SOCIAL TREATMENT OF CHRONIC SCHIZOPHRENIA: A COMPARATIVE SURVEY OF THREE MENTAL HOSPITALS

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ONE of the fundamental concerns of social psychiatrists is to determine whether social events can influence the onset and the course of a particular mental illness and, if so, in what ways. The problems involved are formidable. In schizophrenia, for example, it is necessary to have reliable means of measuring the manifestations and progress of the disease, as well as adequate methods for assessing social events. However, if these difficulties can be satisfactorily overcome, there is a way in which a preliminary experiment can be made.

During the past 10 years, many mental hospitals in the United Kingdom have been changing rapidly, but in some the process of advance has been taken considerably further than in others. If it is true that social routines and administrative procedures influence schizophrenic symptoms, it should be possible to demonstrate differences in clinical state in patients from hospitals which have widely varied social conditions. Consistent associations between measurements of clinical and social factors in three mental hospitals chosen because they were likely to have made different degrees of progress towards the goal of the "therapeutic community", would at least provide a justification for more detailed investigation. If marked differences in social treatment were found at the three hospitals, but the clinical condition of patients did not vary, the theory of social influence would appear much less likely. Clearly, the hospitals would have to be comparable in certain important respects—in particular, that the schizophrenic patients referred to them should be equivalent in severity of illness, and that they should accept all such patients.

The present paper presents some results from a comparative survey of three mental hospitals which was made with the object of investigating these matters.

THE THREE MENTAL HOSPITALS

Three mental hospitals were selected for study because they seemed to differ markedly in social conditions and administrative policies, and their staff were likely to co-operate actively and closely.

Hospital A was a former county mental hospital which for many years had enjoyed a high reputation for its treatment of long-stay patients. At the end of 1951 there were 2,010 in-patients, and at the end of 1959, 1,860. The physician-superintendent himself supervised the two villas which housed the most severely ill chronic schizophrenic patients. A consultant psychiatrist supervised the active rehabilitation programme throughout the hospital.

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Relatively less emphasis was placed on the admission hospital and on community services, although these were not backward. The hospital had a good all-round reputation but was particularly well known for its treatment of long-stay patients.

Hospital B was a former county borough mental hospital which was also well known for the quality of its in-patient treatment, but in contrast to Hospital A, the physician-superintendent devoted most of his time to the early treatment units and the community services. The long-stay wards were looked after by part-time general practitioners under the supervision of a consultant psychiatrist. At the end of 1951 there were 1,240 in-patients, and at the end of 1959, 940. The Superintendent specifically stated that he devoted most of his resources to community care and that his aim was to prevent patients from becoming long-stay by appropriate early treatment. Nevertheless, there were no locks on the doors of *any* of his wards and the hospital was internationally famous, like Hospital A, for its treatment of long-stay patients.

Hospital C was a former county mental hospital which had been passing through the period of change which came over many English mental hospitals during the post-war years. The process had been taken further in the male than in the female wards of the hospital. Throughout the institution, however, the features of the bad old mental hospital—padded rooms, side rooms used for seclusion, E.C.T., and sedation used instead of occupational therapy and skilled supervision to control disturbed behaviour—were disappearing, though a great deal remained to be done. A new physician-superintendent had begun work six weeks before the survey was made and had already introduced a number of changes. At the end of 1951 there were 1,720 in-patients, and at the end of 1959, 1,590.

Selection of Patients

The matron of each hospital was asked to supply a list of the names of all the female patients in the hospital together with age, length of stay, diagnosis and ward. A random sample was taken from each ward in Hospitals A and C of 120 female schizophrenics who had been resident more than two years and were aged under 60. Twenty of these acted as "spares". All the 73 women in Hospital B with these characteristics were selected. The diagnosis was checked from the case-notes and at interview with each patient. Four patients at Hospital A, none at Hospital B and one at Hospital C had to be replaced on diagnostic grounds. In addition a sample of case-notes at each hospital was checked to make sure that long-stay patients with other diagnoses were not in fact schizophrenic by the criteria used in this study—very few extra cases were discovered in this way and no change of procedure was necessary.

Measurement of Clinical and Social Variables

(a) *Classification of Mental State:* A five-part classification—based on ratings of flatness of affect, poverty of speech, incoherence of speech, and coherently expressed delusions, made during a standard interview—has been described in another article (Wing, 1961). The subgroups formed were:

I. Moderately ill:
- 1a No symptoms at interview.
- 1b Moderate disturbance on any symptom, but no severe disturbance.
- 1c Severe flatness of affect, but only moderate disturbance on other symptoms (a borderline category).

II. Severely ill with florid verbal symptoms:
2 Coherently expressed delusions predominant.
3 Severe incoherence of speech predominant.

III. Severely ill without florid verbal symptoms.
4 Severe poverty of speech predominant.
5 Mute or almost mute.

The main criterion for distinguishing between moderately ill and severely ill patients was whether verbal symptoms intruded into replies to standard neutral questions (i.e. not specifically concerned with the patients' illness) to such an extent that conversation was markedly impaired.

