PILOT EXPERIMENT IN THE REHABILITATION OF LONG-HOSPITALIZED MALE SCHIZOPHRENIC PATIENTS

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A national register of disabled persons and facilities for their industrial rehabilitation and resettlement in suitable work were set up after the passing of the Disabled Persons (Employment) Act of 1944. A description of the methods employed in the Industrial Rehabilitation Units and an evaluation of how they were carrying out their functions were included in the Piercy Report (1956). Until recently these units have not taken any very large proportion of schizophrenic patients. The Ministry of Labour (1958) has published the follow-up figures relating to the total entry to all Units during 1956 (9,608 persons). 19 per cent. terminated the course prematurely and were not followed up. The rest were sent a letter inquiring how they were getting on 6 months after discharge from the unit. 10.5 per cent. did not reply to this letter, 21.9 per cent. said they were unemployed or sick, and the remaining 48.6 per cent. said they were employed or training. The diagnosis of schizophrenia was not singled out for separate mention, but similar figures are available for the category of "functional psychosis" (403 persons). This includes affective and schizoaffective psychosis, and acute, as well as chronic, schizophrenia. 27.3 per cent. terminated the course prematurely, 14.1 per cent. did not reply to the follow-up letter, 23.1 per cent. said they were unemployed or sick, and 35.3 per cent. said they were employed or training. It is difficult to predict from these figures what the results would be with schizophrenic patients alone. At one unit, where there has been rather more experience of the problem because of the proximity of several mental hospitals, 46 per cent. of the 22 ex-schizophrenic patients (acute and chronic) admitted during 1956 were employed 6 months after discharge (unpublished data), which is equivalent to the national average. Chronic, long-hospitalized patients represent a still further selection, no doubt because of factors of personality and

social background as well as of illness, so that results are very difficult to predict. There is a dearth of properly conducted follow-up studies which would give an indication of the employment prospects of such patients who are discharged without going to Industrial Rehabilitation Units in spite of the fact that the fashion nowadays is to discharge as many of them as possible. Brown, Carstairs, and Topping (1958), in their study of patients discharged after at least 2 years in a mental hospital, found that 41 per cent. worked for 6 months or more during the year of follow-up. They also noted that 97 per cent. of these employed patients remained out of hospital for at least one year (their criterion of success), while of the 43 per cent. who were never employed only 46 per cent. were successful in remaining out of hospital.

Although it seems likely that the Industrial Rehabilitation Unit results with chronic schizophrenic patients are not as good as average, they are not too discouraging when it is remembered that this is a comparatively new field and that principles for selection and treatment have not been fully worked out. There is no published literature on the subject, apart from a paper by Maxwell Jones (1956) which was mainly introductory and statistical. He showed that the arrangements for patients to attend Units while living in hospital were working satisfactorily and with reasonably good results, and he recommended their extension.

From a survey made of four Birmingham mental hospitals, it appears that a large majority of patients require only routine supervision and that their main therapeutic need is for adequate occupation. At least 12 per cent. are in hospital for purely social reasons (Garratt, Lowe, and McKeown, 1957; Cross, Harrington, and Mayer-Gross, 1957).

This paper is concerned with a small pilot experiment designed to evaluate the effect of a course of

rehabilitation at an Industrial Rehabilitation Unit on long-hospitalized male schizophrenics, compared with an equivalent period of time spent in hospital. The hospital concerned is located in Epsom, Surrey, and is 25 miles from its catchment area, the East End of London. It is a fairly characteristic hospital of the London area, and its schizophrenic patients are probably typical of those in any mental hospital.

METHOD

The Physician Superintendent was asked to supply a list of male schizophrenic patients, aged 25 to 45, who had been in hospital for more than 2 years, who were occupied without close supervision, and who might be willing to attend an Industrial Rehabilitation Unit. These patients (33 in all) were interviewed, the diagnosis was confirmed, and tentative inquiries were made to find out which men would like to take advantage of a course of industrial rehabilitation if the opportunity were offered. Three who declined were excluded; the remaining thirty took part in the experiment.

