

# A STATISTICAL STUDY OF FACTORS INFLUENCING DISCHARGE FROM PSYCHIATRIC HOSPITALS

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ONE of the problems in psychiatric epidemiology is the use of hospital admissions for the study of true morbidity. Clearly this depends upon whether hospitalized cases can be regarded as a representative sample, in other words if admission to hospital varies from one social group to another, from one region to another, etc. Various authors have shown that the duration of hospital stay varies with social status, with marital condition, etc., and such variations in the chances of being *discharged* suggest similar variations in the probability of being *admitted*.

The duration of hospital stay has been examined for all first admissions to psychiatric hospitals in Norway, 1936–1945, a total of 16,038 cases. All these patients have been followed by means of a national registration system until the end of 1955, giving a minimum observation period of 10 years for patients not discharged at all. Patients re-admitted within 12 months are not considered discharged.

As expected *clinical diagnosis* is the decisive factor (Table I). Among the cases diagnosed as schizophrenia one-half are discharged within the first 12 months, while one-fifth stay in hospital for ten years or more. Patients suffering from functional psychoses of other types, mainly affective, will on the other hand rarely stay in hospital more than a year, and a mere 2 to 3 per cent. are left in hospital after ten years. Mental defectives and epileptics with psychotic complications show a discharge pattern very much like that of schizophrenia, while the remaining diagnostic groups, organic and symptomatic, tend to behave like the benignant functional psychoses. In the organic groups the high mortality complicates the picture: of the senile and arteriosclerotic patients one-half die during their first hospital stay, and for patients who stay in hospital for any length of time, the chances of being discharged alive are slight.

TABLE I

	No. of First Ad- missions 1936-45	Per 100 First Admissions						Total	Died per 100 During First Hos- pital Stay	Re- admitted per 100 Dis- charged Alive
		Discharged Alive Within					Still in Hos- pital Jan. 1956			
		(whole years)								
		0-1	1-2	2-5	5-10	10-20				
Schizophrenia .. .. .	5,646	50	12	11	6	4	17	100	9	39
Manic-depression .. .. .	1,738	80	9	6	2	0	3	100	6	33
Other functional psychoses .. .	3,069	79	8	6	3	1	3	100	4	26
Patients with mental deficiency .. .	1,046	49	12	12	7	2	18	100	12	33
Patients with epilepsy .. .. .	286	53	8	11	7	5	16	100	20	35
Senile and arteriosclerotic psychoses	1,641	72	12	10	3	1	2	100	48	15
General paresis .. .. .	798	77	8	5	3	1	6	100	36	20
Other organic psychoses .. .. .	364	78	6	5	4	2	5	100	30	20
Alcoholic psychoses .. .. .	263	90	4	3	1	1	1	100	6	12
Other symptomatic psychoses .. .	587	90	5	3	1	0	1	100	26	17
Other and unspecified psychoses .. .	116	82	7	6	0	0	5	100	16	10
Non-psychotic .. .. .	483	90	5	3	1	0	1	100	1	15
<b>Total .. .. .</b>	<b>16,038</b>	<b>66</b>	<b>10</b>	<b>8</b>	<b>5</b>	<b>2</b>	<b>9</b>	<b>100</b>	<b>14</b>	<b>30</b>

TABLE II  
 Duration of Hospital Stay and Frequency of Re-admission for Major Diagnostic Groups by Sex, Marital Status, Result of First Hospital Treatment, Age on First Admission and Place of Residence. Group 5-20 includes Patients still in Hospital 1 January, 1956 as well as Patients Discharged After 5 to 20 Years. The Figures for "Results of Treatment" include only the Latter, however, and are Consequently Lower