The subgroups are defined so that they are "mutually exclusive and jointly exhaustive". The reliability of the system has been ascertained and is satisfactory for the present purpose. Patients in the various subgroups show different ward behaviour, and significantly different mean outputs on a simple industrial task.

Patients in subgroup 1a, who show no symptoms during the standard interview, may, of course, show symptoms at other times. However, 100 chronic schizophrenic in-patients in a good mental hospital did not show much change in symptomatology, according to the scales used, over a period of 6 months.

(b) *Behaviour on Ward.* A simple 12-item behaviour rating scale was also developed which yields two scores:

1. Social Withdrawal score (S.W.), composed of ratings on 8 items—slowness, underactivity, disinterest, social withdrawal, lack of conversation, poor mealtime behaviour, poor personal appearance, and incontinence. (Range of scores, 0–16.)
2. Socially Embarrassing Behaviour score (S.E.), composed of ratings on 4 items—overactivity, laughing and talking to self, threats of violence, and mannerisms. (Range of scores, 0–8.)

The ratings were made by senior ward nurses on the basis of observation of a sample week of the patients' behaviour in the ward. The S.W. score is very reliable between nurses and over periods up to 3 months; the S.E. score is reliable as between most—but not all—pairs of nurses, and shows considerable variability over periods longer than a week or so. The items composing the S.W. score all suggest a decrease in motivation to behave in a socially acceptable way, while the S.E. items suggest a positive drive to act in a socially embarrassing manner. There is a small correlation between the two scores ($r=0\cdot19$–$0\cdot30$ in various samples).

(c) *Attitude to discharge* was rated on a 5-point scale on the basis of answers to standard questions:

Definitely wants to leave. Vaguely wants to leave. Ambivalent. Indifferent. Definitely wants to stay.

(d) *Ward Restrictiveness Scores.* The female wards in which more than one-fifth of the patients were schizophrenic, aged under 60, and had been resident more than two years, were selected for special study. Ward sisters (and often patients and other nurses) were asked about limitations on the movements of patients and about the extent of their everyday responsibilities. Forty brief scales representing different aspects of life in the ward were constructed. A total of 61 points indicated a maximum restrictiveness score—the minimum was 0 points. The following are examples of the kind of information rated:

(*i*) Time at which the ward was locked at night.

(*ii*) Whether patients could go to hospital entertainments without permission of the staff.

(*iii*) Whether patients were kept waiting at the meal table until all had finished (e.g. for grace).

(*iv*) Whether any were allowed to use the ward kitchen for minor tasks such as tea-making.

(*v*) Whether they had ready access to stored private clothing.

(e) *Time Budget.* The sister in charge of the ward was asked, in considerable detail, about the time spent by each patient in the sample in various activities on the last weekday before the interview. The aim was to cover the whole day to within a quarter of an hour. If necessary to supplement this information, the patient was also interviewed.

(f) *Personal Possessions of the Patient.* An inventory of the personal possessions of each patient (whether initially provided by the hospital, or privately) was obtained by interviewing the patient and the ward sister. Strict ownership was not required; continuous and sole use was considered to define personal possession. For example, if hospital underclothing was returned to the same patient each time after laundering, it was classed as personal property.

(g) *Nurses' Opinions about Patients.* Ward sisters and other nurses were asked standard questions about each of the patients in the sample in order to obtain two opinions about each patient's ability to cope with certain everyday activities and responsibilities.

(h) *Other Information.* A great deal of other information was gathered about hospital policies by a number of standardized and unstandardized techniques. This information will not be systematically presented here.

Results

1. Age, Length of Stay, and Occupation of Fathers

The composition of the three samples in respect of age and length of stay is set out in Tables I and II.

Table I

Hospitals by Age of Patients

Age (Years)	A	B	C
20–40	30	18	26
41–50	35	29	30
51–60	35	53	44
Total	100	100*	100

* Per cent. of 73.

Table II

Hospitals by Length of Stay of Patients

Length of Stay (Years)	A	B	C
2–10	42	29	30
11–20	38	33	40
21+	20	38	30
Total	100	100*	100

* Per cent. of 73.

The distributions are not significantly different at the three hospitals (for age, $\chi^2=6\cdot40$, df=4, p=>·10: for length of stay, $\chi^2=8\cdot62$, df=4, p=>·05). However, since Hospital B tends to have more patients in the 51–60 age group, and more in the over 21 years length-of-stay group, it will be necessary to allow for this in the subsequent analysis.

The occupation of the patients' fathers was classified according to the system of Hall and Jones (1950), and differences between the three hospitals are shown in Table III.

