

EXPERIENCES OF DISCHARGED CHRONIC SCHIZOPHRENIC PATIENTS IN VARIOUS TYPES OF LIVING GROUP

GEORGE W. BROWN¹

I. INTRODUCTION

THIS paper is based on a study of the outcome of 240 male chronic mental hospital patients from seven hospitals, which together provide 15,000 of the 37,000 mental hospital beds in the London area. For the purpose of this inquiry chronic patients were defined as those who were discharged from hospital after a continuous stay of at least two years: readmissions were included. The period of two years was chosen because once a patient has remained continuously in a mental hospital for two years his chances of discharge are relatively small: in England and Wales they range from approximately 1 in 12 in the third year of stay, to 1 in 100 after ten years, and 1 in 200 after thirty years (1, cf. tables M22 and M29). About 80 per cent of the current population of mental hospitals are formed by such chronic patients (1, 2, 3). The major aims of the investigation were (1) to provide systematic data on what happened to such patients once discharged by all methods, including escape, and (2) to make a preliminary evaluation of the influence of social factors on outcome.

Other criteria for inclusion in the series were (1) age on discharge 20–65 years; (2) born in the British Isles; (3) discharged to an address in the Greater London area.

Information about the patient's outcome was obtained through interviews, in their homes, with key persons who had intimate knowledge of the patient during the first year of discharge, and also, if possible, with persons who knew his pre-admission history. Such key persons, typically mothers, wives, sisters, and landladies, and sometimes the patients themselves,

¹Medical Research Council, Social Psychiatry Research Unit, Institute of Psychiatry, Maudsley Hospital, London, S.E.5.

were located for 229 of the 240 cases (95 per cent), and with the help of data from the case notes, standard interview schedules covering some 160 items were completed; the interview was not formalized but the interviewers used a check list to ensure all items had been covered.

This paper will be concerned with patients who were diagnosed by the hospitals as schizophrenic; interviews were completed for 156² of these 164 patients (95 per cent). For the initial analysis "success" was arbitrarily defined as staying out of mental hospital for one year or more, and "failure" as return to hospital within the year. Since information was obtained over a time range from the second year to the seventh year after the key discharge, and note made of any relapse during the period, it was possible, by taking account of the differing periods at risk, to compute that 74 per cent of the schizophrenics who would have relapsed in a six year risk period did so within the first year.

An additional criterion of outcome was obtained by rating the level of social adjustment of all those patients who had not been readmitted to hospital during the year after discharge. This rating was in terms of a four-point scale (to be described in Part III below) based on the patient's employment history, social interaction, and need for supervision. The present analysis will deal with differences of outcome in relation to certain clinical features and more particularly in relation to the types of living group to which patients returned.

II. SOME CLINICAL CHARACTERISTICS OF THE PATIENTS

1. *Duration of Stay.* Table 1 shows that frequencies for duration of key admission were about equally distributed in the periods 2 years, 3-5 years and over 5 years. Duration of key admission shows no relationship to "failure" rates (total duration of hospital admissions shows similar results). However, patients whose total stay was less than ten years showed signifi-

² 155 patients have been included in the following analysis since the "living group" to which one patient returned was not typical (a Mental After Care Association Hostel).

YEARS IN HOSPITAL	TOTAL	NUMBER "FAILURES"	PERCENTAGE "FAILURES"
2	49	14	29
3	27	11	41
4-5	26	7	27
6-9	24	8	33
10-30	29	9	31
TOTAL	155	49	32

Table 1. "Failures" among discharged patients classified by duration of stay in hospital.

cantly lower social adjustment scores than those with over ten years' stay ($p < .05$).³

2. *Previous Admissions.* 31 per cent of the schizophrenics were first admissions. Table 2 shows that their "failure" rates were similar to those of the rest of the patients (as also were their social adjustment scores). The small number (27) who had three or more admissions had significantly higher "failure" rates compared with the rest at discharge ($p < .01$).

3. *Age.* Table 3 shows the distributions of age of the patients. The age range was from 20-65 with a mean age of 39.4 years, $\sigma = 10.4$ years. The means of the "success" and "failure" groups differ by only 1.1 years ($p > .10$), the slight tendency being for older patients to have more "successes." There is a more definite trend for older patients to have higher social adjustment scores but this does not reach significance ($p > .10$, 3 d.f.).

Table 2. "Failures" among discharged patients by number of previous admissions.

PREVIOUS ADMISSIONS	TOTAL	NUMBER "FAILURES"	PERCENTAGE "FAILURES"
None	49	15	31
1	40	12	30
2	39	7	18
3 or More	27	15	56
TOTAL	155	49	32

³ χ^2 tests have usually been employed: the criterion of statistical significance in this paper will be the .05 level.

AGE AT DISCHARGE	TOTAL	NUMBER "FAILURES"	PERCENTAGE "FAILURES"
20-24	10	4	40
25-29	22	8	36
30-34	27	10	37
35-39	26	6	23
40-44	25	9	36
45-49	19	5	26
50-54	11	5	45
55-59	10	1}	13
60-65	5	1}	
ALL AGES	155	49	32

Table 3. "Failures" by age at discharge.

The above three variables are not independent. When these are considered together, the resulting numbers are small, but no results emerge to contradict these findings.

III. LIVING GROUPS TO WHICH PATIENTS WENT

A living group was defined as the one in which the patient lived for the major part of his first year of discharge; groups were classified into the following five types. All ratings were made at the time of interview.

