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Work and Psychiatric Illness: The Significance of the Posthospitalization Occupational Environment for the Course of Psychiatric Illnesses*

R. Vogel, V. Bell, S. Blumenthal, N.-U. Neumann, and R. Schüttler

Abteilung Psychiatrie II der Universität Ulm, Bezirkskrankenhaus Günzburg, Psychiatrische Abteilung, Günzburg, Federal Republic of Germany

Summary. The value of the reintegration and rehabilitation of inpatients vocationally was studied. Certain of the vocational experiences (unemployment and stressful working conditions) of former psychiatric inpatients were examined, with attention being paid to their stabilizing or destabilizing effect on symptomatic behaviour. A cohort of 230 first-time admissions for treatment of various disorders were interviewed while hospitalized and 1 year later. A 20-item list prepared by INFAS was used for indexing stressful working conditions. Psychopathological states were assessed with the help of the Present State Examination of Wing et al. (1973). The results indicate that mentally ill persons (especially those with organic or affective disorders), when confronted with unemployment after discharge from hospital, will usually respond by developing new or worse syndromes. Stressful working conditions appear to have very different effects in schizophrenia and affective disorders, viz. deterioration and amelioration of psychopathological syndromes respectively.

Key words: Psychiatric patients – Posthospitalization unemployment – Stressful working conditions – Psychopathological course

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This report is part of a prospective study of predictors, prognoses and the courses of first-time admissions for psychiatric disorders. Summary accounts of the study have appeared elsewhere (e.g. Aschoff-Pluta et al. 1984, 1985; Bell et al. 1986, 1988; Blumenthal et al. 1985, 1986; Vogel et al. 1985, 1986, 1987, 1988; Vogel 1988).

Offprint requests to: R. Vogel, Abteilung Psychiatrie II der Universität Ulm, Bezirkskrankenhaus Günzburg, Ludwig-Heilmeyer-Strasse 2, D-8870 Günzburg, Federal Republic of Germany

Introduction

A persistently high unemployment rate is making it increasingly difficult for psychiatric patients and the handicapped to find paid work. Recent studies (Wedekind 1986; Vogel et al. 1986) suggest that the unemployment rate in this group is 50%–70%. Almost the entire range of (hospitalized) psychiatric patients are affected (Vogel et al. 1987). This situation has elicited a variety of reactions from people who care for such patients. Some have redoubled their efforts to help patients reintegrate themselves into the workaday world; in their view employment is essential, a lack of it being a factor in the social devaluation of psychiatric patients. Others have pointed out that the demands employment makes of working people have grown, and with them the importance of learning to cope with stress; accordingly they have developed alternative concepts of work that attach greater value, for example, to leisure. Either reaction can be justified by appeal to studies on the psychopathology of unemployment (e.g. Jahoda et al. 1933, 1975; Brinkmann 1978; Brenner 1973, 1976, 1979; Feuerlein 1979; Frese and Mohr 1978; Wacker 1978; Frese 1978; Buchtemann 1984) or industrial psychopathology (e.g. Kornhauser 1965; Gleiss et al. 1973; Abholz 1970, 1973; Rudolph 1974; Bolm 1980; Weiss 1984; Link and Dohrenwend 1987). We should be wary of deciding questions about the proper aims and modalities of rehabilitating psychiatric patients on the basis of such studies. Though quite a wide range of activities are studied, the results are not sufficiently specific to sustain generally applicable conclusions. Further, we must acknowledge that findings on the situations of normal employees at the workplace cannot be applied without qualification to the situations of psychiatric patients. For solid evi-

dence of the importance of employment to psychiatric patients, we must examine case histories and evaluate studies on the courses of psychiatric disorders. Studies of this type (e.g. Brown et al. 1966; Möller et al. 1984; Pieschl and Hirschberg 1984; Vogel et al. 1985) indicate that the availability of employment is a sustained incentive that eases patients' re-entry into society. Whether this factor likewise has a beneficial effect on the course and outcome of symptomatic behaviour is still obscure, however.