TABLE III

Hospitals by Occupation of Patients' Fathers

	A	B	C
Professional and Managerial	36	14	21
Lower Administrative and Clerical	8	8	16
Skilled Manual	21	16	16
Semi-skilled Manual	6	21	10
Unskilled Manual	10	18	22
Not known	19	23	15
Total	100	100*	100

* Per cent. of 73.

An effort was made to obtain this information by writing to the relatives of patients who could not give it themselves, but it was not available for 51 patients (19 per cent.). There was considerable variation between hospitals. ($\chi^2=29\cdot54$, df=8, p=<·001). In particular, the fathers of patients at Hospital A had more often been engaged in professional or managerial occupations compared with the other two hospitals.

2. Mental State, Ward Behaviour and Attitude to Discharge

(a) *Classification of Mental State*

Table IV shows that there were significant differences in the distribution of the clinical subgroups at the three hospitals ($\chi^2=25\cdot81$, df=8, p=<·01). There were fewer moderately ill patients in the sample from Hospital C (23 per cent. compared with 39 per cent. in Hospital B and 40 per cent. in Hospital A). On the other hand, there were 56 patients at Hospital C who showed severe flatness of affect or poverty of speech—subgroups 4 and 5—compared with 39 per cent. at Hospital B and 26 per cent. at Hospital A.

TABLE IV

Hospitals by Clinical Classification of Patients

Clinical Category	Hospital A		Hospital B		Hospital C	
Moderately ill:						
1a No symptoms	10		15		8	
1b Moderate symptoms	21	40	19	39	13	23
1c Borderline severe symptoms	9		5		2	
Severely ill:						
2. Coherent delusions	17		8		6	
3. Incoherence of speech	17		14		15	
4 Poverty of speech	20	26	25	39	32	56
5 Mute	6		14		24	
Total	100		100*		100	

* Per cent. of 73.

There was a significant association between clinical classification and length of stay in hospital ($\chi^2=21\cdot71$, df=8, p=<·01). In particular, relatively few patients in subgroups 1 and 2 had been in hospital 21 years or more, and relatively few patients in subgroup 5 had been in hospital for less than 10 years. Since there were fewer patients at Hospital A who had been in hospital 21 years or more, or who were aged 51–60, than at the other two hospitals, the age and length-of-stay distributions at Hospitals B and C were standardized to those of Hospital A. This reduced the numbers of patients at Hospital B in subgroups 4 and 5 to 32 per cent.—very little different to the proportion at Hospital A. At Hospital C, however, the deficiency of patients in subgroup 1 (26 per cent. when corrected) and the excess in subgroups 4 and 5 (51 per cent. when corrected) still remained.

Table V shows that there is no significant association between clinical classification and occupation of patients' fathers ($\chi^2=11\cdot92$, df=12, p=>·30). This held true for each of the hospitals taken separately, and also when the non-manual occupations were broken down further into professional, managerial, administrative, supervisory and clerical.

TABLE V

Clinical Classification by Occupation of Patient's Father

(Data for 3 hospitals combined)

	Non-manual	Skilled Manual	Semi-skilled Manual	Unskilled Manual
1	35	24	9	14
2	13	5	3	3
3	11	7	6	4
4	25	11	9	18
5	13	2	4	6
	97	49	31	45

(b) *Behaviour in Ward*

The mean S.W. scores for the samples of patients from Hospitals A, B and C were 2·9, 4·6 and 5·4, respectively (F=10·0, p=<·001). Thus patients at Hospital A showed least abnormality in this respect. The mean S.E. scores were 1·2, 2·3 and 1·3, respectively (F=9·8, p=<·001): that is, patients at Hospital B showed most disturbance on this scale.

A special check was necessary because 34 per cent. of patients in Hospital B, and 21 per cent. of patients in Hospital C, came from one large long-stay ward. If the two ward sisters concerned had been unduly severe in their ratings of ward behaviour, they could have biassed the comparison with Hospital A. Their ratings were therefore compared with ratings made by other ward sisters in the same hospital, and with the mental state ratings made independently by the investigator. There was no indication that a special bias was operating in either case.

Table VI shows mean S.W. and S.E. scores in three length-of-stay groups. Analysis of variance of S.W. scores disclosed significant differences between hospitals (F=10·8, p=<·001) and between length of-stay-groups (F=11·7, p=<·001). Subsequent t-tests showed that there was a significant increase in score with length of stay. Patients in Hospital C showed significantly higher mean scores than patients in Hospital A, however long they had been in hospital.

However, there was a gradation in mean score at Hospital B. Patients who had been resident 2–10 years were not significantly different from equivalent patients in Hospital A. Patients who had been resident more than 21 years were not significantly different from equivalent patients in Hospital C. The remaining patients, who had been in hospital 11–20 years, had a mean score which was intermediate between those of equivalent patients in Hospitals A and C.

There was no significant variation in S.E. score with length of stay in hospital.

