and "dynamic" terms may also be understood in other ways. Thus, some situations where a patient is said to be "hostile" or "resisting psychotherapy" may reflect a problem in communication between patient and therapist, related to their differences in social background.

It also is apparent that the social background of the majority of the mentally ill patients is such as to make the current practice of universally employing a verbal, insightful-oriented therapeutic approach a difficult, if not inappropriate, procedure. The answer to the problem of how to treat the vast number of mentally ill may be not to train more and more psychotherapists, but, rather, to develop therapeutic techniques more suitable to the patient's own systems of value and communication.

### Summary and Conclusions

Significant relationships were found between sociopsychological factors and duration of hospitalization, discharge evaluation, and diagnosis in a voluntary mental hospital.

Patients hospitalized for the shortest period were oldest, had the least education, were most likely to have been foreign-born, and had the highest scores on the California F Scale. Younger, native-born, more educated, and lower F-score patients were hospitalized the longest.

The same relationship of these factors to length of hospitalization was found when analyses were made according to type of treatment (convulsive therapy or psychotherapy) and diagnosis.

Discharge evaluations of improvement were significantly related to age, the older

patients having the more favorable ratings. Analysis of the data by type of treatment demonstrated that patients rated as recovered or much improved after convulsive therapy had the highest F scores, the least education, and were most likely to be foreign-born.

Diagnoses of schizophrenia or psychoneurosis were associated with lower F scores, younger ages, more education, and native birth. The older, less educated, foreign-born, high-F-score patients were most frequently classified under involuntional or manic-depressive psychosis.

It is postulated that these relationships reflect the influence of social background on psychological processes, such as the habitual patterns of communication, modes of expression, and symbolic values. These not only contribute to the pattern of mental illness but affect all aspects of the patient-therapist interaction.

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Sociopsychological Aspects of  
Psychiatric Treatment in Three Voluntary Hospitals

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This study was done when the authors were associated at the Department of Experimental Psychiatry, Hillside Hospital, Glen Oaks, L.I. New York, 1959-1962.

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In their studies of the New Haven psychiatric patient population, Hollingshead and Redlich have reported significant relationships between an individual's position in the social class structure and the incidence of treated illness, types of diagnosed disorders and kinds and duration of psychiatric treatment administered (2). The influence of the economic status of the patient on the availability of treating personnel, however, was not excluded.

Studies of the role of social factors in the treatment of hospitalized patients independent of their financial status and the availability of treatments were undertaken at Hillside Hospital in 1957. In this hospital, a variety of treatment modes, including individual psychotherapy, pharmacotherapy and convulsive therapies were available to all patients regardless of their ability to pay. In these surveys (3,4) we observed that patients hospitalized for the shortest periods were older, had less education and were more often of foreign birth. These older, less educated patients were predominantly treated by convulsive therapy and received more favorable clinical discharge ratings. In contrast, younger, native born and more educated patients were hospitalized for longer periods, treated primarily by psychotherapy and received poorer discharge ratings. These clinical factors were also related to a measure of stereotypy, the California F Scale (1,5). Higher F scores, *i.e.*, greater stereotypy, were often found in patients diagnosed as involuntal psychosis, who were referred for convulsive therapy, hospitalized for shorter periods, and more often were rated as much improved or recovered.

In the survey reported here, it was suggested that differences in psychiatric treatment among hospitals should reflect the influence of social factors as noted for the patients within Hillside Hospital. To test this suggestion it was decided to employ the procedures of the 1957 Hillside study in three institutions -- Hillside Hospital, the C. F. Menninger Memorial Hospital in Topeka and the Massachusetts Mental Health Center in Boston. These institutions were selected with the expectation that they had diverse treatment modalities equally available, yet served patients of different social classes. Each provided short-term treatment of voluntary patients and did not provide custodial care. Each is a residency training center with a full time supervisory staff and active research units, emphasizing psychoanalytically-oriented psychotherapy.

This study was designed to determine the population characteristics of the three institutions with respect to social class, age, education and F score; and to relate these characteristics to treatment variables of type of treatment, duration of hospitalization, diagnosis and discharge evaluation among the institutions.