1. *Hostels* (13 patients). Patients in this category lived almost exclusively in Working Men's Hostels or Salvation Army Shelters, whose populations usually include a large number of "down and outs." It is possible to live in these hostels, which are usually large, with hardly any personal relationships. Peculiar behavior, such as talking aloud, is common and tends to pass unnoticed. The hostels by present standards are very cheap, enabling a man to sleep there for as little as 18s. per week.

2. *Lodgings* (18 patients). This category implies a commercial transaction with a landlord. In a few cases there was a personal relationship with a landlady, the patient living as "one of the family," but most frequently patients would have little contact with others in the house, typically eating out.

LIVING GROUP	TOTAL	NUMBER "FAILURES"	PERCENTAGE "FAILURES"
Hostel	13	7	54
Marital	14	7	50
Parental	86	31	36
Sibling	24	4	17
Lodgings	18	0	0
TOTAL	155	49	32

Table 4. "Failures" by type of living group in which patient resided after discharge.

3. *Parental* (86 patients). This group includes one or both parents, and sometimes other siblings were present, but the parent was the financial head of the household.

4. *Sibling* (24 patients). 21 patients returned to siblings, usually a sister; 3 patients returned to more distant kin but have been included in this category. In two instances a parent was present, but there was no doubt that it was the siblings' household, the parents being old and infirm and no longer the financial head of the household.

5. *Marital* (14 patients). This included all patients who returned to live with their wives. Several of the wives lived alone. The others lived with their children. In one case the patient's parents were also present.

"Failure" Rates. Table 4 gives the number of "failures" occurring in the five types of living group. Percentage of "failures" is high in *hostel*, *parental* and *marital* groups, and low for patients in *sibling* and in *lodgings*, the overall differences being significant ($p < .01$, 4 d.f.). The difference between the *parental* and combined *sibling/lodgings* group⁴ is large with 36 and 10 per cent of "failures" respectively.

Social Adjustment Scores. A scale of social adjustment was applied to all patients who remained out for one year ("suc-

⁴ This combination of *sibling* and *lodgings* is used frequently in the following presentation in instances in which there is no significant difference of outcome in these two groups; it enables statistical comparisons to be made with the larger *parental* group. However, later discussion argues that this combination has a more substantial basis than mere expediency.

LIVING GROUP	NUMBER WITH SPECIFIED SCORE					PER CENT WITH SPECIFIED SCORE				
	Total	0	1	2	3	Total	0	1	2	3
Hostel	6	1	1	1	3	101	17	17	17	50
Marital	7	1	2	2	2	101	14	29	29	29
Parental	55	12	15	10	18	100	22	27	18	33
Sibling or Lodgings	38	2	6	14	16	100	5	16	37	42
TOTAL	106	16	24	27	39	100	15	23	25	37

Table 5. Social adjustment scores for "successes" among discharged patients by type of living group.

cesses") scored on their behavior at the end of the year. The scale was arrived at by giving a score of 1 or 0 in three areas of behavior. A point was awarded for full-time work for at least five of the last six months of the first year. Lack of need for supervision, particularly with regard to sleeping habits, toilet, dressing, eating, and spending money, was given a point. Finally those having "satisfactory" interpersonal relationships were given a point—a rating of "unsatisfactory" was only given when there were major discrepancies from the norm, such as violence or threats prompted by paranoid ideas, or extreme withdrawal from social contacts.

Table 5 shows that patients in *parental* groups earn significantly lower social adjustment scores compared with those in *sibling* and *lodgings* groups ($p < .05$, 3 d.f.).

It is possible that the less favorable outcome of patients returning to *parental*, *marital* and *hostel* living groups is due to the relatively worse clinical state of these patients at discharge. On the other hand, it may be due, at least in part, to interaction between the patient and his social environment after discharge: if he had returned to a different kind of living group he might have remained out longer and reached a higher level of social adjustment. The following sections will attempt to elucidate the two relationships shown in Tables 4 and 5, keeping these possible alternative explanations in mind: first by comparison *between* types of living group, and then by analysis *within* them.

IV. COMPARISON BETWEEN LIVING GROUPS

This section reports some of the 150 stratifications carried out on the cross tabulations between type of living group and the outcome criteria (Tables 4 and 5), using third test factors that may be influencing these original relationships. The method (which has been most fully described by Kendall and Lazarsfeld (4), and Hyman (5)) involves examination of the resulting subgroups for evidence of influence of the test factor on the original relationship. Interpretation of results depends on where the test factor is conceived in time in relation to the two original items. Usually those *antecedent* in time are employed to control for likely spurious results; while the general purpose of using test factors *intervening* in time between the two original items is to isolate factors that may help interpret the original results.

The first three test factors used in this section give an indication of the patients' clinical state at discharge and thus help to control the possible effect of a biased distribution of patients of different clinical levels into the several types of living group.

1. *Hospitals' Psychiatric Rating at Discharge.* The mental hospitals assess each patient at discharge as either: "recovered," "relieved," or "not improved." These categories are quite highly related to "failure" rates ($C = .33, p < .001, 2 \text{ d.f.}$).⁵

Examination of Table 6 shows that there is only a slight and nonsignificant trend for *parental* to receive patients rated clinically worse than the combined *sibling/lodgings* group ($p > .10, 2 \text{ d.f.}$). *Hostels* receive a relatively larger number of worse cases but the categories of patients going to *marital* and *sibling/lodgings* groups are exactly comparable.