This last question suggests another. How far may conditions in an unprotected working environment have a destabilizing or destructive effect on patients? Our ignorance on this point is even more striking. Most of the evidence now available is indirect, i.e. consists of inferences from the psychiatric condition of patients (as in Blankenburg 1970; Cumming and Cumming 1973; Schüttler 1983) or from observations of chronic patients and patients working in protected environments (as in Salm 1971; Seyfried et al. 1985; Wedekind 1983). But for the work of Hack and Angermeyer (1979), and more recent reports on model studies of measures for caring for the mentally handicapped at their places of work (e.g. Borrmann 1987; Bähr 1987), we would still lack a solid basis for conclusions on the proper aims and modalities of rehabilitation programs. All in all, however, even these contributions are inadequate. A particulary grave shortcoming is that almost no attempt is made to avoid the conflation of approaches in one and the same group of patients.

The aim of the present study is to answer several questions which the above set of problems suggest, viz.:

1. In what ways do the psychopathological states of former psychiatric inpatients develop as a function of (a) posthospitalization employment status; (b) posthospitalization working conditions potentially detrimental to mental health?

2. What part does the patient's psychiatric disorder play in determining the outcome of this development?

Subject and Methods

The material investigated consisted of 230 psychiatric patients, all consecutive first admissions to the Department of Psychiatry II, University of Ulm (BKH Günzburg), Federal Republic of Germany in 1979; as in many other studies (e.g. Isele and Angst 1982), onset of illness and the start of the first course of inpatient treatment were assumed to coincide. Patients were included in the sample only if they had been employed at least intermittently before being admitted to hospital and wanted to work again after discharge (employable persons). Apart from patients with serious mental impairment, no one was excluded on diagnostic grounds. Diagnoses were made as patients were discharged (1979), and were coded in accordance with the WHO's International Classification of Diseases (ICD). This classification differs from others, e.g. the criteria of Feighner, in enabling non-prognostic diagnoses of schizophrenia by syndrome, which is one of the reasons why we adopted it. For methodological reasons (sample size, increased reliability and validity) we collected diagnoses in five subgroups on the basis of the ICD. Here the attempts at classification made by the (few) researchers who had conducted comparative studies of several diagnostic subgroups before us served as a guide (cf. Gaebel and Pietzcker 1984; Möller et al. 1984). Specifically, we distinguished between organic psychiatric disorders, schizophrenia, affective psychoses, neuroses and severe personality disorders, and drug dependency. Schizophrenics were not differentiated into subgroups, first, for lack of clear rules of assignment, and, secondly, because the courses are mutable and shade into each other (cf. Huber 1973; Schüttler 1987).

Psychopathological states were assessed with the German version of the Present State Examination (PSE) (Wing et al. 1973). The PSE assesses a total of 140 symptoms. Especially close attention was paid to changes in patients' overall clinical pictures from the time of discharge to the time of the follow-up study.

In addition we report on syndromes that can be constructed from the 140 symptoms assessed in the 9th edition of the PSE (cf. PSE description and glossary, Wing et al. 1982). As the numbers of cases differed and were sometimes quite small, only a selection was subjected to analysis (simple depression, general anxiety, slowness, specific features of depression, tension, worrying, social unease, loss of interest and the ability to concentrate, lack of energy).

Accordingly, no comments can be made at the syndrome level for the population. Nevertheless the pertinent results should be reported, tendencies having been noted (some of them very pronounced) which suggest corresponding differences in the population. Measurements were taken shortly before and 1 year after discharge.

Earning capacity was assessed by reviewing patients' work histories over the first 12 months after discharge, and noting all occasions when patients lost work.

Stressful or burdensome features of work, whether associated with the nature or scheduling of the work done or the work environment (deadline pressure, shiftwork, noise, cold, heat), were classified as health-endangering. To determine stress exposure, subjects were given a list of 20 working conditions generally considered disagreeable, undesirable or stressful. The questions referred to the subjects' last (unprotected) places of work before the start of the follow-up study.