METHOD

A census of all voluntary, adult patients in residence in the institutions was undertaken in January, 1959. While Menninger and Hillside Hospitals had voluntary patients only, a small number of those at the Massachusetts Mental Health Center (MMHC) were assigned by the courts for psychiatric evaluation or were members of a chronic schizophrenic state hospital group transferred for a specific research project. These patients were excluded from the study because of their non-voluntary status. The California F scale was scored for each patient on the census day.

Eighteen months later the records of discharged patients were examined to determine the social and psychiatric factors of the study. For a measure of social class, the Hollingshead 2-factor index - a weighted score of education and occupation - was used (3,4,7). The study population consisted of 173 patients at Hillside, 100 at Menninger and 95 at the Massachusetts Mental Health Center.

The study included examination of the relations of the social to the psychiatric variables within each institution as well as between institutions. These comparisons were difficult however, because of various methodological differences discussed below. These difficulties were most marked in the intra-hospital comparisons, and accordingly, in the analyses of psychiatric variables emphasis will be placed on the differences between institutions with citation of intra-institutional trends. These difficulties also led to missing information for some data, which is reflected in the tables by the varying population sample sizes.

## RESULTS

### A. Methodological Problems

When reporting studies from one institution, the structure of the hospital may be taken for granted and either ignored or mentioned briefly. In gathering comparable data from multiple institutions, however, the many differences between institutions are accentuated. While these institutions were selected as comparable in teaching, research and treatment programs, they were functionally unlike in ways which influenced the data of the study. Specific differences were prominent in the designation of type of treatment, diagnostic classifications, and the evaluation of treatment outcome.

1. Designation of Type of Treatment: The criteria for designating that a patient received "psychotherapy" differed among the institutions, making comparisons difficult.

At Menninger Hospital psychotherapy was designated as treatment administered on a prescription basis by a staff psychiatrist for which the patient was charged a fee. Sessions with the psychiatric resident were considered part of routine administrative patient care.

At Hillside Hospital psychotherapy was defined as treatment sessions with a psychiatric resident. Staff psychiatrists did not treat patients, but restricted their activities to supervising resident physicians. No additional fees were charged.

At the Massachusetts Mental Health Center psychotherapy was designated as the activity of many disciplines -- psychiatric residents, psychologists, social workers, nurses and medical students. Formal records of such sessions were not routinely included in the patient's record and to ascertain which patients received psychotherapy it was necessary for members of the study team to interview the resident responsible for each case.

2. Diagnosis: Individual institutional diagnostic styles made comparisons difficult. At Menninger Hospital diagnoses employed the multiple evaluative scheme recommended by the American Psychiatric Association, while both Hillside and MMHC followed different unitary systems. Several examples of diagnoses from Menninger are listed in Table I, with our suggested conversions into categories comparable to that of the other two institutions. These conversions provide a source of distortion.

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Table I

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3. Discharge Ratings of Improvement: Ratings of improvement at the three hospitals varied in format and detail. The discharge rating at Menninger Hospital was tripartite with a separate evaluation for social, characterological and syndrome changes. Hillside Hospital and Massachusetts Mental Health Center had global ratings making it difficult to assess the contribution of each factor of the Menninger system (Table II). For this study the Menninger syndrome rating was compared to the global ratings of the other institutions.

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Table II

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B. Inter-hospital Comparison

1. Sociopsychological Variables

The distribution of the variables of social class, age, education and California F Scale score among the three institutions is presented in Table III.

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Table III

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a) Social Class: The anticipated difference in social class composition of the three institutions was observed. At Menninger Hospital the population was predominantly upper class; At Hillside Hospital, middle class; and at Massachusetts Mental Health Center, predominantly lower class.

b) Age: There were no differences in age distribution in the institutional populations.

c) Education: The populations also differed in educational attainment, with patients having more years of education at Menninger Hospital than at Massachusetts Mental Health Center. While 41 per cent of the patients at MMHC had not completed high school, only 32 per cent at Hillside and 23 per cent at Menninger did not graduate.

d) F Score: Differences in the distribution of scores on the California F Scale were also observed. Fifty-one per cent of Menninger patients had F scores below 30, and only eight per cent with scores of 50 or above -- the higher F scores being associated with higher degrees of stereotypy. In contrast, at Hillside thirty-one per cent of the patients had F scores below 30 while at MMHC only twenty per cent were below 30.