If only those patients in the "relieved" category are considered, the difference in percentage of "failures" between *parental* and the *sibling/lodgings* group clearly remains ($p < .05, 1 \text{ d.f.}$): the differences are in the same direction for patients in the "recovered" and "not improved" categories but numbers are

⁵Uncorrected coefficients of contingency derived from χ^2 results are used. The maximum size for a 2×2 relationship is .707 and 3×3 is .816.

LIVING GROUP	TOTAL	DISCHARGE CATEGORY			TOTAL	DISCHARGE CATEGORY		
		Recovered	Relieved	Not Improved		Recovered	Relieved	Not Improved
		NUMBER OF PATIENTS				PER CENT OF TOTAL		
Hostel	13	0	7	6	100	0	54	46
Marital	14	3	9	2	100	21	64	14
Parental	86	10	57	19	100	12	66	22
Sibling or Lodgings	42	9	27	6	100	21	64	14
TOTAL	155	22	100	33	100	14	65	21
		NUMBER OF "FAILURES"				PERCENTAGE "FAILURES" IN DISCHARGE CATEGORY		
Hostel	7	0	3	4	54	—	43	67
Marital	7	0	5	2	50	0	56	100
Parental	31	2	17	12	36	20	30	63
Sibling or Lodgings	4	0	2	2	10	0	7	33
TOTAL	49	2	27	20	32	9	27	61

Table 6. Hospital discharge category for patients in different living groups and "failures" by discharge category and living group.

too small for firm conclusions. "Failure" rates in the *marital* group also remain high. Differences in psychiatric state at discharge in so far as they are reflected in the hospitals' ratings evidently do not account for the results shown in Table 4.

2. *Method of Discharge.* This item has been rated from in-

Table 7. "Failures" by method of discharge for each type of living group.

LIVING GROUP	ON ADVICE			AGAINST ADVICE		
	Total	Number "Failures"	Percentage "Failures"	Total	Number "Failures"	Percentage "Failures"
Hostel	6	2	33	6	4	67
Marital	10	3	30	4	4	100
Parental	58	16	28	28	15	54
Sibling/Lodgings	32	2	6	9	1	11
TOTAL¹	106	23	22	47	24	51

¹ Two patients, both "failures," could not be rated by method of discharge. One was in the hostel group and one in the sibling group.

formation given in the hospital case notes; when there was doubt, information on this point was sought at the interview itself. 47 patients (including the 15 who escaped) left hospital "against advice." The categories "on" and "against advice" are related to "failure" rates ($C = .29, p < .01, 1 \text{ d.f.}$).

Table 7 shows that differences between *parental* and *sibling/lodgings* groups in percentage of "failures" remain in both discharge categories, being significant in the larger "on advice" category ($p < .01, 1 \text{ d.f.}$), but just below significance in the smaller "against advice" category ($p = .057$). The percentage of "failures" in the *marital* group also remains high in both categories. This suggests that differences in method of discharge do not explain the results shown in Table 4.

Another stratification showed that the *parental* and *sibling/lodgings* groups have approximately the same proportions of patients in the "relieved" category who were discharged "against advice" and "on advice"; and that the different percentages of "failures" persist in both these categories within the "relieved" group.

3. *Leaves in Last Year.* 66 per cent of patients had leave in their last year in hospital but the relationship with "failure" rates is not significant ($p > .10, 1 \text{ d.f.}$). 78 per cent of those going to kin groups had leave, the relative frequencies in the three types of kin group being almost identical.

The different percentages of "failures" of the *parental* and *sibling/lodgings* groups persist in both "leave" and "no leave" categories—the difference in the former is significant ($p < .01, 1 \text{ d.f.}$) and in the latter just fails to reach significance. A high percentage of "failures" also remains in the *marital* group.

Of the patients who had leave, only 1 out of 24 who went to live with *siblings*, as compared with 28 out of 76 who went to stay with their parents, relapsed within a year.

These three results suggest that, although there was some selection of clinically worse patients into *parental* compared with the *sibling/lodgings* groups, the different percentage of "failures" could not be explained by this. Although numbers

	HOSTEL	MARITAL	PARENTAL	SIBLING	LODGINGS
Mean	39.2	40.6	33.7	43.9	49.4
Standard Deviation	7.4	6.4	7.6	8.9	8.4
Range	25-54	30-65	20-49	20-65	30-65

Table 8. Mean age of patients by type of living group.

are small, a similar conclusion would seem to apply to the high "failure" rate of the *marital* group.

4. *Age.* Though there is no obvious relationship between age and "failure" rates (cf. Table 4), there are differences in age distribution of patients in the various types of living group.

Table 8 shows that patients who go to live with their parents have, as one would expect, a younger mean age than the rest. This could introduce some form of bias, but the evidence summarized below argues against this, though it cannot be ruled out.

a. Table 9 shows that patients' age at discharge is not related to the hospitals' discharge categories of "recovered," "relieved," and "not improved."

b. Within the various types of living group percentage of "failures" is not related to patients' ages.

c. Patients returning to *marital* and *lodgings* groups are of similar mean age and contain similar proportions of the three discharge categories but have markedly different percentages of "failures."

d. Matching between living groups is hampered by the small

Table 9. Hospital discharge category by age of patient at discharge.