Since no specification was made as to any other form of supervision, nor as to mental state, there was a wide range of severity of illness. A psychiatrist unconnected with the project was asked to see all the patients and to assess the mental state of each one in the following way. Four categories of symptoms were distinguished—flatness or incongruity of affect; speech disorder; delusions; and hallucinations—each of which could be rated on a 5-point scale according to its prominence during the interview. If no symptom was present, a rating of 1 was made. Minimal symptoms were rated 2, moderate symptoms 3, severe and very severe symptoms 4 or 5. On the basis of these ratings the patients were divided into one group of fifteen patients with severe symptoms (a rating of 4 or 5) in one or more categories, and a second group rating 1 to 3. From these two groups patients were allocated at random to an experimental group of twenty patients or to a control group of ten patients. At this stage two patients had to be rejected from the experimental group—one because he escaped from hospital and was thereafter placed under strict supervision; the other because he was placed on physical treatment and had to miss the course. These patients were replaced by two others fulfilling the original criteria and equivalent in mental status. None of the moderately ill patients had been severely ill (according to their case records) during the previous 3 months.

At this initial stage the two groups were not significantly dissimilar in respect of age (means

34.2 and 37.1, range 25–44 and 27–44 years), length of stay in hospital (means 4.8 and 5.4, range 2–20 and 2–11 years), highest previous occupation (about half of each group had been unskilled manual workers), or legal status (about two-thirds of the patients in each group were certified).

Each patient was then rated by the investigator on his attitude towards leaving hospital and his plans for the future (see Tables IV and V for details of these ratings and the composition of the experimental and control groups in respect of them). No patient said he wished to stay in hospital, presumably because of the conditions of selection.

Finally ratings were made of the social behaviour shown by the patients on the wards. The charge nurses were asked to observe the patients' behaviour during the course of a week and then to complete a schedule of fourteen items, each of which could be rated as present in marked degree (+2), present in moderate degree (+1) or absent (0). Six items (social withdrawal, lack of conversation, lack of interest or curiosity, slovenliness of dress, slowness of movement, underactivity) were related together, and formed a subscale of "Social Withdrawal". The other eight items (suspicion, excessive self-assertion, overactivity, irritability, hostility, gesticulations, talking to self, laughing to self) were related together, and formed a subscale of "Socially Embarrassing Behaviour". In preliminary work it was shown that the two subscores were not significantly related together ($r = +0.19$ and -0.08 in two samples), and that after four independent sets of ratings, the mean r for "Social Withdrawal" was $+0.85$, and for "Socially Embarrassing Behaviour" $+0.72$. Further details about this schedule are presented elsewhere (Wing, 1959; 1960a). It is considered that the two subscores measure different aspects of behaviour and that each is reproducible. There were no significant initial differences between the experimental and control groups (see Tables II and III) for either score.

ADMINISTRATIVE PROCEDURE

The patients were admitted to the Industrial Rehabilitation Unit a few at a time in order to keep the maximum proportion at the Unit at any one time below 10 per cent. (the total capacity was 100 persons). Since over half of them were certified, and some doubts were felt concerning their good behaviour, they travelled to and from the hospital by hired bus accompanied by a nurse. This procedure had definite disadvantages, as it made it plain from

the outset that these patients were in some way exceptional. In addition, no test was possible of their individual time-keeping, though this was later arranged for certain of them. However, the patients themselves preferred the arrangement to "going in a gaggle on a public bus in the charge of a nurse", as one of them put it. No special arrangements for supervision were made at the Unit. This is in any case fairly close. It was made clear that the patients were attending voluntarily and could terminate the course any time they wished. The patients received the usual money given to all Unit entrants, but this was paid directly to the hospital and deductions for board and lodging were made before the remainder (about £1 weekly) was paid to the patient. This arrangement, while it was suitable for the severely-ill patients, did not give the others as much freedom from restriction as might have been thought desirable to counteract "institutional" attitudes.

Once at the Unit the patients were treated in exactly the same way as the other entrants. The course lasted an average of 8 weeks. Each patient was assessed individually by the Unit staff and assigned work in one or more of the Unit workshops. Towards the end of the course certain patients were sent to their local employment exchanges which had already received detailed instructions as to their employment capabilities. Other patients were recommended for training in some trade, others for return to hospital. At the end of the course the original scheme of rating (mental state, behaviour, and attitude) was repeated. The patients were then followed up, by social-worker visits, letters, and the employment exchanges, for at least one year. The ten patients in the control group remained in hospital and were treated exactly as they would have been if they had not been included in the experiment. They were re-rated after a period of 10 weeks and followed up for a year.