		Sex		Marital Status			Result of Treatment		Age on First Admission				Place of Residence								
		Men	Women	Single	Married	Widowed	Divorced	Good	Fair	Poor	15-19	20-29	30-39	40-49	50-59	60-69	70-	Rural	Semi-urban	Minor Towns	Oslo-Bergen
Schizophrenia	0-1	..	..	48	52	48	56	42	38	80	52	51	46	41	39	66	48	51	54	50	53
	1-5	..	..	23	24	24	22	32	25	17	32	32	25	28	33	17	23	23	24	22	25
	5-20	..	..	29	24	28	22	26	37	3	16	17	29	31	28	17	29	26	22	28	22
	Re-admission	..	..	39	40	41	32	35	50	40	38	39	44	41	36	25	21	39	39	40	37
Other functional psychoses	0-1	..	..	80	80	76	84	78	55	85	78	71	81	85	82	75	74	79	81	82	80
	1-5	..	..	15	14	17	12	16	32	13	17	23	16	12	13	20	19	16	13	13	15
	5-20	..	..	5	6	7	4	6	13	2	5	6	3	3	4	6	7	5	6	5	5
	Re-admission	..	..	28	29	30	28	23	41	30	25	28	37	31	29	27	28	31	28	34	28
Psychosis with epilepsy and with mental deficiency	0-1	..	..	49	51	47	61	64	47	70	54	57	51	50	51	59	—	50	51	41	50
	1-5	..	..	21	26	24	22	14	18	24	32	29	27	24	18	22	29	24	20	39	19
	5-20	..	..	30	23	29	17	22	35	6	14	14	22	26	31	21	22	26	29	20	31
	Re-admission	..	..	32	36	34	37	9	33	37	35	31	40	38	31	28	29	33	31	36	36
Senile and other organic psychoses	0-1	..	..	76	73	70	79	74	63	84	80	74	—	72	78	77	76	67	69	73	65
	1-5	..	..	15	20	18	14	21	27	14	15	20	—	12	12	15	14	23	15	18	24
	5-20	..	..	9	7	12	7	5	10	2	5	6	—	16	10	8	10	10	16	9	11
	Re-admission	..	..	17	17	22	16	11	19	25	18	17	—	36	23	22	17	31	14	21	19
Others (mainly symptomatic psychoses and non-psychotics)	0-1	..	..	89	89	84	93	88	90	91	92	86	85	90	90	91	83	88	92	86	89
	1-5	..	..	8	9	12	5	10	6	8	6	12	15	9	8	6	14	8	6	12	9
	5-20	..	..	1	2	4	2	2	4	1	2	2	0	1	2	4	3	4	2	2	2
	Re-admission	..	..	16	15	18	12	12	21	15	13	16	21	16	17	15	10	14	14	18	19

The diagnostic differential is so marked that the diagnostic groups have to be kept apart during the statistical analysis of all other factors. In order to avoid splitting up the material too much, the number of groups is reduced from twelve to five in the following. Within each of these major diagnostic groups the discharge pattern is relatively uniform, and the sub-groups are closely related (such as senile and arteriosclerotic, general paresis and other organic psychoses).

Table II shows that the discharge pattern is very much the same in men and women. For schizophrenia early discharge is somewhat more common in the female sex (a difference of  $4 \pm 1.44$  per cent.), whereas the opposite is the case for senile and arteriosclerotic psychoses. In order to simplify the tables the figures in the following represent both sexes.

The *result of treatment* is the only other factor with an influence upon the duration of hospital stay which is comparable to that of diagnosis. Actually these two correlate closely, because our diagnostic system is largely based upon outcome. In schizophrenia with a favourable outcome the discharge pattern is practically the same as in the more benign functional psychoses. Schizophrenic patients who are discharged as "unimproved" or as merely "improved", on the other hand, tend to stay much longer, and the same pattern is found for psychoses with epilepsy and with mental deficiency. In the remaining diagnostic groups, organic and symptomatic psychoses, the result of treatment is of little or no effect upon the duration of hospital stay, unimproved cases having the same discharge pattern as the much improved ones.

It may seem surprising that so many patients are discharged as unimproved after less than one year of hospital treatment. The explanation is that a certain improvement in social adjustment has been achieved, and that there is little hope for further improvement—so the patients and their relatives want to try a discharge, with or without the consent of the hospital. Furthermore a great number of these unfavourable cases are in Norway discharged to some other form of care, such as nursing homes or family care, and quite often this is done as soon as it becomes reasonably clear that the patient is unlikely to benefit from a prolonged stay. The overcrowding is a main reason for this practice.

It should be noted that the considerable number of patients who are still in hospital at the end of the observation period are not included in the figures, as they cannot be classified according to result of treatment. The overwhelming majority, however, belong in the unimproved category.

It is common experience that *married* patients tend to be discharged earlier than the single, but this is to a large extent a mere consequence of the difference in diagnostic distribution. Schizophrenia predominates in the single, while more benign forms tend to be more common in the married. But even when the diagnostic groups are considered separately the married have a significantly shorter hospital stay in all groups. This trend is equally marked in both sexes (not shown in table). The type and the closeness of social contact may make the return to an extramural existence easier for the married. It should not be overlooked, however, that within each of our coarse clinical groupings the married may tend towards more benign clinical pictures. This is certainly so for epileptics and mental defectives with psychotic complications, and it might easily be true even of the schizophrenics.