AGE GROUP	TOTAL	NUMBER IN DISCHARGE CATEGORY			TOTAL	PER CENT IN DISCHARGE CATEGORY		
		Recovered	Relieved	Not Improved		Recovered	Relieved	Not Improved
20-29	32	4	22	6	100	12	70	18
30-39	53	8	33	12	100	15	62	23
40-49	44	3	32	9	100	7	73	20
50-65	26	7	13	6	100	27	50	23
TOTAL	155	22	100	33	100	14	65	21

overlap in patients' age ranges in *parental* and other groups. Considering only patients in the "relieved" category in the age range 35-54, where there is clear overlap, the different percentages of "failures" remain between *parental/marital* and *sibling/lodgings* groups ($p < .05$). However, this comparison involves only 51 per cent of the "relieved" patients in these living groups.

Similar analysis was carried out with the following six items, none of which was found to invalidate the association of outcome with living group: 5. Duration of key admission and all admissions. 6. Previous admissions. 7. Years since onset of illness. 8. Whether violent or not before admission. 9. Rating of last job before admission. 10. Highest level of social responsibility reached.

It is henceforward assumed that the differential "failure" rates in the various types of living group are not entirely explained by clinical bias. We are now interested in test factors that help us to interpret these differences.

11. *Ratings of Behavior at the End of the First Year of Discharge or at Readmission.* In the course of the interviews informants were asked questions about ten specific aspects of the patients' behavior in the first year, and any other abnormalities of behavior were noted. The ten aspects were: outbursts of temper, violence, expression of strange ideas, talking aloud to himself, unusual or absent emotional response, abnormal sexual behavior, ability to look after personal toilet and money, and three items concerned with the amount of social contact. An index of disturbance of behavior was obtained from the number of positive items. It should be remembered that the data were collected in the second to seventh year after discharge and referred to behavior at the end of the first year or before any re-admission in this period.

A further threefold rating of behavior made by the interviewer was designed to do justice to extreme disturbance in only a few of the items or minimal disturbance in a number of them. Patients who showed only minor peculiarities were rated as "*nearly normal*": for example, a patient showing queer man-

nerisms and slightly developed delusions. Patients with evident peculiarities which did not or presumably would not have prevented the patient moving around in society were rated as "moderately disturbed": for example, a patient with hallucinations, paranoid ideas, bad temper, and a tendency to act on delusions, such as frequent quitting of jobs in response to them. Patients showing more severe peculiarities, such as could be quoted in ordering certification, were rated "severely disturbed": for example, a patient who was regressed, rarely spoke coherently, mumbled and sang and walked with a peculiar gait, was often deliberately incontinent, shouted out at night, and showed many schizophrenic mannerisms. The interviewers checked each other's ratings regularly in order to achieve rating reliability. The rating of any difficult case was discussed; disagreements were infrequent, and were resolved by accepting the majority opinion.

The relationship of this threefold rating of behavior to "failure" rates is high ($C = .47$, $p < .001$, 2 d.f.). It has to be remembered, however, that these ratings were retrospective and that they may have been influenced by the interviewer's knowledge of the patient's outcome.

Table 10 shows that there are more "severely disturbed" and "moderately disturbed" patients in *hostel*, *marital* and *parental* than in the combined *sibling/lodgings* group (for *parental* and *sibling/lodgings* $p < .05$, 1 d.f.). There is a significantly higher proportion of "severely disturbed" patients in *parental* (32 per cent) as compared with *sibling/lodgings* groups (9 per cent). If only those patients who were recorded as "relieved" at discharge are considered, there is still a significant trend for more patients to be rated as "moderately" or "severely disturbed" in *parental* and *marital* than in the combined *sibling/lodgings* group ($p < .02$, 2 d.f.). The following observations suggest that the more disturbed behavior shown by patients going to *parental* and *marital* groups can be partly attributed to deterioration in behavior during the year after discharge:

- a. Such deterioration in behavior was explicitly reported

LIVING GROUP	TOTAL	RATING			TOTAL	RATING		
		Nearly Normal	Moderately Disturbed	Severely Disturbed		Nearly Normal	Moderately Disturbed	Severely Disturbed
	NUMBER OF PATIENTS				PER CENT OF TOTAL			
Hostel	13	5	6	2	100	38	46	15
Marital	14	2	4	8	100	14	29	57
Parental	86	30	29	27	100	35	34	31
Sibling or Lodgings	42	23	15	4	100	55	36	10
TOTAL	155	60	54	41	100	39	35	26
	NUMBER OF "FAILURES"				PERCENTAGE "FAILURES" IN RATING CATEGORY			
Hostel	7	0	5	2	54	0	83	100
Marital	7	0	2	5	50	0	50	63
Parental	31	1	10	20	36	3	34	74
Sibling or Lodgings	4	1	1	2	10	4	7	50
TOTAL	49	2	18	29	32	3	33	71

Table 10. Rating of psychiatric disturbance in first year after discharge for patients in different living groups and "failures" by rating and living group.

more often in *parental* than in all other groups. ($p < .05$, 1 d.f.), although these particular retrospective reports must be very cautiously interpreted.

b. Outbursts of temper in the year after discharge, reported for 53 per cent of patients, and violence, reported for 24 per cent, were significantly related to higher percentages of "failures." These disturbances occurred more frequently in *parental* and *marital* than in the combined *sibling/lodgings* group. Table 11 shows that, even for the patients discharged "relieved," violence was more frequent in the combined *parental* and *marital* groups than in the *sibling/lodgings* group—the difference is significant ($p < .05$, 1 d.f.).

c. "Pathological emotional response," "strange ideas," and "talking aloud," occurring in 51 per cent, 52 per cent and 36 per cent of the patients respectively, were also significantly related to higher "failure" rates. But for patients classified as "relieved" these traits did not occur significantly more frequently in *marital/parental* than *sibling/lodgings* groups: indeed, the re-

corded incidence of delusions was 43 and 42 per cent respectively in these combined groups.