RESULTS

(1) FOLLOW-UP RESULTS

The follow-up status, 12 months after the second rating, of the thirty patients in the experiment, is shown in Table I.

Six of the ten moderately-ill patients who attended the Industrial Rehabilitation Unit were out of hospital one year later and had been self-supporting for at least 6 months. One had completed a refresher course in tailoring and had found a job in the trade. One had completed a probationary period with Remploy Ltd. (learning to make orthopaedic boots) and had given full satisfaction. The other four had been placed into simple manual jobs with little responsibility attached. Only one of the patients was living at home, but four had relatives or friends who were able to give some help. Another patient had completed a training course in plumbing—he had been discharged from hospital (though rather unwilling to leave) and was attending as an out-patient. He had not yet found work. Another patient had completed a course in bench-fitting and was working well from hospital. He was completely self-supporting but, because of a doubt about his capacity for keeping himself clean and reasonably tidy, he had not been discharged. Two patients were in hospital and not employed outside. One had left hospital (against advice) during a bus strike, had been unable to continue his course at the Unit from his hostel, and after a short period was re-admitted elsewhere. The other, although he did fairly well in a lowly capacity at the Unit decided firmly that he neither wanted to leave hospital nor to work outside. He had first been taken ill when 16 years old and had been continuously in hospital from the age of 21 to the time of the experiment—over 20 years. Although he could have done some manual work, it was thought that he would never acquire the confidence to leave the hospital, and he wanted to end his days there. He

TABLE I
FOLLOW UP STATUS, 12 MONTHS AFTER SECOND RATING*

Group	Severity of Illness	No. in Group	Discharged from Hospital		Still Resident in Hospital	
			Self supporting	Not Employed	Self supporting	Not Employed
Experimental ..	Moderately Ill	10	6	1	1	2
	Severely Ill	10	—	1	—	9
Control	Moderately Ill	5	—	1	—	4
	Severely Ill	5	—	—	—	5

* In this and subsequent Tables the "Second Rating" refers to the examination made after the completion of the Industrial Rehabilitation Course for the Experimental group, and at a similar interval, about 10 weeks after the First Rating, for the Control group.

resisted the modest pressure which was put upon him and it was not felt justifiable to persuade him further.

Four of the five moderately-ill patients in the control group were still in hospital one year after the second rating. The fifth, a 27-year-old man who had been destined for a solicitor, returned home after 9 months but has not so far found work. He needs vocational guidance and would be a good subject for the Industrial Rehabilitation Unit. One moderately-ill patient discharged himself from hospital during the experiment (possibly as a result of the interviews). He failed to find work, however, and was soon re-admitted. The superiority of the experimental over the control group is thus clearly evident so far as the moderately-ill patients are concerned.

The ten severely-ill patients who went to the Industrial Rehabilitation Unit did not fare very well. At follow-up only one was living outside hospital. He was a 35-year-old man with marked incoherence of speech who had improved very considerably at the Unit and had been recommended for sheltered work from hospital. Such work could not be found, but he left hospital and at follow-up was supported by his wife; although she realizes that he is not capable of open employment and he is not otherwise a liability, this is not a satisfactory arrangement. Another severely-ill patient was returned to hospital without completing his course because of marked socially embarrassing behaviour. He improved on Prochlorperazine and was later discharged, but could follow no regular employment, and shortly afterwards had to be re-admitted. Another patient was discharged from hospital and worked as an electrician's mate for 3 months before relapsing. He was re-admitted to the local hospital and is still there. One other patient, although remaining severely deluded, found work locally and was employed for 2 months while remaining in hospital. He lost this job because he was too erratic and he, together with the rest of this group, was resident in hospital and not employed outside at the time of follow-up. Five of the ten severely-ill patients were recommended for sheltered employment, but it was not possible to implement this because of lack of facilities.

All five severely-ill patients in the control group remained in hospital throughout the follow-up period and the question of employing any of them outside never arose.