Thus, differences in social class, educational attainment and performance on the F Scale were observed. These differences permit a test of the hypotheses relating sociopsychological factors to the treatment variables among these institutions.

## 2. Psychiatric Treatment Variables

a) Selection of Treatment: Among the institutions, significantly fewer patients at Menninger Hospital (43%) received somatic therapy than at Hillside (64%) or MMHC (68%) (Table IV).

b) Duration of Hospitalization: The three institutions differed with regard to patient's length of stay (Table IV). Patients at Menninger Hospital were hospitalized longest, with 65% of patients remaining for twelve months or more, compared to 31 per cent of the Hillside patients and only 5 per cent at the Massachusetts Mental Health Center. The modal stay of the Hillside group was between seven and eleven months while two-thirds of the MMHC patients were discharged within six months of hospitalization.

c) Discharge Evaluation: In each hospital, most patients were evaluated at the time of discharge as "improved" (Table IV). At Menninger Hospital, however, a higher percentage (19%) of patients were rated as "unimproved" and only a single patient was scored "recovered" or "much improved". The highest percentage of "recovered" or "much improved" ratings (28%) and the lowest proportion of "unimproved" (10%) were found at the Massachusetts Mental Health Center.

d) Diagnosis: For statistical analysis three diagnostic groupings were made: schizophrenia, affective disorders, and

psychoneurosis and personality disorders (Table IV). The diagnostic proportions of patients within these groups were similar for Hillside and MMHC, as slightly more than half were diagnosed as schizophrenia and one-quarter as psychoneurosis or affective disorder. In contrast, at Menninger Hospital psychoneurosis and personality disorder accounted for more than fifty per-cent of the population.

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Table IV

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C. Intra-Hospital Comparisons

The lack of meaningful criteria for the subdivision of populations, their homogeneity within each institution, and the limited sample size (several groupings were obtained which had fewer than five cases) precluded significant intra-hospital comparisons. However, the trends appeared similar to those found in the earlier study. Age and F score were found related to the selection of treatment at Menninger Hospital (older and higher F score patients more frequently receiving somatic therapy), and F score alone at Hillside. Length of hospitalization and chronological age were related at both the Menninger and Hillside Hospitals - the younger patients remaining for the longest periods. While such relationships were significant in these two hospitals, a similar trend was noted at the MMHC (Table V) where no patients over 40, but 14% of patients under the age of 20 remained longer than a year.

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Table V

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## DISCUSSION

The patients of three voluntary psychiatric hospitals exhibited significant inter-institutional differences in social class and years of education, but not age; in distribution of California F Scale scores; and in each of the treatment variables -- duration of hospitalization, selection of treatments and distributions of diagnoses and discharge evaluations (7). Expectations based on our earlier intra-Hillside Hospital were confirmed. The institution serving upper class patients did have the longest duration of stay, a higher proportion of psychoneurotic diagnoses and more complex diagnostic schemata, a lower proportion of patients receiving somatic forms of therapy, and the poorest discharge ratings among the three institutions. Similarly, the institution serving lower class patients did have the shorter periods of hospitalization, lower proportions of psychoneurotic diagnoses, and the better discharge evaluations.

It is our impression that these differences in psychiatric treatment are related more to differences in staff attitudes and social class variables than psychiatric differences in populations. The contrasts between institutions in duration of hospitalization are great, as are the complexity of diagnostic formulations, discharge evaluations, definitions of psychotherapy, and the details and amount of recorded data. While these stylistic differences may be dismissed as idiosyncratic, they follow a pattern related to social differences, and their consistency with expectations suggests a greater dependence on social class variables than ordinarily acknowledged.