This evidence suggests that, although equal numbers of patients in all living groups show some continuing psychiatric symptoms, grossly anti-social behavior tends to be shown more often by patients who are living with their parents or their wives.

Table 10 shows that even within the "moderately disturbed" category "failure" rates are higher for *parental* than the *sibling/lodgings* groups ($p = .039$). Similar trends were obtained when patients were subdivided in respect of the quantitative "index of disturbance" and also by the measures of violence, outbursts of temper, pathological emotional response, strange ideas, and talking aloud to self. The results suggest that the differences in "failure" rates may be partly related to social factors such as differences in level of tolerance and in the amount of social contact made by patients within the living groups.

In case the "moderately disturbed" category might cover a large range, all cases in it were checked by an independent rater using a four point scale. This rater was given complete accounts of a patient's behavior, but no information about social background or "success" or "failure." The distribution of rating scores was almost identical in *parental*, *marital* and the combined *sibling/lodgings* living groups, suggesting that in our

Table 11. Reported violence in living groups for patients classified by hospital discharge category.

LIVING GROUP	ALL PATIENTS			RECOVERED			RELIEVED			NOT IMPROVED		
	Total	Violent		Total	Violent		Total	Violent		Total	Violent	
		No.	Per Cent		No.	Per Cent		No.	Per Cent		No.	Per Cent
Parental-Marital ^a	94	27	29	13	2	15	62	17	27	19	8	42
Sibling-Lodgings ^b	39	4	10	9	1	11	25	2	8	5	1	20
TOTAL	133	31	23	22	3	14	87	19	22	24	9	38

^a Violence not classifiable for 6 patients: 4 relieved and 2 not improved.

^b Violence not classifiable for 3 patients: 2 relieved and 1 not improved.

LIVING GROUP	MONTHS OF WORK IN FIRST YEAR				MONTHS OF WORK IN FIRST YEAR			
	Total	Less Than 1 Mo. or None	1-5 Mos.	6-12 Mos.	Total	Less Than 1 Mo. or None	1-5 Mos.	6-12 Mos.
	NUMBER OF PATIENTS				PER CENT OF TOTAL IN SPECIFIED WORK GROUP			
Hostel	13	5	4	4	100	38	31	31
Marital	14	6	2	6	100	43	14	43
Parental	86	47	13	26	100	55	15	30
Sibling	24	9	3	12	100	38	13	50
Lodgings	18	2	0	16	100	17	0	83
TOTAL	155	69	22	64	100	45	14	41
	NUMBER OF "FAILURES"				PERCENTAGE "FAILURES" IN SPECIFIED WORK GROUP			
Hostel	7	4	2	1	54	80	50	25
Marital	7	5	1	1	50	83	50	17
Parental	31	26	5	0	36	55	38	0
Sibling	4	4	0	0	17	44	0	0
Lodgings	0	0	—	0	0	0	—	0
TOTAL	49	39	8	2	32	57	36	3

Table 12. Amount of time spent at work during the first year of discharge for patients in different living groups and "failures" by months of work and living group.

category "moderately disturbed" various degrees of disturbance were equally distributed in each of these living groups.

12. *Work History.* Table 12 shows the amount of time spent at work during the first year of discharge. 14 per cent of the population worked for 1 to 5 months, and 41 per cent worked over 6 months—most of these approaching 12 months' work. There is a very high relationship between employment and "failure" rates. Of the 22 who worked for 1 to 5 months, 9 "failed," and of the 64 who worked for over 6 months only 1 patient "failed."

There are many more unemployed in *parental* than in the combined *sibling/lodgings* group (55 per cent and 26 per cent respectively— $p < .01$, 1 d.f.). There is a higher "failure" rate for those unemployed in *marital* and *hostel* than in *parental* groups.

Many of the "successes" who worked for 6 to 12 months still showed some residual symptoms—sufficiently marked in a third of these cases to earn them the rating "moderately disturbed." This suggests that work history and behavioral ratings are to some extent independent. In some instances the patient's work record may be a more important factor in his "success" or "failure" than the presence or absence of psychotic symptoms.

Other stratifications were carried out for the following items: 13. Whether the chief pressure for patient's discharge came from the patient, his family, or the hospital. 14. Type of residence in terms of physical separation from neighbors. 15. Economic level of household. 16. Number of persons. 17. Sex ratio

Table 13. Social adjustment scores for "successes" by hospital discharge category and living group.