(2) RATINGS OF MENTAL STATE, BEHAVIOUR, AND ATTITUDE

There was no substantial change in the ratings of any of the four categories of abnormal mental

phenomena. However, ten patients in the experimental group were given a rating on the second occasion, which was one point better than the first rating in one or more of the four categories. This happened with only one of the control group (Fisher's exact probability, two-tailed = 0.075). Only one patient (the one who improved after termination when given Prochlorperazine) was changed in grouping from severely ill to moderately ill, and he later relapsed.

The mean social behaviour scores, on the two occasions, of the experimental and control groups are presented in Tables II and III.

TABLE II
MEAN SOCIAL WITHDRAWAL SCORES FOR EXPERIMENTAL AND CONTROL GROUPS BEFORE AND AFTER INDUSTRIAL REHABILITATION COURSE

Group	Severity of Illness	No. in Group	Mean Score	
			First Rating—Before Course	Second Rating—After Course
Experimental	Moderately Ill ..	10	3.3	2.1
	Severely Ill ..	10	3.7	3.4
Control ..	Moderately Ill ..	5	3.2	3.8
	Severely Ill ..	5	5.6	5.8

TABLE III
MEAN SOCIALLY EMBARRASSING BEHAVIOUR SCORES FOR EXPERIMENTAL AND CONTROL GROUPS BEFORE AND AFTER INDUSTRIAL REHABILITATION COURSE

Group	Severity of Illness	No. in Group	Mean Score	
			First Rating—Before Course	Second Rating—After Course
Experimental	Moderately Ill ..	10	2.6	1.4
	Severely Ill ..	10	6.4	4.1
Control ..	Moderately Ill ..	5	3.2	3.2
	Severely Ill ..	5	5.0	6.8

Analysis of variance disclosed no significant change in the "Social Withdrawal" score in any group. The analysis of variance of the scores representing "Socially Embarrassing Behaviour" disclosed a significant interaction effect between ratings and groups ($F = 6.53$; $p = <0.05$). Subsequent *t*-tests showed a significant decrease in score in the severely-ill experimental group. The severely-ill control group showed an increase in mean score but this did not reach significance.

The data concerning attitudes to discharge and plans for the future are presented in Tables IV and V.

TABLE IV
ATTITUDES TO DISCHARGE BEFORE AND AFTER
INDUSTRIAL REHABILITATION COURSE

Attitude to Discharge	Experimental Group				Control Group	
	Moderately Ill		Severely Ill		First Rating	Second Rating
	First Rating	Second Rating	First Rating	Second Rating		
Strong Desire to Leave ..	1	7	—	1	—	1
Moderate Desire to Leave	3	1	1	3	2	—
Vague Desire to Leave ..	6	1	6	2	6	6
Indifferent ..	—	—	3	2	2	1
Wish to Stay	—	1	—	2	—	2
Total in Group	10	10	10	10	10	10

TABLE V
PLANS FOR THE FUTURE BEFORE AND AFTER
INDUSTRIAL REHABILITATION COURSE

Plans for the Future	Experimental Group				Control Group	
	Moderately Ill		Severely Ill		First Rating	Second Rating
	First Rating	Second Rating	First Rating	Second Rating		
Realistic ..	2	8	—	2	1	1
Unrealistic ..	5	1	7	6	5	4
None ..	3	1	3	2	4	5

So far as attitudes to discharge are concerned, the major change is a crystallization of attitude. In the moderately-ill experimental group, six patients had a vague desire to leave hospital before going to the Industrial Rehabilitation Unit; in four of them the desire became definite, while one became sure that he wished to remain in hospital. Similarly, in the severely-ill experimental group, four patients became definite about leaving or staying, whereas before they had been vague. There could be no case of reversal of attitude because no patient in the series said initially that he wished to remain in hospital. In the control group there was little improvement.

Plans for the future became more definite and more realistic in the moderately-ill experimental group. Within the severely-ill experimental group and the control group there was little change.

The relationships between attitudes and follow-up status are shown in Tables VI and VII. Thirteen patients were rated on the second occasion as having a definite desire to leave hospital. Six of them were in fact outside one year later and seven were in hospital (four of these had been discharged for short periods of time). Of the seventeen patients who were not rated on the second occasion as definitely wanting to leave hospital, only three were outside at follow-up. (These three had all had a vague leaning towards discharge). These relationships do not reach statistical significance (Fisher's exact probability, two-tailed = >0.10).