TABLE VI

Mean S.W. and S.E. Scores by Hospitals and by Length of Stay of Patients

Length of Stay in Hospital	Mean S.W. Score				Mean S.E. Score			
	A	B	C	Total	A	B	C	Total
2–10 years ..	2·2	2·6	3·9	2·9	1·0	1·7	1·5	1·3
11–20 years ..	2·8	4·5	6·1	4·5	1·3	2·3	1·3	1·5
21+ years ..	4·6	6·3	5·9	5·7	1·4	2·6	1·2	1·8
Total	2·9	4·6	5·4	4·3	1·2	2·3	1·3	1·5

Mean S.W. and S.E. scores for patients whose fathers were in various occupational groups, are shown in Table VII. Combining equivalent groups from the three hospitals, there was significant variation in both scores (for S.W. scores, $F=3\cdot26$, $p=<\cdot05$; for S.E. scores, $F=4\cdot32$, $p=<\cdot01$). Subsequent t-tests showed that this was mainly due to the fact that patients whose fathers were skilled manual workers tended to have lower scores than other groups (this was also true of the three hospitals taken separately). There was no tendency for the prestige (according to the Hall Jones scale) of the father's occupation to be associated with the degree of disturbance of the patient's behaviour.

TABLE VII

Mean S.W. and S.E. Scores by Hospitals and Occupation of Patients' Fathers

Hall-Jones Occupational Category		Mean S.W. Score				Mean S.E. Score			
		A	B	C	Total	A	B	C	Total
1, 2, 3	Professional, managerial ..	3·1	3·0	5·3	3·7	1·1	1·3	1·1	1·1
4, 5	Lower supervisory and clerical	4·1	3·8	5·3	4·7	3·0	2·0	1·8	2·1
6	Skilled manual	1·7	2·7	3·4	2·5	0·8	1·7	0·8	1·1
7	Semi-skilled manual	3·5	5·1	6·5	5·3	1·3	2·7	2·2	2·3
8	Unskilled manual	2·6	4·0	5·5	4·5	0·4	2·1	1·4	1·4
–	Not known	3·4	7·5	6·9	5·7	1·4	3·3	1·1	1·7

(c) *Attitude to Discharge*

Fifty-four per cent. of patients in Hospital A, 66 per cent. in Hospital B and 70 per cent. in Hospital C were either indifferent about being discharged or actually wanted to stay ($\chi^2=5\cdot81$, p=just over 0·05). There was an association between clinical classification and attitude to discharge. If patients who were indifferent were omitted, 62 per cent. of moderately ill patients and patients with coherently expressed delusions (subgroups 1 and 2) had some desire to leave, compared with 49 per cent. of the remaining groups. Indifference was, of course, strongly related to poverty of speech and muteness. The relationship

between attitude to discharge and length of stay is shown in Table VIII, which also shows the detailed results for the three hospitals. There was a decrease in the proportion of those wishing to stay, the longer patients had been resident, in each of the three hospitals (combined $\chi^2=16{\cdot}9$, $p=<{\cdot}001$). When either clinical condition or length of stay was controlled, there was no difference between hospitals.

TABLE VIII

Attitudes to Discharge by Hospitals and Length of Stay

Attitude to Discharge	Length of Stay (Years)								
	2–10			11–20			21+		
	A	B	C	A	B	C	A	B	C
Some desire to leave	14	6	12	9	4	6	3	1	–
Ambivalent	11	4	3	7	6	4	2	4	5
Indifferent	7	6	9	10	4	23	8	14	13
Desire to stay	10	5	6	12	10	7	7	9	12
Total	42	21	30	38	24	40	20	28	30

3. SOCIAL AND ADMINISTRATIVE PROCEDURES

(a) *Ward Restrictiveness Scores*

Each patient in the three samples was given the score for his ward, and the sum of scores was divided by the number of patients in the sample. The mean scores are expressed as percentages of the possible total of 61. The average score for Hospital A was 27 (range 8–62, 8 wards studied). For Hospital B it was 40 (range 20–54, 5 wards studied), and for Hospital C, 66 (range 11–89, 8 wards studied). These mean scores represent the combined experience of the patients in the various samples.

Measures of amenities provided on these wards also showed large differences between the hospitals. For example, a count was made of all lockers (whatever their size), wardrobes, dressing tables and chests of drawers on each of the selected wards. In Hospital A there were 522 such articles of furniture for 378 patients in the 8 wards studied (1·4 per patient), in Hospital B 418 articles for 191 patients in 5 wards studied (2·9 each), and in Hospital C 113 articles for 500 patients in 8 wards (0·2 each).