DISCHARGE CATEGORY AND LIVING GROUP	NUMBER WITH SPECIFIED SCORE			PER CENT WITH SPECIFIED SCORE		
	Total	3 + 2	1 + 0	Total	3 + 2	1 + 0
Total "Successes"	106	66	40	100	62	38
Hostel	6	4	2	100	67	33
Marital	7	4	3	100	57	43
Parental	55	28	27	100	51	49
Sib.-Lodgings	38	30	8	100	79	21
Recovered—Total	20	15	5	100	75	25
Hostel	—	—	—	—	—	—
Marital	3	1	2	100	33	67
Parental	8	5	3	100	63	37
Sib.-Lodgings	9	9	—	100	100	—
Relieved—Total	73	48	25	100	66	34
Hostel	4	3	1	100	75	25
Marital	4	3	1	100	75	25
Parental	40	22	18	100	55	45
Sib.-Lodgings	25	20	5	100	80	20
Not Improved—Total	13	3	10	100	23	77
Hostel	2	1	1	100	50	50
Marital	—	—	—	—	—	—
Parental	7	1	6	100	14	86
Sib.-Lodgings	4	1	3	100	25	75

of household. 18. Age of key persons. 19. Incapacitating illness in key persons. 20. Social class.

None of these was shown to affect the results except that all "middle class" kin groups tended to have high "failure" rates. Among the 15 patients who went to *siblings* in the "working class," there was only 1 "failure": in the "middle class" group there were 6 "successes" and 3 "failures." However, because of the small number in the "middle class" category these results can only be suggestive.

21. *Social Adjustment.* The superior social adjustment scores of "successful" patients in the *sibling/lodgings* group compared with the *parental* group were shown in Table 5. Table 13 shows that this difference persists when only those patients in the "discharged relieved" category are considered ($< .05$, 1 d.f.). It persists also when patients are subdivided as those who left hospital "on advice" or "against advice."

The results suggest that patients in the *parental* category tend to fail to reach standards of social adjustment achieved by patients in other groups.

22. *Changes in Living Groups on Leaving Hospital.* The domestic arrangements of patients in the year before the key admission were compared with those to which they returned. A change of living group was highly related to "success."

Table 14 shows that patients discharged "relieved" who changed living groups had a significantly lower percentage of

Table 14. "Failures" among patients who did and who did not return to their preadmission living group by hospital discharge categories.

CHANGE IN LIVING GROUP	ALL PATIENTS			RECOVERED			RELIEVED			NOT IMPROVED		
	Total	Failures		Total	Failures		Total	Failures		Total	Failures	
		No.	Per Cent		No.	Per Cent		No.	Per Cent		No.	Per Cent
Change	38	6	16	6	0	0	22	2	9	10	4	40
No Change	116	43	37	16	2	13	77	25	32	23	16	69
TOTAL ¹	154	49	32	22	2	9	99	27	27	33	20	61

¹ Change not known for 1 patient.

“failures” ($p < .02$, 1 d.f.). This was true also for both those who had left hospital “on advice” and those who had left “against advice.”

14 of the 22 patients in the “relieved” category who changed living groups came from *marital* and *parental* groups and all 14 “succeeded.” The other 8 came from *army* (4-S), *hostel* (1-S), *other kin* (1-F) and *lodgings* (1-S, 1-F).

Those who had been violent before admission and who changed their living group had a smaller proportion of “failures” (4 out of 19) than those who had been violent and had not changed (21 out of 44) ($p < .05$, 1 d.f.); the same proportions occur when the “relieved” group only is considered ($p = .032$).

Patients who changed their living group also had slightly higher social adjustment scores but the differences did not reach statistical significance. ($p > .10$, 3 d.f.).

V. COMPARISON WITHIN TYPES OF LIVING GROUP

In studying complex interpersonal relationships we have relied on interview ratings amplified by descriptive accounts. These were informative, especially when, as was the case in rather less than half the interviews, the patient and key informant were seen together. Inevitably, in cases where the patient had returned to hospital several years before, there was a risk of distortion in the informant’s account of what had taken place.

Parental Group (86 patients). All but 3 of the 86 schizophrenic patients returning to *parental* groups had a mother to receive them: in 55 per cent both parents were at home. In 19 per cent the mother lived alone with the patient, but in 51 per cent other relatives (usually one or more sibs of the patient) were also present. Analysis failed to reveal any statistical relationship of significance between patient’s outcome and the composition of the parental household.

If “working” was defined as being employed for more than half of the first year for “successes,” and more than half their

discharge period for "failures," then 3 of the 29 thus "working" and 28 of the 58 "not working" were found to have been readmitted within the year. There was thus a low "failure" rate in the working group but also a large proportion of "successes" among those not working. The threefold rating of behavior at the end of the first year or on readmission showed that the non-working group were more disturbed than the working group. This was so even when those rated as "not improved" at discharge were excluded.

The results and interviews suggested that continuous close contact between a patient and relative was sometimes a strain to both and might contribute to the different percentage of "failures" of the working and non-working patients.

In Table 15 patients who lived with their mothers are divided into two categories according to whether mother or patient left the house to work (*interrupted* personal contact) or both remained at home unemployed (*continuous* personal contact).

The percentage of "failures" in these categories were 16 and 55 per cent respectively. Even omitting those patients who worked (who were found to be slightly less disturbed), the differences remained between the categories showing *continuous* and *interrupted* personal contact ($p < .05$, 1 d.f.).

It might be supposed that the more disturbed the patient, the greater the tendency for his mother not to work. However, the "mother-working/patient-not-working" group did not contain

Table 15. "Failures" and amount of social contact as measured by mothers' and patients' work history, for discharged patients living with mothers.