TABLE VI
RELATIONSHIP BETWEEN SECOND RATING OF ATTITUDE TO DISCHARGE AND FOLLOW-UP STATUS ONE YEAR LATER

Status One Year after Second Rating	Attitude to Discharge at Second Rating	
	Strong or Moderate Desire to Leave	Vague Desire to Leave, Indifferent, or Wish to Stay
Living outside Hospital	6	3
Living in Hospital ..	7	14

TABLE VII
RELATIONSHIP BETWEEN SECOND RATING OF PLANS FOR THE FUTURE AND FOLLOW-UP STATUS ONE YEAR LATER

Status One Year after Second Rating	Plans for the Future at Second Rating	
	Realistic	Unrealistic or None
Employed outside Hospital ..	7	—
Not Employed outside Hospital ..	4	19

Eleven patients were rated on the second occasion as having fairly realistic and sensible plans for the future. Seven of them were employed at follow-up, and four were unemployed (three of these four had held down jobs for several months). All the remaining nineteen patients were unemployed and none of them had worked outside hospital during the follow-up period. (Fisher's exact probability, two-tailed = <0.001).

(3) DESCRIPTIVE ANALYSIS OF OBSERVATIONS MADE AT THE INDUSTRIAL REHABILITATION UNIT

In order to provide a framework for the descriptive material, and to allow a fairly objective decision as to what should be presented and what omitted,

the descriptive phrases used by various members of the Unit staff at the first and final case conferences were recorded and analysed. This analysis has been presented in detail elsewhere (Wing, 1959) and only certain of the findings will be presented here.

It was clear from a glance at the lists of phrases that no change in behaviour had occurred, in the sense of a reversal of traits previously observed. No patient was said to be unreliable on admission and reliable on discharge, or to have changed from apathetic to interested, from slowmoving to energetic, from withdrawn to sociable. On the other hand, there was a very definite change of emphasis from derogatory remarks, which were common at the first case conference, to positive descriptions a few weeks later. This impression was strikingly confirmed if a simple count was made of positive and negative remarks about each patient. Of 62 phrases used about the ten moderately-ill patients at the first conference, 46 (74 per cent.) were disparaging. On the occasion of the final conference only 28 out of sixty (47 per cent.) were negative. However, for the ten severely-ill patients, 83 per cent. of 75 phrases were derogatory on the first occasion and 75 per cent. of 73 phrases on the second. Thus there was a very significant change of emphasis in the remarks made about the moderately-ill group ($\chi^2 = 9.7$; $df = 1$; $p = <0.01$), but not in those concerning the severely-ill patients ($\chi^2 = 1.2$; $df = 1$; $p = >0.05$). At the first case conference, both groups were adversely commented on, irrespective of severity of illness, while at the final case conference there was a significant discrimination in favour of the moderately ill. Since the two groups were initially very different in mental state, social behaviour, and attitudes, and since no reversal of behaviour was described, two interpretations may be offered. In the first place, the moderately-ill patients may have been encouraged to display qualities which were latent in them already but which did not show up during the first week at the Unit. In the second place, the attitudes and expectations of the senior staff of the Unit may have changed, as the moderately-ill patients demonstrated that they were no different from the other, non-schizophrenic, patients. Probably both explanations have some validity.

Among the phrases used to describe the patients' social behaviour, manners and attitudes, a common reference was to "unrealistic" attitudes. These were particularly evident in seven patients with severe florid symptoms whose attitudes were influenced by their delusions and incoherence of speech. Eleven patients (including all the severely-ill group) were said to have a manner which would be unacceptable

to an employer. Remarks were made about the acceptable manner of six of the moderately-ill patients. This concept of acceptability (based largely on appearance, spontaneity of speech, and friendliness) plays a very large part in the thinking of the senior members of the Industrial Rehabilitation Unit staff. Eight patients were said to be very solitary. Three were said to mix well. The others were reticent and passively withdrawn but mostly pleasant and amenable so that their withdrawal did not stand out as unfriendly. No patient was said to improve in this respect.