A variety of multivariate techniques were used for statistical analysis of hypotheses of change. We shall confine ourselves here to the results of partial correlation analyses, so as to keep the presentation simple and straightforward. The partial correlation coefficients ($\hat{R}$) describe the strength of the linear correlation between the above features and the symptomatology at the time of the follow-up, independently of the severity of initial symptomatology performed at discharge. The coefficients can take any value between -1 and $+1$. A plus sign means that high values for one variable are associated with high values for the other. A minus sign means that low values for one variable are associated with high values for the other.

As to the inclusion of potentially significant covariates (e.g. concurrent therapeutic and rehabilitative measures), we were most interested in analysing the effects of working conditions as related to the usual realities of posthospitalization care. At the same time the (quasi-experimental) design of our study and the size of our sample imposed certain limits. Posthospitaliza-

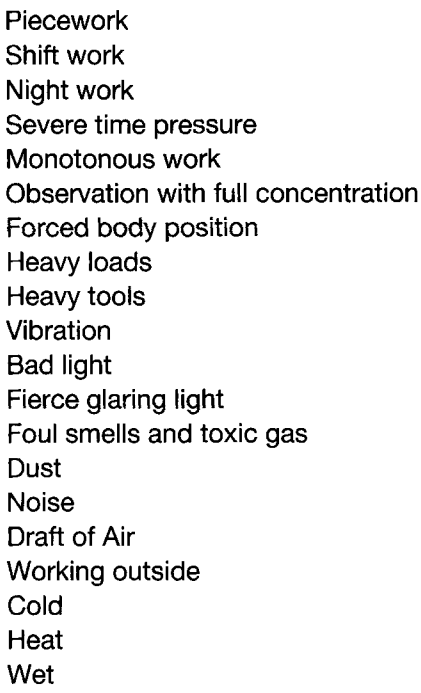

Fig. 1. Stress factors

tion care took the following forms. At 1 year after discharge 75% of the patients had turned to services or institutions of the health care system for reasons related to their illnesses. The majority of these patients had been in a doctor's care, usually in the care of a psychiatrist (88% of the patients who were treated as outpatients, or 68% of the sample as a whole). Contacts with non-medical institutions and professionals (counselling centres, welfare offices, social workers) were comparatively rare. In consequence, general and specific rehabilitative measures (e.g. vocational training, industrial rehabilitation) were seldom taken during the observation period, and the same is true of measures concerning the work place. Again, the majority sought out the help of aftercare institutions irregularly (less than one visit per month, after vacation time and admissions are deducted). As expected, the various diagnostic subcategories revealed marked differences on examination from a diagnosis-specific point of view. By way of summary, we note that patients with a schizophrenic illness were treated significantly more often and more regularly after discharge than the members of the other diagnostic subgroups (for details see the account of our work group's results in Bell et al. 1988). Specialist care was preponderant. Patients with an organic psychic illness or affective disorder usually consulted general practitioners. Collectively, the patients with neuroses and personality disorders took advantage of almost all facilities less often than other patients; on the other hand, they sought out sociotherapeutic or psychotherapeutic help more often than the members of other groups (32%). Requests for help by addicted patients were exceedingly rare. Most of the prescriptions written for psychotropic agents during the reporting period were for neuroleptics, tranquilizers/hypnotics, and antidepressants. The average duration of drug therapy for all categories together was 6.3 months (the separate average durations, 6.8, 5.2, and 7.1 months). Psychotropic agents, as one would expect, were prescribed especially often for patients who had been treated for an endogenous psychosis. Chronic treatment was also most common in these groups (43% of schizophrenics and 50% of patients with affective disorders). Intensive pharmacological therapy was also deployed in patients with neurotic symptom formation (average duration of therapy 6.6 months, 22% were chronic therapeutic regimens). Tranquilizers/hypnotics were the predominant drug category. Antidepressants were given about as frequently, neuroleptics far less so. A distinguishing feature of the addict group is that only a very few members submitted to psychopharmacological treatment (tranquilizers/hypnotics).

Results

Table 1 shows the diagnostic make-up (diagnoses at the time of discharge) of our five diagnostic subgroups.