The *widowed* have a discharge pattern very much like that of the married, which seems to indicate initial selection by marriage rather than social contact as the decisive factor.

The *divorced* tend to stay in hospital even longer than the single. These patients, who were divorced previous to first admission and mostly previous to first onset of psychosis, are likely to have had particularly serious personality problems, and at the same time they have generally exhausted the tolerance and the resources of their relatives long ago.

Marital status is far from being a direct measure of the degree of social contact, as many single patients have lived in an equally close family relationship with parents and siblings. *Age on admission* may clarify this problem. Table II shows in fact that the younger schizophrenics, who are more likely to have parents who can take care of them, are discharged more rapidly than the older patients. This trend is not found in the other diagnostic groups, and on the whole age on admission does not seem to be a factor of great importance.

In previous investigations *social and economic status* has been found to play a role, in that high status correlates with early discharge and *vice versa*. To some extent this is a result of diagnostic distribution, as schizophrenia is relatively and absolutely more frequent in low status groups such as farm labourers and seamen. Age is another source of error, as low age on admission correlates on one hand with poor outcome (schizophrenia) and on the other hand with certain low status occupations.

When the discharge pattern is analysed for diagnosis and occupation the differentials are very moderate (Table III). A comparison of more or less parallel groups such as farmers and farm labourers does not show any consistent tendency for higher status to go with earlier discharge. Such a trend is

TABLE III

*Duration of Hospital Stay by Occupation for the Three Main Diagnostic Groups. Men, and Married Women by Occupation of Husband. Also Re-admissions per 100 Discharged Alive*

	Men				Married Women			
	0-1	1-5	5-20	Re-admission	0-1	1-5	5-20	Re-admission
<b>Schizophrenia:</b>								
Farm labourers .. .. .	47	24	29	43	45	32	23	42
Farmers .. .. .	47	17	36	35	45	32	23	36
Fishermen .. .. .	47	17	36	36	57	22	21	19
Labourers .. .. .	46	22	32	36	56	23	21	38
Artisans, technicians .. .. .	49	27	24	39	51	26	23	39
Seamen, crew .. .. .	40	31	29	37	59	14	27	39
Seamen, officers .. .. .	55	18	27	21	75	19	6	20
Trade, employees .. .. .	54	23	23	42	63	23	14	33
Trade, owners, managers .. .. .	41	35	24	34	55	28	17	40
Public service .. .. .	57	19	24	42	79	8	13	29
Professional service .. .. .	56	20	24	36	60	9	21	54
Not gainfully employed .. .. .	49	23	28	44	—	—	—	—
<b>Other functional psychoses:</b>								
Farm labourers .. .. .	74	20	6	32	87	6	7	28
Farmers .. .. .	77	19	6	21	82	15	3	39
Fishermen .. .. .	79	17	4	34	80	13	7	28
Labourers .. .. .	81	13	6	24	80	13	7	28
Artisans, technicians .. .. .	83	12	5	31	85	13	2	26
Seamen, crew .. .. .	77	18	5	41	87	5	8	32
Seamen, officers .. .. .	88	12	—	12	80	10	10	7
Trade, employees .. .. .	83	12	5	27	84	13	3	25
Trade, owners, managers .. .. .	77	14	9	32	81	18	1	27
Public service .. .. .	78	15	7	23	86	10	4	27
Professional service .. .. .	88	10	2	30	81	14	5	27
Not gainfully employed .. .. .	84	9	7	30	—	—	—	—
<b>Senile and other organic psychoses:</b>								
Farm labourers .. .. .	64	15	21	25	81	13	6	11
Farmers .. .. .	66	25	9	20	70	25	5	25
Fishermen .. .. .	86	14	—	18	69	23	8	15
Labourers .. .. .	79	15	6	16	84	14	2	14
Artisans, technicians .. .. .	77	13	10	14	74	22	4	20
Seamen, crew .. .. .	58	22	20	19	70	25	6	16
Seamen, officers .. .. .	75	9	16	16	67	20	13	14
Trade, employees .. .. .	77	14	9	14	68	28	4	14
Trade, owners, managers .. .. .	80	16	4	15	82	10	8	11
Public service .. .. .	85	7	8	20	73	23	4	14
Professional service .. .. .	87	7	6	27	86	14	—	10
Not gainfully employed .. .. .	72	—	28	15	—	—	—	—

found for seamen versus officers in the merchant marine, but for employees versus owners and managers in trade the trend is reversed.