Twelve of the twenty entrants were described as unskilled, four displayed a fair degree of skill (or skill "potential"), and four showed slight skill. A need for detailed supervision was also emphasized ("Does everything he is told perfectly, then stops and waits"; "Must demonstrate everything in detail"; "Must be given very simple instructions", etc.). Several such remarks indicated an inability to make a series of decisions ("Cannot master four operations on a machine"; "Cannot put him on a machine with a choice of handles", etc.). At its most severe this was an incapacity to make any decisions at all (*e.g.* "Must be told every single simple operation separately—then he can do that one—then he has to be told again"). Several patients showed a degree of this incapacity. Other patients were able to decide (sometimes quite rapidly) but they made the wrong decisions, and could not be trusted on machines because they spoiled materials. In general, these two types of handicap corresponded with the absence or presence of florid symptoms such as incoherence of speech or coherent delusions. (In patients without florid symptoms, the main features were flatness of affect and poverty of speech). These observations, taken together, explain the recommendation of simple, repetitive manual work, with little opportunity for decision-making, which was offered for twelve out of twenty patients; three were unsuitable for any kind of job, and only five were thought capable of any kind of skilled work.

The concept of "workshyness" was applied to six patients—all except one of whom were severely ill. This was partly a misconception, due to the difficulty of categorizing behaviour traits which could be seen in non-schizophrenic individuals as symptoms of a schizophrenic illness. However, there was undoubtedly a strong feeling about a few patients that they occasionally exaggerated their psychotic symptoms in order to avoid work they considered too hard.

None of these phrases was specific to this schizophrenic population; all represented problems which were familiar in non-schizophrenic entrants to the

Unit, though the pattern revealed by this analysis is more typical of the less skilled physically-handicapped entrants.

DISCUSSION

On this evidence, the practical results of offering courses of industrial rehabilitation to *moderately-ill*, chronic schizophrenic patients, who, initially, wish to leave hospital, seem fairly good. Only one of the ten patients terminated his course prematurely, and six were satisfactorily resettled one year after discharge. Another patient was supporting himself but living in hospital. This proportion compares very favourably indeed with the national figure of 49 per cent. of all entrants known to be employed or training 6 months after leaving the Industrial Rehabilitation Units. The five moderately-ill patients who did not have the advantage of a course of industrial rehabilitation did not fare so well; four were still in hospital and one was at home but not working at the time of the follow-up.

In a study of the attitudes to discharge of samples of male schizophrenic patients who were under 60 years of age and had been in hospital over 2 years, it was found that 27 out of 185 (15 per cent.) were moderately ill and had some desire to leave hospital (Wing, 1960b). The two hospitals concerned in the survey were thought to be representative, and other hospitals are not likely to have a smaller proportion of patients in this category.

The results might have been even better had facilities existed to implement the recommendation of sheltered employment which was made for five of the severely-ill patients. It cannot be concluded that a similar degree of success could not have been achieved by the use of similar methods within the hospital without the aid of the Industrial Rehabilitation Unit since the experiment was not designed to answer this problem. But, given the existing hospital services, and without a considerable increase in social work and disablement resettlement facilities, it is very doubtful whether the results of the control group could have been much improved.

The handicaps revealed by the Rehabilitation Unit course can be classified in much the same way as the symptoms shown in hospital. Patients showing mainly flatness of affect and poverty of speech (whether moderate or severe) are likely to be slow at work, to lack initiative, to be incapable of complex work, and to be socially withdrawn. They are often willing and amenable and capable of simple process work requiring no complicated decision-making. Patients with "florid" symptoms tend to rush their work, to be unrealistic (thinking they are doing better than they are), and to do worse the more

complex the task. They often have abundant energy, however, if the right job can be found. Thus both groups require fairly unskilled work. The four patients who had some degree of skill (three of whom later took training courses) had all been semi-skilled manual workers before the onset of illness. Several other patients had achieved relatively higher work in other fields (clerical, physical training, etc.), but this experience did not seem to stand them in as good stead.

This experiment took place during a period of relative economic recession, which, however, was not as marked in London as in other parts of the country. There is no evidence that this affected the chances of any of these patients very considerably. Labouring jobs and simple machine-operating jobs were not difficult to get. Indeed, jobs from which all the skill has been extracted are becoming more and more common. Many of these patients were well able to do such work and did not seem bored by it. Taking up work within their capacity is a reasonable method of adjusting to their handicaps and making use of their residual ability.