Psychoses associated with organic disturbances of brain function and mental disorders secondary to physical illnesses affecting the brain made up the great majority of organic psychiatric illnesses. The schizophrenics were a fairly homogenous group, paranoid schizophrenia being the predominant subtype (70%, not tabulated). Depressive psychotic states predominated in the group with affective psychoses. Pure manias and bipolar disorders were rare. Neuroses and personality disorders were mostly of the depressive subtype (35/81 = 43%), but included hysterical, asthenic, and other personality disorders (23/81 = 28%). The group of addicts was made up almost exclusively of alcoholics (89%).

The Effects of Posthospitalization Employment Status on the Patients' Psychopathological State

Of the sample, 43.5% were unemployed during at least part of the follow-up period. The majority of

Table 1. Diagnostic composition (ICD-8)

Diagnostic subgroup	ICD-8	Frequency
Organic psychiatric disorders ($n = 21$; 8.1%)	292	3
	293	8
	294	3
	309	5
	316.1	2
Schizophrenic Disorders ($n = 33$; 12.8%)	295	33
Affective and other non-organic psychoses ($n = 23$; 8.9%)	296	16
	298	7
Neurotic and severe personality disorders and temporary emotional syndromes ($n = 81$; 31.4%)	300	46
	301	23
	305	3
	307	9
Addicts ($n = 100$; 38.8%)	291	6
	303	89
	304	5

Table 2. Relation between post-hospital unemployment and changes in the post-hospital clinical picture (partial correlation $\hat{R}$)

	Changes in psychopathological picture					
	Total group	Organic psychiatric disorders	Affective psychoses	Schizophrenic disorders	Neuroses/ personality disorders	Addicts
Post-hospital unemployment	0.23	0.54	0.26	0.16	0.15	0.13

Table 3. Relation between post-hospital work stress and changes in the post-hospital clinical picture (partial correlation $\hat{R}$)

	Changes in psychopathological picture					
	Total group	Organic psychiatric disorders	Affective psychoses	Schizophrenic disorders	Neuroses/ personality disorders	Addicts
Frequency of stress	−0.08	0.12	−0.37	0.23	−0.02	0.00

these patients (26% of the total sample) returned to work before the follow-up period ended; the rest (18% of the total sample) were unemployed the whole time.

Symptomatic behaviour, as will be seen from Table 2, differed significantly ($\hat{R} = 0.23$, $P \leq 0.000$) according to posthospitalization employment status. More unemployed than employed patients exhibited a deterioration in symptomatic behaviour, which usually took the form of increased depressive and anxious behaviour, feelings of tension, and tendencies to social withdrawal (not tabulated). Conversely, patients who found steady work were more likely to show an improvement in psychiatric condition; improvements were seen, notably, in the symptoms lack of initiative, retardation, and depressive behaviour (not tabulated). Patients' symptomatic reactions were not uniform in the diagnostic subgroups defined by us. Patients treated for psychiatric disorders of organic origin exhibited the most sensitive reactions. Expressed subjective feelings of energy loss and retardation predominated. Patients with other types of disorder, especially those with a neurotic or personality disorder or alcohol-related disease, showed much less pronounced reactions. Outstanding changes in patients with neurotic or severe personality disorders were increased anxiety symptoms, tendency to withdrawal, and insecurity. Alcoholics reacted, if at all, primarily by falling into a state of depression. Loss of employment had only a rather marginal influence on drinking habits ($r = 0.17$, $P \leq 0.07$, not tabulated) (cf. Vogel et al. 1985). With patients treated for affective or schizophrenic disorders the picture was different. On balance those who remained unemployed throughout the observation period showed no change in psychiatric condition, whereas those did whose employment status changed between the times of the first and second questionnaires ($\hat{R} = 0.39$ or 0.26, not tabulated). Loss of self-esteem was a notable reaction in patients with affective disorders. Schizophrenics succeeded far less often in overcoming their anxious behaviour and lack of energy.

The Effects of Stressful or Burdensome Features of Posthospitalization Employment on Psychopathological State

Of the 20 stress factors listed below, patients reported a mean of 5 as being characteristic of their last places of work. The most important stress factors were work requiring concentration, extremely tight schedules or deadlines, and noise.