Public service is a group of particular interest, in that the level of income is moderate, but with a high degree of security in case of illness. In this group the percentage of early discharges is high, particularly for schizophrenia, and definitely more for single women than for men and married women. This suggests that economic security rather than status may be decisive for the discharge of mental patients with a somewhat doubtful prognosis. When the prognosis is better and a full remission is to be expected, social security may on the other hand lead to a *prolongation* of the hospital stay in certain cases.

TABLE IV

*Duration of Hospital Stay by Occupation for Three Main Diagnostic Groups. Single Women Gainfully Employed. Also Re-admissions per 100 Discharged Alive*

	0-1	1-5	5-20	Re-admissions
<b>Schizophrenia:</b>				
Farm labourers .. ..	48	26	26	39
Domestic servants .. ..	50	26	24	42
Labourers .. ..	50	24	26	43
Artisans .. ..	55	23	22	35
Trade, employees .. ..	55	22	23	42
Public service .. ..	63	18	19	57
Professional service .. ..	56	22	22	34
Not gainfully employed .. ..	52	21	27	36
<b>Other functional psychoses:</b>				
Farm labourers .. ..	73	19	18	32
Domestic servants .. ..	70	21	9	33
Labourers .. ..	85	9	6	20
Artisans .. ..	76	20	4	37
Trade, employees .. ..	82	11	7	31
Public service .. ..	76	18	6	29
Professional service .. ..	67	20	13	35
Not gainfully employed .. ..	79	14	7	30
<b>Organic psychoses:</b>				
Farm labourers .. ..	57	26	17	12
Domestic servants .. ..	80	10	10	14
Labourers .. ..	76	20	4	18
Artisans .. ..	78	13	9	19
Trade, employees .. ..	66	25	9	36
Public service .. ..	72	28	—	38
Professional service .. ..	75	25	—	24
Not gainfully employed .. ..	57	23	10	

Seamen are in many respects placed at the other pole with regard to social security, and in accordance with this we find very low percentages for early discharge. This is not so for seamen's wives, however, which is not surprising.

Patients not gainfully employed at the time of first admission (mostly young sons and daughters living with parents) do not differ much from the other groups. In diagnostic groups with a poor outlook (such as schizophrenia) early discharge is not particularly common, whereas in the more benign (affective) group there is a slight tendency for these patients to be discharged early. One might conclude that parents are not particularly anxious to receive sons and daughters who have been hospitalized for a psychosis, unless the outlook is comparatively favourable. In eight out of 12 occupational groups the

percentage of early discharges for schizophrenic patients is higher for married women than it is for "daughters".

On the whole we have been unable to confirm earlier findings from as different parts of the world as New England (U.S.A.) and Singapore that social class is of decisive importance for psychiatric treatment—at least not as far as the major psychoses go. In Norway the well-established nation-wide sick-insurance, the lack of private institutions for the insane, etc., will tend to level out all differentials in the standard of medical care as well as in the attitudes of patients, doctors and relatives.

*Place of residence* (Table II) does not have much influence upon the discharge pattern, not even when such extremes as typically rural districts are compared with the two major cities. The organic psychoses represent the only exception, with a significantly higher proportion of early discharges in the major cities. The main reason is that in Oslo a large number of senile and other organic psychoses are admitted to psychiatric receiving hospitals for examination and placement, while in other parts of the country such patients tend to go directly to nursing homes. etc.

Clearly discharge is a function not only of the patient but even of *the hospital*. Therapeutic efficiency and optimism, local conditions, discharge policy, etc., are bound to play a role. In Table V the ordinary mental hospitals of Norway are compared, hospitals with a selected clientele (such as the criminal insane) being excluded. The most definite trend is a geographical one. With two exceptions (both being old hospitals in poor repair) the hospitals along the southern and western coast and way up north have a shorter hospital stay than any of the hospitals in Eastern Norway. In the former group the percentages of patients discharged within one year range from 72 to 83, while in the Eastern hospitals the range is from 48 to 70. These western and northern mental hospitals have very little in common, some are old and some more modern, and they are not more overcrowded than the eastern ones. In the West and the North the incidence of mental disorders, as measured by the rates

TABLE V  
*Length of Hospital Stay (Whole Years) in Major Mental Hospitals, Men and Women,  
All Diagnoses, 1936-45*