(b) *Time Budget*

Table IX gives details of the average time spent, by patients in the three samples, on certain daily tasks. Hospitals A and B are fairly similar. Hospital C differs from them very markedly; in particular, patients spent a great deal of time in the ward (only 30 per cent. left the ward at all) and the time spent either doing "nothing" (5 hours 36 minutes) or at "toilet" or "meals" (3 hours 10 minutes) when in the ward is very long compared with the other two hospitals. An average of 67 per cent. of the patients' total time out of bed was accounted for under these two headings. (The patient was only regarded as doing "nothing" when there was no evidence that she was occupied in any way which could possibly be called constructive or leisure activity.) A high score (e.g. nine hours) would be recorded for a patient who remained inert the whole day on the same chair she occupied at breakfast; a lower score (e.g. four hours) by one who did some ward work during the day but after tea sat in a chair until bedtime, neither talking, knitting, reading nor watching television, etc. In case of any doubt, judgment was given against a recording of "nothing".

TABLE IX

Time Budget of Typical Weekday

	A		B		C	
	hours	mins	hours	mins	hours	mins
On Ward:						
Leisure activities	2	04	1	03	1	22
Ward work or occupational therapy	1	19	1	17	1	45
Toilet or meals	2	38	2	48	3	10
Nothing	2	40	2	40	5	36
	8	41	7	48	11	53
Off Ward:						
Occupational therapy or leisure ..	0	41	1	16	0	20
Work	3	32	2	50	0	47
Nothing	0	08	0	35	0	03
	4	21	4	41	1	10
Total time out of bed	13	02	12	29	13	03

Hospitals A and B differed in two important ways. Firstly, at Hospital B considerably less time was spent in leisure activities (particularly watching television, though this was available on all wards). The explanation appears to be a much earlier bedtime—7.38 p.m. compared with 8.30 p.m. at A and 8.13 p.m. at C. Secondly, somewhat fewer patients in Sample B worked for at least three hours per day. "Work" was defined as occupation in the grounds, or in hospital departments, special industrial work or outside employment, and excluded ordinary occupational therapy.

(c) *Personal Possessions*

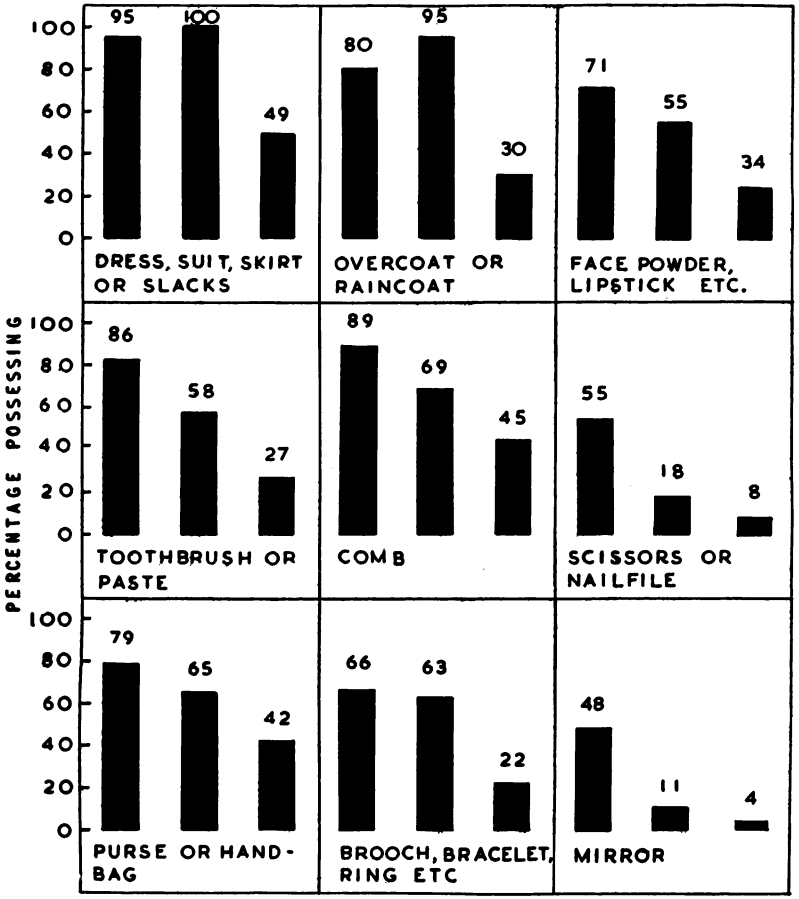
The main differences appeared between Hospital C and the other two. For example, 33 patients in Hospital C had *no* personal possessions at all (44 if items of clothing are not considered), whereas none at Hospital B and only one at Hospital A were without any effects at all.

Some detailed results are presented in Figure 1. While patients at Hospitals A and B possessed comparable amounts of clothing, Hospital B occupied a more intermediate position when other articles were considered. In figures for possession of a comb or brush, for instance, B (69 per cent.) occupied an intermediate position between A and C (89 and 45 per cent.), while the numbers owning scissors or a nail file at A (55 per cent.) far exceeded those at either B or C (18 and 8 per cent.).