The (specified) challenges of the workplace to psychological stability usually had no effect on the patients' psychiatric condition after discharge, as can be seen from Table 3. Patients with schizophrenic disorders were the exception. In this group the magnitude of challenges to psychological stability was at least weakly correlated with the psychopathological course. Subjects of whom no demands, or modest demands, were made showed a general amelioration of symptoms, whereas a slight deterioration was the response to highly demanding work. At the syndrome level, general anxiety and loss of energy were the clearest cases in point. Failing exceptional demands, anxiety symptoms subsided markedly and motivation improved. In the presence of rigorous demands, no changes were seen in these symptoms. Instead the syndrome simple depression (one measure of which is the subjective experience that one's thinking is impeded and inefficient) worsened. Some patients with affective disorders reacted rather "paridoxically". Increased demands sometimes resulted in an improvement in symptomatic behaviour (i.e. in improved concentration and an increase in interests), whereas

work that was fairly or completely undemanding and unstressful was apt to produce a tendency to chronic illness ($\hat{R} = -0.37$, $P \leq 0.10$).

Discussion

Our study points to the importance of posthospitalization working conditions for the course of psychiatric conditions. Admittedly, the correlations are for the most part not especially marked. But then stronger ones could scarcely be expected from a field study; the states of affairs that such studies deal with are too involved for that. Thus the kind of social support a patients receives after discharge, drug therapy, and the nature and extent of follow-up care measures are variables bearing on the course of psychiatric condition, to name just a few; all of them are no less germane than posthospitalization employment status. Again, we used clinically relevant variables as indicators rather than appeal to such vague indicators as general subjective state, emotional tension, and general satisfaction with life. That said, our long-term findings indicate that work, even when associated with elevated psychic stress, jeopardizes the psychic health of (former) psychiatric patients less than unemployment.

Naturally different classes of mentally ill employees must be distinguished, just as one customarily distinguishes between different classes of "normal" employees. Reactive deterioration in symptomatic behaviour was most pronounced in patients suffering an organic psychic disorder or affective psychosis. In the former such reactions were doubtless closely tied to occupational fate. The occupational histories of these patients were markedly unexceptional up to the time of their first admissions, in contrast with the histories of patients in the other diagnostic categories (Lungershausen et al. 1983). Thus the experiences of being unable to perform adequately and of losing one's job were new to most of them, and their embarassment was accordingly great. In the group with affective psychoses, on the other hand, reactions were probably due to career-mindedness.

The "experienced social quality" of unemployment (Büchtemann 1985) was found to be influenced by its course, just as the above modifying variable (best described as "psychological") influenced the experience of being unemployed in the subjective-personal sphere. Two findings may be called in evidence, viz. that long-term unemployment and persistent, unsuccessful attempts at finding work were detrimental to the objective mental health of one subgroup, and changed occupational status and concomitant behavioural demands to that of another (cf. Büchtemann 1982).

The effect of occupational stress on symptomatic behaviour in the diagnostic groups studied was fairly uniform, in contrast to the diverse clinical pictures associated with unemployment; in short, it had no notable effect in most cases. Schizophrenics were the exceptions, their complaints being more likely to be prolonged or exacerbated. This is not doubt closely linked with the schizophrenic's elevated vulnerability, or elevated sensibility to external stimuli, on which there is a body of clinical experience (Schüttler 1985). On the analogy of Tellenbach's Typus Melancholicus (1969) we attribute the "paradoxical" reaction of patients with affective psychoses to their carrier-mindedness.

As to the problem outlined earlier, our findings suggest that the notion of the labour market should continue to govern therapeutic and rehabilitative efforts, at least to the extent that it has governed them to date, regardless of whether this involves making increased demands of patients' capacity for psychological stress. The imposition of such demands may itself be stabilizing factor, since it shows patients that they are still (or have again been) accepted as full members of society.

In conclusion, we admit that the present study has its flaws, which limit the applicability of our findings. Our aim, however, was not to solve the problem, but to help temper the emotionalism so characteristic of West German views on the subjects of "work and the psychiatric patient", and "work and the handicapped". A better-informed, fairer view needs to be taken.

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