There was no improvement in these primary work handicaps during the Rehabilitation course, nor was there any marked change in mental state. Social withdrawal, as rated by the nurses in hospital, did not decrease significantly, but socially embarrassing behaviour did show a significant improvement in the severely-ill group. The schedule used has the limitations of a narrow range of scores and no provision for rating positive behaviour. Several nurses did spontaneously comment on an improvement in appearance and manner of some of the moderately-ill patients: this might be measurable on an extended schedule. However, Brown, Carstairs, and Topping (1958) found that their schizophrenic patients discharged after 2 years in a mental hospital seemed to do better when they were able to avoid intimate social contacts. Social withdrawal could be looked upon as a protective feature. Socially embarrassing behaviour was rare in the moderately-ill patients and there would be little room for improvement in this respect.

Secondary handicaps (represented by unsatisfactory attitudes to discharge and plans for the future) did diminish markedly, and attitudes and plans became more definite and more realistic. The Industrial Rehabilitation Unit enabled the patient's working ability to be demonstrated, not only to himself but to his doctor, the Unit staff, and the Disablement Resettlement Officer. The resulting changes in attitude were probably mutually reinforcing. The adoption of a new role by the hitherto "institutionalized" patient was made possible by the

realistic setting and the presence of a majority of non-schizophrenic workers. The inculcation of working habits suitable to such a new role is part of the deliberate policy of the Unit. These three factors would be difficult to replicate in the protective setting of a mental hospital. They constitute a considerable social pressure on the patient quite different from those he has been used to, and may explain the decrease in manifestations of socially embarrassing behaviour in the severely-ill patients. In turn, the patients increased in social "acceptability" as employees and as persons in general. It cannot be claimed, from this small material, that the change in attitude is a cause of the later successful resettlement, though there is a strong implication in this direction. Among the moderately ill, all those who improved in attitudes and plans were relatively successful at follow-up. Those who remained hesitant, or adopted more unfavourable attitudes, were unsuccessful.

Although plans for the future were significantly related, at the second rating, to future employment status, attitude to discharge was not related to whether the patient was in or out of hospital one year later. This curious divergence may possibly be explained by the fact that patients were given specific work practice at the Unit, and thus could see the actual situation for themselves and base their attitudes on it. However, they were still living in hospital and travelling by hospital bus, and they were given no specific experience of what living outside hospital meant, such as might, for example, have been provided by a hostel or by supervised lodgings. This hypothesis is clearly an important one and deserves further attention.

No patient in this series said initially that he wished to stay in hospital. However, in the survey already mentioned, 47 per cent. of moderately-ill patients did say this, and it is doubtful whether the results of the present experiment could be applied to them. The age limit of 45 which was imposed is also a considerable limit to generalization. Moreover, there is a substantial group of patients on the borderline between moderately and severely ill which could possibly benefit from an Industrial Rehabilitation Unit course combined with some form of supervision or care thereafter. It is of some importance to determine the extent to which the present results can be extended in these various directions.

How far, if the rehabilitation process could have been carried on for 6 months to a year, the pressures

of the Industrial Rehabilitation Unit would have gradually affected the severely-ill patients, it is impossible to say. The evidence that the severe and chronic symptoms of the illness were diminishing is not conclusive, and these are the limiting factors to the final level of resettlement. What is fairly clear is that such a prolonged process of rehabilitation would enable advantage to be taken of any natural remissions in the disease process, and would prevent the continual accumulation of secondary handicaps.

SUMMARY

A group of twenty male schizophrenics, aged 25-45, who had been in hospital over 2 years, attended routine courses at a Ministry of Labour Industrial Rehabilitation Unit. Ten equivalent patients who remained in hospital acted as controls. The two groups were initially similar in respect of a number of relevant variables. The experimental group showed a clear superiority in discharge and employment status one year after leaving the Unit. Severity of illness was an important factor in determining future success. Various aspects of behaviour and attitudes were measured and an attempt has been made to relate the changes recorded to the outcome. The question of how far the results can be generalized is discussed.

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