(d) *Nurses' Opinions about Patients*

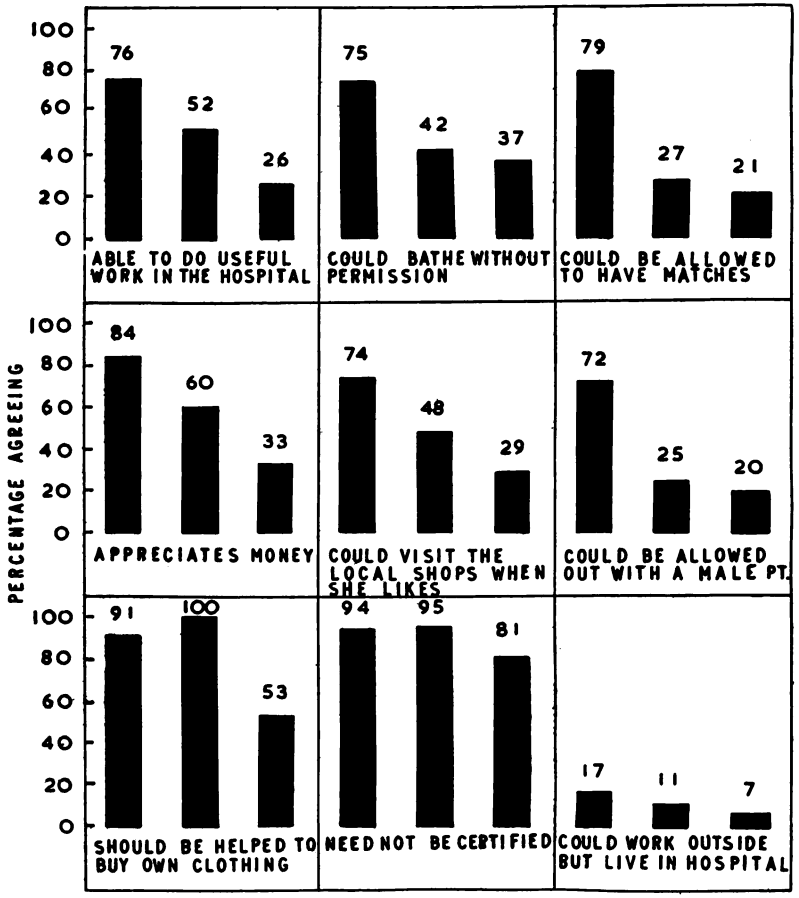
Ward sisters at Hospital A were more optimistic in their opinions about the patients than those at either B or C (see Fig. 2). Nurses at Hospital B tended to be intermediate or to approach those at Hospital C very closely. For example, 76 per cent. of patients in Sample A were thought capable of doing useful work (laundry, domestic work, etc.) for the hospital compared with 52 per cent. at Hospital B and only 26 per cent. at Hospital C. There was a high degree of agreement between nurses at all three hospitals on only two questions. Few patients were considered to need certification, and few were thought to be fit enough to work outside the hospital while living in.

FIGURE 1 - PERSONAL POSSESSIONS (SUPPLIED PRIVATELY OR BY THE HOSPITAL) OF LONGSTAY FEMALE SCHIZOPHRENIC PATIENTS



IN EACH CELL THE BLOCKS REPRESENT HOSPITALS A, B AND C IN

FIGURE 2 - WARD SISTERS OPINIONS ABOUT LONGSTAY FEMALE SCHIZOPHRENIC PATIENTS



IN EACH CELL THE BLOCKS REPRESENT HOSPITALS A B AND C IN

There was a high level of agreement between the opinions of ward sisters and nurses when discussing the same patients.

(e) *Drug Treatment*

One other item of information which was systematically collected for all patients in the samples will be considered here. The ward sisters were asked to say what drug treatment the patients had been receiving during the previous week. The detailed results are presented in Table X.

TABLE X

Drugs Prescribed for Chronic Schizophrenic Patients in the Three Hospitals

		Hospital					
		A		B		C	
Number in sample		100		73		100	
Number receiving any day-time drug		63		62		70	
Drug Received	Size of "Unit"	N	Total Daily "Units"	N	Total Daily "Units"	N	Total Daily "Units"
Chlorpromazine	100 mg.	23	44	33	76	44	94
Reserpine	1 mg.	13	47	18	57	–	–
Fentazine	4 mg.	–	–	7	22	4	14
Prochlorperazine	25 mg.	8	16	14	36	2	9
Trifluoperazine	10 mg.	24	42	1	1	7	8
Unnamed compound	50 mg.	–	–	–	–	10	20
Total "Units"		–	149	– (For 100 patients)	192 (262)	–	145
Sodium amytal (by day)		5	20gr.	16	109gr.	8	60gr.
Phenobarbitone (by day)		3	5gr.	2	3gr.	3	9gr.
Sodium amytal (at night)		12	61gr.	6	24gr.	12	42gr.