Such population and treatment variable relationships are interactive processes, determined both by the attitude of the physician and the administrative staff and by the constellation of symptoms or history which patients present. Such relationships are marked most in those psychiatric conditions where diagnostic criteria are least specific, *i.e.*, where objective criteria defining diseases of known etiology are absent, as in schizophrenia, psychoneurosis, personality and behavior disorders. Under these conditions of perceptual and situational ambiguity, the observer's attitudes and expectations become significant aspects of his perceptions, classifications, and decisions. A similar situation was clearly documented by Pasamanick, Dinitz and Lefton (6) in their study of variations in diagnosis within a single institution. They observed that patients assigned at random to different wards did not differ in type of admission, marital status, education, age or residence. Significant differences did occur, however, in

the incidence of various diagnostic classifications among the three wards and among three administrators on one ward. As no differences in the populations were demonstrated, we believe the different incidence of diagnoses reflect the attitudes of the examiners.

Present psychiatric concepts of diagnosis and clinical evaluation have little meaning when transferred from one institution to another. Literal adherence to these concepts produces paradoxical results. For example, Menninger Hospital with the more highly trained personnel conducting treatment, keeps its patients for the longest time, has the fewest patients diagnosed as schizophrenia, and yet, reports the poorest treatment results. At MMHC, in contrast, which is most inclusive in defining a therapist, keeps patients for the shortest periods, and has a higher proportion of the population classed as schizophrenia, reports the best treatment results.

In the absence of independent criteria for the quality of care or the assessment of comparability of populations for degree of illness among the institutions, these findings do not reflect the relative therapeutic efficacy of the institutions. Since the evaluations are based on the institution's own ratings, we believe that the differences reflect variations in the criteria used for evaluation of improvement rather than intrinsic psychiatric characteristics.

In our initial Hillside study (4) it was postulated that different criteria of improvement were utilized for persons of different social background. It was suggested that the higher the person's social background the more complex the criteria employed. This has been literally confirmed in the present study, with the staff of Menninger Hospital using a tripartite rating compared to the global rating of the other two institutions. Even considering the syndrome rating on which our comparative statistical analyses were based, it is our contention that for lower class persons we are apt to assess improvement in relation to symptom relief or the patient's capacity to resume work, while for upper class persons the criteria emphasize such complex intangibles as "developing insight," or "working through one's problems."

While these investigations have again demonstrated the role of social factors in psychiatric treatment, we have been greatly impressed by the methodological problems of studies across institutions. These institutions were selected for their educational

leadership and the expectation that the recorded variables would be clearly defined. But differences in institutional style made it difficult to obtain comparable data. This experience is a cue to the problems of the conventional use of comparative statistics, especially in the evaluation of psychiatric therapies. The use of discharge ratings, diagnostic classifications or length of hospitalization as criteria in therapeutic evaluations or the identification of comparable populations are subject to extensive error unless the institutions are clearly matched for staff attitudes and style as well as social class patterns in patient populations. These difficulties also extend to the failures of scientists to confirm clinical or laboratory observations made in other laboratories, for the lack of confirmation may reflect differences in populations and psychiatric criteria as much as errors in the original hypotheses. The use of the terms "schizophrenia" or "psycho-neurosis" to explore changes in psychological and biological features of mental illness has led to a science burdened by negative results. Even were a valid observation to be reported from one laboratory today, we do not have the methods to describe psychiatric populations adequately for a satisfactory test of the hypothesis. Increased attention must be paid to the classification of subjects by "objective" criteria rather than our present methods, so highly dependent on institutional and observer attitudes and the socio-psychological aspects of the therapist-patient interaction.

SUMMARY AND CONCLUSION

Population characteristics, defined by social class, age, education and F score, were related to treatment variables in three voluntary teaching hospitals. Treatment variables included type of treatment, duration of hospitalization, diagnosis and discharge evaluation. Inter-institutional differences were observed in patient social class, years of education and distribution of California F scores, but not age.

The variations in treatment characteristics among institutions were significantly different in the predicted direction. The institution serving upper class patients did have the longest duration of stay, a higher proportion of psychoneurotic diagnoses and more complex diagnostic schemata, a lower proportion of patients receiving somatic forms of therapy, and the poorest discharge ratings among the three institutions. Similarly, the institution serving lower class patients did have the shorter periods of hospitalization, lower proportions of psychoneurotic diagnoses, and the better discharge evaluations.