PATIENTS' WORK HISTORY	TOTAL			MOTHER WORKING			MOTHER NON-WORKING		
	Total	"Failures"		Total	"Failures"		Total	"Failures"	
		No.	Per Cent		No.	Per Cent		No.	Per Cent
Working	29	3	10	9	2	22	20	1	5
Non-working	55	26	47	15	4	27	40*	22*	55*
TOTAL	84	29	35	24	6	25	60	23	38

* Denotes the continuous contact category.

significantly more patients rated as "recovered" and "relieved" at discharge than that in which neither the patient nor his mother were employed. Nor were the 22 "failures" in the "continuous contact" category given worse ratings at discharge than the 18 "successes" in the same category. This suggests that continuous personal contact in the home may be associated with deterioration in the patient's behavior or lessening of the mother's tolerance.

Seven broad subgroups could be identified among these patients.

1. "*Success*"—*Very Disturbed* (5 patients). Great devotion by some member of the household was found in this group, sometimes with indications of pathological relationships as in the case of one patient who was largely under the care of a schizophrenic father.

2. "*Success*"—*Disturbed* (4 patients). All these patients showed very dependent relationships. It is doubtful if any could have worked.

3. "*Success*"—*Lesser Disturbance—No Work—Dependent* (14 patients). This was the main group in non-working "successes." In most of these cases there was evidence of great devotion by the mother and child-like dependency on the part of the patient. Many of these patients were judged to be probably capable of some work, but there was no indication of pressure for them to make the effort.

4. "*Success*"—*Lesser Disturbance—No Work—Independence* (6 patients). There were 6 patients among the "successes" who, though not working, seemed to have less dependent relationships with family members, who were more or less content to leave them alone.

5. "*Success*"—*Work* (26 patients). Many of these patients had residual psychotic symptoms, sometimes quite marked. On the whole they seemed to be relatively free from the extreme over-protectiveness noted in the non-working group—only 9 out of the 26 definitely had such relationships. In many families our notes clearly stated that the patient tended to keep apart.

6. "*Failures*"—*Very Disturbed* (8 patients). According to the descriptions given by our informants, 8 of the "failures" were

very disturbed at discharge, and caused considerable disruption at home. They were all rated "not improved" at discharge.

7. "Failures"—Not "Very Disturbed" (22 patients). The 22 other "failures" were more difficult to characterize. There was evidence that many deteriorated after discharge. Hostile relationships with the parents were reported far more frequently, and over-protective relationships less frequently than the "successes" living with parents.

In *parental* groups there was, therefore, evidence from those who "succeeded" that at least half entered child-like relationships of dependence; this was found especially among those not employed. The impression gained at interviews was that many of these patients could have worked, if only under sheltered conditions.

Marital (14 patients, of whom 7 "failed," 7 "succeeded"). Five of the wives lived alone: the rest lived with children of various ages. There were 22 children in all involved, the family size varying from 1 to 7, and the children's ages from 5 years to 23 years. 6 children were 20 or over, and 7 were 10 or less. There was no significant relationship between family composition and "failure" rates.

In this category 6 of the 7 "successes" were employed and 6 of the 7 "failures" were not. 8 of the 14 patients had definite delusions centered on their wives. Although deluded and violent, they could put on a good front to outsiders. There also seemed a greater pressure to work. Only in one patient was there anything approaching a child-like dependence on his wife; there were 7 children in this family with ages ranging from 17 to 6. There were two examples of what seemed complete recovery, one of the patients having been in hospital 17 years. However, one is most aware in this small series of the terrible suffering a schizophrenic patient may bring to relatives. Indeed, two of the most disturbed patients in the whole sample lived with wives: both worked and "succeeded." In several instances only the fact of *interrupted* social contact seemed to have made life bearable for the wife.

Sibling (24 patients, of whom 4 "failed," 20 "succeeded"). 8 of the siblings lived alone with the patient: in 5 instances there was more than one sibling, and 9 siblings were married. In 4 the main sibling was a brother.

Most of the "successes" worked and in none was there *continuous* contact within the home. There was only one definite example of a child-like relationship with a sibling and there is evidence that, although many had quite marked or residual symptoms, the delusions were not directed within the living group. Compared with *parental* and *marital* groups the relationships impress one as being much less intense.

None of the 4 "failures" in this group were employed. Two were very ill at discharge and rated "not improved" by the hospital. The third was not obviously ill but was sent back at once by his sister who did not want him. The fourth deteriorated and was sent back by his brother-in-law after eleven months.

Lodgings (18 patients, of whom none "failed"). All 18 of the patients in this group "succeeded." They had, on the whole, high social adjustment scores, only 3 dropping more than one point. 2 patients did not work during the first year: one of these was supported by his family, and the other had a pension.

The overwhelming impression gained from this group is one of social isolation. Only 4 patients showed evidence of mixing socially in the place of residence, and only 4 showed evidence of personal relationships of any intensity with relatives or acquaintances.

11 of these patients showed evidence of at least slight delusional systems—mostly of a paranoid nature.

Hostel (13 patients, of whom 7 "failed," 6 "succeeded"). This small group of 13 patients is considerably more heterogeneous in nature than any other group. 4 of the 6 "successes" worked—the other two were on public assistance. 4 of the 7 "failures" were returned by the police. In two cases there was evidence of severe drunkenness. Two at least appear to have been seriously ill at discharge. It is possible that the hostels'

low expectations with regard to their inmates' behavior and financial condition are factors in these results; but the patients' clinical state was probably a major factor. Relatively more patients rated "not improved" on discharge were found in hostels than in any other living group (67 per cent—*cf.* Table 6).