More patients at Hospital B were receiving major tranquillizers or sedatives, by day, than at the other two hospitals. In order to provide a direct comparison, doses of the major tranquillizers were translated into arbitrary units, roughly equivalent to 100 mg. of chlorpromazine. A total of 149 units daily was prescribed for the 100 patients at Hospital A, 192 units for the 73 patients at Hospital B (i.e. 262 for 100 patients), and 145 units for the 100 patients at Hospital C. Sodium amytal was also prescribed in larger quantities, by day, at Hospital B than at the other two hospitals.

COMPARISON OF MATCHED PATIENTS

Twenty patients at each hospital were selected (without knowledge of their scores on these social measures) because they were equivalent in clinical grouping, S.W. score, S.E. score, age, length of stay in hospital and attitude towards discharge. The clinical condition of these patients was considerably above the average for the complete samples. Differences between hospitals, in terms of social measurements, were reduced when only these 20 patients were considered, but for the great majority of items tested large differences still remained between Hospital C and the other two. There was, for example,

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little difference between the numbers leaving the ward for any reason in Hospitals A and B (85 and 80 per cent. respectively), but in Hospital C only 45 per cent. had done so. Differences between Hospitals A and B tended to be much reduced, but on some items they were still significant. These included certain attitudes of the nursing staff, for example, towards possession of matches, bathing alone, and going out with a male patient, in all of which staff at Hospital B were more doubtful.

Summary of Differences Between Hospitals

There were differences between the hospitals in respect of the age, length of stay, and social class composition of the samples of long-stay schizophrenic patients studied. When these were allowed for, there was little difference in the clinical classification of the samples from Hospitals A and B, but Hospital C contained significantly fewer moderately ill patients. Twenty-four per cent. of the patients in Hospital C were mute at interview, but only 6 per cent. at Hospital A. Ward behaviour was significantly more characterized by social withdrawal in Hospitals B and C than in Hospital A. Patients in Hospital B, according to the S.W. scores, behaved like those from Hospital A before they had been in hospital ten years, and like those from Hospital C in the longer-stay groups. S.E. scores on the other hand were highest at Hospital B. Attitudes to discharge also varied significantly between hospitals, mainly due to a relationship with clinical condition and length of stay.

In general, the sample from Hospital A showed least disturbance in verbal behaviour at interview, and in ward behaviour, while the sample from Hospital C showed most. Patients in Hospital B were in some respects like the former, in some respects like the latter.

Social differences between hospitals were evident both in matters of central importance in everyday life, and in small details. For example, there was a 50 per cent. difference between Hospitals A and C in the proportion of the sample leaving the ward during the day and a 60 per cent. difference in the proportion of patients possessing a toothbrush. Hospital B, on the whole, approximated to Hospital A, but also showed certain similarities with Hospital C. In matters of obvious importance, such as the amount of time spent off the ward, the opportunities for constructive work, the provision of respectable personal clothing, the amount of locker space, etc., Hospital B was more or less equivalent to Hospital A. But in more intimate, and perhaps less obvious, details, the patients in Hospital B were not so well off as those in Hospital A. Fewer patients, for example, possessed scissors or a mirror, and fewer baths were "screened" from onlookers. Patients went to bed on average nearly one hour before those at Hospital A and leisure activities were more restricted. These differences were further reflected in the opinions of the nursing staff. Ward sisters at Hospital B thought that *all* patients should be helped to buy clothing (91 per cent. did at A) but that only 27 per cent. could be trusted with matches (79 per cent. at A).

Discussion

The results given above show a consistent pattern in the three hospitals studied. Patients in the sample of female long-stay schizophrenics from Hospital A tend to show least disturbance in verbal behaviour at interview, and least disturbance of social behaviour in the ward (assessed by S.W. score), while patients in the sample from Hospital C tend to show most disturbance on these

two variables. Hospital B patients are intermediate in both respects, though when age and length of stay are allowed for, they approximate more closely to patients in Hospital A so far as verbal behaviour at interview is concerned. The difference in ward behaviour between Hospital A and Hospital B patients is confined to those who have been resident over ten years: in this very long-stay group, ward behaviour (S.W. score) is closer to that in Hospital C. S.E. scores are significantly higher at Hospital B than at the other two hospitals, particularly in the longer-stay groups. No interpretation of this finding can be offered at this stage of the analysis.

The same pattern that is evident in the measurements of mental state and socially withdrawn behaviour is also clearly recognizable in the social data. Hospitals A and C are markedly different in nearly every detail—ward restrictiveness, time budget, personal possessions and nurses' opinions—while Hospital B on some measurements shows similarity to Hospital A, and on others to Hospital C.

This report has presented only the barest minimum of information—all of the descriptive details which can give substance to this brief formulation have been omitted, as have many systematic observations. In addition, no attempt has been made, at this stage, to analyse the interactions between the clinical and social measurements. However, the major problem of interpretation can be stated immediately. Are the different social conditions under which the patients live responsible for the differences in their clinical condition in the three hospitals, or are there different processes of selection which ensure that more clinically disturbed patients accumulate in one hospital than in another? If the latter process is operating, the high proportion of severely-ill patients might determine the social and administrative policies of the hospital rather than the other way round. In fact, the extent to which treatment procedures had to be adapted to clinically disturbed patients might lead to generalization of these procedures to cover even moderately ill patients. This would account for the fact that differences between the hospitals in respect of personal possessions, ward routines and nurses' opinions persist even within clinical categories, and when age and length of stay have been allowed for.