These variations in psychiatric practices followed a pattern consistent with the social class differences among the institutions and are not regarded as idiosyncratic.

Such differences in institutional style make comparisons of diagnoses, duration of hospitalization and treatment results between institutions difficult and tenuous, and the need for more objective criteria for the classification of psychiatric populations is emphasized.

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TABLE I

Redesignation of Discharge Diagnoses

<u>Menninger Discharge Diagnoses</u>	<u>General Classification</u>
Depressive Reaction Narcissistic Personality	Psychoneurosis
Anxiety Reaction Narcissistic Personality	Psychoneurosis
Narcissistic Personality	Personality Trait Disturbance
Narcissistic Personality Alcoholism, Chronic Infantile Personality	Sociopathic Personality Disturbance
Passive Aggressive Personality Alcoholism	Sociopathic Personality Disturbance
Infantile Personality Schizophrenic Reaction, Schizo-Affective Type	Schizophrenic Psychosis

TABLE II

Comparative Ratings of Clinical  
Condition At Time of Hospital Discharge

<u>MENNINGER HOSPITAL</u>	<u>HILLSIDE HOSPITAL</u>	<u>MASSACHUSETTS MENTAL HEALTH CENTER</u>
<u>Social Adjustment</u>		
Improved	Recovered	Recovered
Unimproved	Much Improved	Markedly Improved
	Improved	Moderately Improved
<u>Character Structure</u>	Unimproved	Slightly Improved
Improved		Unimproved
Unimproved		
<u>Syndrome</u>		
Complete Remission		
Improved		
Unchanged (or worse)		

TABLE III

Interhospital Comparisons for Sociopsychological Variables

		Menninger Hospital	Hillside Hospital	Massachusetts Mental Health Center
Social Class	N	(87)	(133)	(72)
	I	31%	7%	3%
	II	51	20	28
	III	17	34	13
	IV	1	34	28
	V	0	5	28
$\chi^2 = 121.5; df=8; p < .001$				
Age	N	(100)	(173)	(95)
	<20	19%	19%	15%
	20-39	59	58	52
	40 +	22	23	33
$\chi^2 = 3.9; df=4; p=n.s.$				
Years of Education	N	(100)	(173)	(91)
	<12	23%	32%	41%
	12-15	54	51	49
	16+	23	17	10
$\chi^2 = 9.7; df=4; p < .05$				
F Score	N	(92)	(163)	(76)
	10-29	51%	33%	20%
	30-49	41	50	38
	50-70	8	17	42
$\chi^2 = 39.2; df=4; p < .001$				

TABLE IV

Interhospital Differences in Treatment Variables

		Menninger Hospital	Hillside Hospital	Massachusetts Mental Health Center
Type of Treatment	N	(100)	(173)	(89)
	Psychotherapy	21%	36%	24%
	Somatic	43	64	68
	Other	36	--	8
$X^2 = 82.8; df=4; p < .001$				
Duration of Hospitalization	N	(100)	(173)	(95)
	< 7 months	22%	27%	67%
	7-11 months	13	42	27
	> 11 months	65	31	5
$X^2 = 90.6; df=4; p < .001$				
Discharge Evaluation	N	(99)	(172)	(88)
	Recovered, Much Improved	1%	23%	28%
	Improved	80	62	61
	Unimproved	19	15	10
$X^2 = 29.3; df=4; p < .001$				
Discharge Diagnosis	N	(95)	(171)	(85)
	Schizophrenia	43%	52%	54%
	Affective Psychosis	5	22	17
	Psychoneurosis and Personality Disorder	52	26	29
$X^2 = 23.8; df=4; p < .001$				

TABLE V

Duration of Hospitalization

By Age

PERCENTAGE OF AGE GROUP STAYING OVER ONE YEAR

<u>Age</u>	<u>Menninger</u>	<u>Hillside</u>	<u>MMHC</u>
Below 20	81	42	14
20-29	73	36	6
30-39	61	30	6
40-49	30	20	0
50+	36	0	0