VI. DISCUSSION

The original finding that the outcome of chronic schizophrenic patients after leaving hospital, whether measured in terms of success in staying out of hospital for one year, or of level of social adjustment at the end of the year, was significantly associated with the type of living group to which they went has been subjected to further analysis. This has suggested that the differences in outcome were not due simply to the acceptance of clinically worse patients into *parental* and *marital* living groups.

The differential "failure" rates imply that it may not always be beneficial for such schizophrenic patients to return to the close emotional ties of *parental* and *marital* groups. A definite tendency towards seclusion and lack of close personal ties was noted in many patients living with *siblings*, and more especially in patients living in *lodgings*. However, it must remain at present speculative whether, in high "failure" rate living groups, actual deterioration in behavior could be attributed to post-hospital experiences. The following pieces of evidence were suggestive of this. Reported outburst of temper and violence occurred relatively more frequently with wives and parents but the incidence of other psychotic symptoms such as delusions was comparable in all living groups. Continuous interpersonal contact of the patient all day with the mother was related to higher "failure" rates. This may have been due to tendencies toward greater deterioration in behavior or toward decreased tolerance of members of the household in such circumstances. There were lower "failure" rates in patients changing their living groups on discharge from hospital, perhaps related to their not returning to previously stressful environments.

There was evidence that the degree and kind of behavior disorder could not solely explain the differences in "failure" rates. Differences in tolerance were suggested as a partial cause.

It has been appreciated by psychiatrists that it may not always be in the schizophrenic patient's best interests for him to be returned to his family; and two recent ecological studies dealing with admissions to mental hospital have actually argued in favor of the "beneficial" aspects of social isolation. Gerard and Houston, in a study of family setting and residential stability of 305 male schizophrenics admitted to the State Hospital from the city of Worcester, Massachusetts (6), advanced the hypothesis that a "mode of protection from disturbing close relationships for the single or divorced schizophrenic is the avoidance of meaningful communications or relationships through residential instability." Hare in similar studies (7, 8) in Bristol, England, put forward a similar hypothesis. Such hypotheses are consistent with our finding that no relapses occurred during the first year after discharge among those patients who went to live in lodgings, although these studies supply no direct evidence of the beneficial effects of such a life for schizophrenics.

The second major finding concerning the relatively low social adjustment scores of patients returning to parents has received tentative support from somewhat similar studies carried out by Simmons and his colleagues in Boston which were received after our analysis was complete (9, 10). These studies confirm that schizophrenics can remain out of hospital when they are actively psychotic and socially withdrawn. The main study (10) involved 182 cases of non-organic psychotic patients who had been in mental hospital over 45 days. Only *parental* and *marital* groups were analyzed. In this, as in the previous pilot study (9), "failure" rates were much the same in both types of group but it was shown that among the "successes" patients living with their wives showed a higher level of social adjustment than did patients living with their parents. They emphasized the child-like role that patients tended to assume in *parental* groups.

Although numbers in the *marital* category of our study are

small, they clearly support these findings. Unfortunately the Boston study includes no evidence on patients returning to *lodgings* and *sibling* groups. Our data suggest that higher social expectations, especially in the area of employment, in *sibling*, *lodgings* and *marital* groups stimulate "successful" patients to higher levels of achievement than if they had returned to the often lower expectations of *parental* groups. Freeman and Simmons have the same thought: "return of a patient to the parental family, where there is less likely to be an expectation of instrumental performance, may well occasion regression from, rather than movement toward, better functioning, and eliminate any gains of a therapeutic hospital experience" (10).

The possibility has been examined that the different incidence of employment in the various types of living group might simply reflect differences in the clinical state of the patients concerned. However, both the evidence reported and observations of the domestic situation at interviews suggest that ability to work is to some extent independent of clinical state; and also that work itself may play a therapeutic role.

There are three relevant questions which this study did not directly tackle. Firstly, whether or not a patient had alternative living groups to which he might go, and, secondly, whether he exercised choice in selecting from a number of possible alternatives. For example, it is very probable that while parents are alive unmarried patients will generally return to them. If, however, the parents are dead or the patients choose to go elsewhere, their choice of domicile is potentially wide and their ultimate destination will be influenced by the declared readiness or unwillingness of some of these alternative hosts to accept them. Such a mutual selective procedure might lead to greater chance of interpersonal adjustment. This leads to the third question. It is possible that the outcome might be the result of interactions between the personalities of the patient and his host which change in character during the year following discharge.

The major aim of this study was to provide an account of the

experiences of discharged chronic patients. Such an aim was incompatible with the direct control of such possible biasing factors as age and clinical state at discharge for patients returning to different settings. Examination of the three questions just listed and of hypotheses arising from this study can only be dealt with by the adequate control of such factors in a planned study—preferably carried out from the time of the patient's discharge.

SUMMARY

1. A follow-up enquiry was carried out for 156 schizophrenic patients discharged after more than two years' stay in mental hospital.

2. 68 per cent of the schizophrenic patients succeeded in remaining out of hospital for at least one year after discharge.

3. Ability to remain out of hospital and level of social adjustment were related to the type of living group to which the patients went: patients staying with siblings and in lodgings did better than those staying with parents, with wives and in large hostels.

4. The data available regarding severity of illness at time of discharge from the hospital suggest that the results were not attributable to more severe clinical conditions in those who went to live with parents or wife than in those who went to siblings or lodgings.

5. The influence of social factors on the behavior of patients is discussed.

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