		0	1	2-4	5-9	10-	Total
Veum	Eastern including Oslo	63	13	14	5	5	100
Sanderud		63	12	13	5	7	100
Presteseter		48	19	16	8	9	100
Gaustad		55	13	14	9	9	100
Dikemark		70	13	10	4	3	100
Blakstad		66	12	11	6	5	100
Lier	South-eastern	69	9	9	6	7	100
Faret		76	8	6	5	5	100
Eg	Southern	60	14	15	7	4	100
Dale	South-western	73	9	9	5	4	100
Valen	Western including Bergen	72	13	9	3	3	100
Nevingården		74	10	11	3	2	100
Opdøl		72	11	9	5	3	100
Østmarka	Northern	83	7	5	3	2	100
Rotvoll		61	10	13	8	8	100
Rønvik		76	8	7	5	4	100

of first admissions, ranges from the highest in the country (Rogaland) to the lowest (Nordland and Troms). Economically Eastern Norway may on the whole be better off, and the population is generally supposed to be less frugal than the Westerners and Northerners, with a higher standard of living, particularly with regard to housing. This might paradoxically make them less tolerant of mentally abnormal relatives. The more advanced level of industrialization and urbanization may play a similar role. During the period of investigation two large and effective receiving hospitals existed in Oslo, and most of the admissions to them came from Eastern Norway, while similar clinics did not at the time exist in other parts of the country. It is common experience that such hospitals tend to receive a disproportionate number of benign cases, which leads to a lowering of the patient standard in the mental hospitals of the same district. In our statistical material these receiving hospitals are included, the only exception being Table V.

#### RE-ADMISSION

The tendency towards relapse is an important factor in the discharge pattern. As a simple measure of this tendency we have included in the tables the number of patients re-admitted per 100 discharged alive. As previously mentioned, patients re-admitted within 12 months of discharge have not been considered as discharged at all, which simplifies the statistical treatment of the many patients who go in and out of hospital with brief intervals.

TABLE VI

*Re-admissions per 100 Discharged Alive by Length of Hospital Stay and by Condition on Discharge. The Durational Groups 5-10 and 10-20 are Pooled for the Four Lower Diagnostic Groups, because the Number of Cases is Small*

		0-1	1-2	2-5	5-10	10-20
Schizophrenia	Good	41	41	35	29	10
	Fair	44	43	35	21	16
	Poor	40	45	44	36	12
Other functional psychoses	Good	30	32	31		24
	Fair	23	38	42		12
	Poor	26	41	40		18
Psychoses with epilepsy and with mental deficiency	Good	42	36	27		6
	Fair	33	50	36		27
	Poor	30	36	36		22
Senile and other organic psychoses	Good	26	24	10		17
	Fair	16	25	27		19
	Poor	13	17	24		15
Others (mainly symptomatic psychoses and non-psychotics)	Good	14	15	27		20
	Fair	13	13	0		20
	Poor	14	41	21		20

One might expect a negative correlation between length of hospital stay and frequency of re-admissions, but no such trend is borne out by the statistical data (Table VI). The only possible exception is the small group of psychoses with epilepsy and with mental deficiency. For patients with this diagnosis who were discharged in good condition, the tendency towards relapse seems to be lower if they have stayed in hospital for more than one or two years. The difference is not statistically significant, however. In these cases therapy consists

mainly of habit training in the hospital regime, and it takes time for results to consolidate.

When the hospital stay is prolonged over years, the age factor enters into the picture, and this is most likely the reason why re-admission appears to be rare in schizophrenics and organics with more than ten years hospital stay. Also it should be pointed out that the observation period for discharged patients is shorter for patients with a prolonged hospital stay (in fact it may go down to zero for patients discharged just before 31 December, 1955), and consequently these patients are exposed to the risk of relapse during a somewhat shorter period of time.

In the non-schizophrenic functional group re-admission appears to be less common in patients with an early discharge, particularly when the condition on discharge was unsatisfactory. This somewhat paradoxical finding indicates that it may be useless or contra-indicated to prolong the hospital stay if the course of a presumably benign psychosis is less favourable than expected. (The relation of re-admissions to result of treatment will be discussed more thoroughly in another paper.)

On the whole there does not seem to be any general tendency for length of hospital stay to be related to frequency of re-admissions, and this makes it justifiable to look for more special correlations (Tables I-IV).