It might be objected that a patient who was offered the choice of admission to a chronic ward in one of these hospitals would consider this a somewhat academic argument. There is little doubt on the evidence that, though she might hesitate between Hospital A and Hospital B, she would reject Hospital C at once. However, the point at issue is not which hospital provides most comfort for its chronic schizophrenic patients, or which a discriminating patient would most like to live in. The question is—Do the differences in social atmosphere indicate that one hospital will have a beneficial, while another has a harmful, effect on the mental health of its inmates (irrespective of whether they like it there or not)? The answer to this question should not be taken for granted because it seems obvious on humanitarian grounds.

The data collected in the present "cross-sectional" survey are not very well suited to answering questions of this kind. However, a number of checks may be made, and two kinds of "longitudinal" data can be gathered which may help to provide an answer. The two alternatives may be taken separately—Does the environment influence the patients, or do the patients create their own environment? In the latter case, it should be possible to demonstrate some kind of selective process at work, above all in Hospital C, to account for the high proportion of clinically disturbed patients there. Two possibilities suggest themselves. The social class structure of the three communities is very different

and possibly a different type of patient is being admitted to Hospital C. This argument cannot be carried very far since Hospital B admits from an area which is similar in social composition and, in any case, clinical classification and ward behaviour are not related to the occupation of the patients' fathers. The case notes of all schizophrenic patients entering Hospitals A and C have been studied and rated, and no evidence was found that the latter hospital admitted more severely ill patients. Another possibility is that there is a relatively high early discharge rate in Hospital C, so that the severely ill patients, with a bad prognosis, who remain and accumulate in the hospital, would form a high proportion of all patients who had been resident for more than two years. Alternatively, there might be a specially high number of discharges of moderately ill chronic patients from Hospital C, with the same result. The latter suggestion has been checked and it is found that Hospital A has had by far the highest annual discharge rate of chronic schizophrenic patients during the past 10 years. Studies have also been made of cohorts of admissions of female schizophrenic patients to the hospitals in 1951 and 1956. The statistical analysis is not yet complete but there appears to be no evidence that Hospital C has had a higher early discharge rate than the other two hospitals.

If anything, therefore, these results seem to point in the opposite direction. But even if there had been a specially high early discharge rate at Hospital C, which distinguished it from the other hospitals, it is not clear that this would necessarily mean an accumulation of a large proportion of severely ill patients. Hospital B had the lowest proportion of patients retained for two years, of the three hospitals, but 39 per cent. of the long-stay schizophrenics were moderately ill. Thus, not only severely ill patients are retained (and, probably, not only moderately ill patients are discharged).

There is a further method of checking the selection hypothesis. If the survey can be repeated in Hospitals B and C, after the lapse of a suitable period of time, using the same individuals, selective factors will be held constant. Any changes that have taken place in clinical condition would therefore be attributable either to the lapse of time alone or to the introduction of changes in social conditions or in physical treatment. It can very fairly be assumed that time alone, up to now, has not seen very marked changes in the clinical condition of these chronic patients (unless it has been for the worse). Most of them were already receiving adequate doses of the new tranquillizing drugs and no major development in this direction has taken place. A definite test of the general hypothesis is therefore possible, and the necessary further work is being undertaken.

Whatever the outcome of these studies, it is already quite clear that there are major social differences between mental hospitals, and that at least one specific group of in-patients also varies markedly in type and severity of illness. It is not necessary to wait for general agreement on a theory to account for the causes of these differences before appreciating their administrative significance.

Summary

The clinical condition of samples of chronic female schizophrenic patients in three mental hospitals was assessed by means of standard interviews, and rating scales completed by ward sisters. Information on the restrictiveness of the ward routine, the way the patient's day was organized, her personal possessions, and the nurses' opinions of her, was also systematically gathered. After due allowance had been made for differences in distribution of age,

length of stay, and social class (occupation of father), marked differences still remained between the groups. A consistent pattern emerged. At Hospital A, where the main emphasis of care was on the long-stay patient, there was least clinical disturbance and most personal freedom, useful occupation, and optimism among the nursing staff. At Hospital C, where reform had not progressed so far, there was most clinical disturbance among patients and least personal freedom, useful occupation and optimism. Hospital B was intermediate in most respects. Alternative explanations are considered and it is concluded that there is good preliminary evidence that social conditions in a mental hospital do influence the mental state of schizophrenic patients. It will be necessary to show an improvement in patients in Hospital C, as the social regime there changes, in order to confirm these results.

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