The percentage of re-admissions decreases markedly with *age*, particularly after the age of fifty, which is a natural consequence of the decreasing life expectancy. This represents a source of error whenever groups are being compared which differ in age, such as the single and the married. The influence upon the discharge pattern of *marital status* appears to be confirmed by the figures for re-admission. Not only do married patients tend to be discharged earlier, but they are also less commonly re-admitted. For schizophrenia the difference between 41 per cent. re-admissions for the single and 32 per cent. for the married is formally significant beyond doubt ( $9 \pm 1.76$  per cent.), but most likely this is due to the difference in age distribution, and so the hypothesis of a real difference in the discharge pattern does not find any definite support in the re-admission data. The divorced, on the other hand, have in addition to their low rate of early discharge a high rate of re-admission *in spite of their higher age*. This confirms the conclusion that divorced patients are less readily accepted outside the hospital than are the single and the married. This is so for all diagnostic groups.

The tendency towards re-admission is unrelated to *place of residence*, with one important exception: patients suffering from organic psychoses are more readily re-admitted if they come from rural districts, while re-admission is much less common in the large cities. This unexpected finding may mean that the cities have provided a more varied care for such nursing cases, which makes re-admission to psychiatric hospital unnecessary. The finding that early discharge of organic psychotics is much more common in the major cities, points in the same direction.

The general impression that *social and economic status* has little or no influence upon the discharge pattern, is confirmed by the re-admission data. There is no consistent tendency for low status to go with a high frequency of re-admission. Where such a trend seems to occur, it is readily explained as a result of difference in age distribution. The re-admission rate is 43 per cent. for schizophrenic farm labourers as against 35 for farmers. Similarly it is 42 for employees in trade and industry (mostly clerks) and only 34 for owners



and managers. But this corresponds roughly to the differences found between patients in their twenties and in their forties, and is therefore probably an artefact. Unfortunately the material is not sufficiently large for a study of age specific occupational groups.

Certain irregularities are hard to explain, such as the high percentage of re-admissions in farmers' wives suffering from non-schizophrenic psychoses: 39 per cent. as against 27 to 28 per cent. in most other occupational groups. Other irregularities are probably due to small numbers.

The high incidence of early discharge in the "socially secure" group of public servants is found to go with a high percentage of re-admissions, particularly in single women suffering from schizophrenia. Evidently social and economic security may lead to early discharge even in cases where it turns out to be medically unjustified.

Seamen have a moderate to high percentage of re-admissions, which is at least not inconsistent with their low percentage of early discharge and with the assumption that the discharge pattern of this group is influenced by social insecurity.

#### CONCLUSIONS

The chances of a mental patient being discharged from hospital is dependent upon numerous factors, the more important being clinical diagnosis and outcome of hospital treatment. The possibility of using the discharge pattern as a measure of the tendency of society to accept mental patients, and of the ability of such patients to adjust outside of hospital, has been examined, and certain meaningful results seem to confirm that this is a possible approach in social psychiatric research. The great number of interplaying factors make a somewhat detailed statistical analysis necessary, and even our material of 16,000 first admissions followed for twenty years proved to be insufficient for certain special purposes, such as the elimination of possible statistical errors due to differentials in age distribution.

The findings indicate that social conditions connected with marital and occupational status have a significant but moderate influence upon the discharge pattern. The married appear to be a favoured group in comparison with the single, while the divorced are definitely handicapped. When occupational groups are compared, the differences are much more moderate, and a clear and definite trend could not be established. Certain findings indicate a relation between social security during illness and early discharge, but this trend is much less marked than has been reported from other countries.

On the whole social conditions as expressed in statistical data on marital status, place of residence or occupation does not in Norway influence markedly the relations of mental patients to psychiatric hospitals. This may have something to do with the organization of medical care, and with the entire social structure. To some extent the more pronounced findings reported from other countries may, however, be due to a less detailed differentiation of the material. If diagnostic groups are not kept apart, one will for instance find a higher correlation between low social status and prolongation of hospital stay, because of the correlation between schizophrenia and low social status.

In conclusion, this statistical study of the discharge pattern has failed to reveal any very serious shortcomings of this particular type of hospital statistics. In the study of mental disorders in relation to such social factors

as residence, marital condition or occupational status, the *relative* morbidity rates which can be calculated from such hospital material should, therefore, give a fairly undistorted picture of corresponding relations in true morbidity.

#### SUMMARY

For 16,000 first admissions to psychiatric hospitals in Norway, 1936–45, the pattern of discharge and re-admission has been studied, with regard to such factors as clinical diagnosis, outcome, age on admission, place of residence, marital status and occupation. Certain moderate but significant and apparently meaningful findings are reported, which seem to show that the chances of social rehabilitation may differ somewhat from one social group to another. These differentials are much more modest, however, than those reported from other countries.

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