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Personality Disorder: Part II. Follow-up*

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In a previous study (Liss, Welner and Robins, 1973), the hospital records of 212 patients who received a diagnosis of personality disorder other than antisocial personality were studied. The clinical information about these patients was used to arrive at an established psychiatric diagnosis based upon the rigorous diagnostic criteria designed for research (Feighner, Robins, Guze, Woodruff, Winokur, and Munoz, 1972). In 118 cases (56 per cent) the clinical symptoms and the course of the disorder met the required diagnostic criteria for one or more of the established psychiatric diagnoses. The remaining 94 patients (44 per cent) had too few symptoms to meet these criteria.

It was not clear why the patients initially received a diagnosis of personality disorder, except that they had a significantly higher frequency of impulsive and manipulative behaviour, temper tantrums, suicide attempts or severe marital discord, compared with a control in-patient population. It was presumed from the record study that these were in fact the characteristics on which the initial diagnosis of personality disorder rested. This presumption was to be examined by this follow-up study. It should be mentioned that in the record study there was no correlation between the personality disorder diagnosis and the diagnosis arrived at by using diagnostic criteria, with the possible exception of hysterical personality and hysteria.

This study is a follow-up of these patients. Its purposes were: (1) to reassess by a structured follow-up interview the psychiatric diagnoses of the patients who were dischaged with a personality disorder diagnosis; (2) to confirm the validity of the established diagnoses given when the records were reviewed by comparing them to the follow-up diagnoses; (3) to examine in a systematic way whether in-patients discharged with a personality disorder diagnosis are more likely to manifest impulsive and manipulate behaviour, temper tantrums, suicide attempts or marital discord, as the record study suggested. These types of behaviour were especially frequent in the patients who had too few symptoms to meet the criteria for an established diagnosis (Liss, Welner, and Robins, 1973).

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Material and Method

All patients who at the time of the record study were residents of Saint Louis and Saint Louis County were included in this study. A follow-up interview consisted of: (1) 225 psychiatric symptoms and signs; (2) general information, demographic data, age of onset, length of illness, number of admissions to hospital, medical illnesses, morbidity and mortality; and (3) detailed history associated with the illness concerning academic and job performance, marriage, social interaction, general behaviour and suicide attempts. Also a premorbid evaluation was made of: (1) family interaction; (2) friendships; (3) school performance; (4) temper; (5) mood disturbances and (6) social withdrawal. Each of these six premorbid categories was graded on a three-point scale: (−1) poor, (0) unremarkable or average, and (+1) good.

In order to determine if there was general agreement on the meaning of the terms impulsive, manipulative and immature behaviour, and to design an operational definition suitable for a follow-up study for these terms, written definitions were obtained from the staff of the Department of Psychiatry of Barnes Hospital and Washington University. There was consistent agreement on the meaning of these terms, and for the purposes of the follow-up study they were defined as follows: Impulsive behaviour—acting without thinking about the

consequences; Manipulative behaviour—acting in a socially unacceptable indirect way to influence the behaviour of others; Immature behaviour—acting in a manner which is normal only for a chronologically younger individual.

Sources of information for the follow-up were patients, relatives, physicians, and records in various combinations. All interviews were conducted blind. The follow-up data were checked with the diagnostic criteria designed for research for the following disorders: depression; mania; schizophrenia; hysteria; alcoholism; antisocial personality; anxiety, phobic, and obsessive-compulsive neuroses; drug dependency; mental retardation; organic brain syndrome; homosexuality and transsexuality.

Patients were called 'undiagnosed, too few symptoms' if their clinical picture showed too few symptoms to meet the criteria for at least one of the above diagnoses. Patients were called 'undiagnosed, too many symptoms' if they had enough symptoms to meet the criteria for multiple psychiatric diagnoses whose coexistence seemed unlikely (Welner, Liss, and Robins, 1973). Patients whose diagnosis was 'no mental illness' had no psychiatric history or finding at the time of the blind follow-up, and when their records were reviewed no more than one or two symptoms were found which were related to physical illness, e.g. a teenage boy was admitted to hospital because of unexplained abdominal pain and nervousness, and at the time of the follow-up 25 months later had the diagnosis of regional ileitis confirmed by X-ray and was psychiatrically symptom free.

Results

A total of 112 patients were included in this study. Of these 101 (90 per cent) were followed up; the remaining 11 patients could not be located. There were no refusals. The mean length of follow-up was 50 months. Of the follow-up patients 80 (79 per cent) were personally interviewed. For most of these additional information was obtained from treating psychiatrists, hospital records, and relatives. Of the remaining 21 who were not personally interviewed 6 had died and 15 were followed up by information obtained from relatives, records, and/or treating psychiatrists.

(a) *Follow-up diagnoses*

At the time of the follow-up the primary diagnoses arrived at by criteria were as follows: unipolar depression 24 (patient and per cent), antisocial personality 13, drug dependency 7, alcoholism 5, schizophrenia 4, anxiety neurosis 3, hysteria 3, no mental illness 3, mental retardation 3, bipolar affective illness 2, obsessive compulsive-phobic neurosis 2, homosexuality 2, schizo-affective 1, transsexuality 1, undiagnosed too few symptoms 24, and undiagnosed too many symptoms 4. The initial personality disorders, the clinical record, and follow-up diagnosis arrived at by criteria are presented in Table I. This table specifies the initial per-

Table I

The distribution of record and follow-up diagnoses for patients discharged with a personality disorder

Number (Total = 101) and per cent of patients	Initial personality disorder diagnosis	Diagnosis by criteria from record information	Diagnosis by criteria at follow-up
19	Schizoid (1), Character disorder (4), Passive-aggressive (2), Hysterical (2), Emotionally unstable (2), Cyclothymic (1), Personality trait (4), Inadequate (3)	Unipolar—Depression	Unipolar depression
2	Personality trait (1), Emotionally unstable (1)	Unipolar—Depression	Unipolar depression and alcoholism
1	Schizoid (1)	Unipolar—Depression	Obsessive compulsive neurosis and secondary depression
1	Hysterical (1)	Unipolar—Depression	Hysteria and secondary depression

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TABLE I—*continued*

10	Passive aggressive (4), Character disorder (1), Emotionally unstable (2), Inadequate (1), Personality trait (2)	Antisocial personality	Antisocial personality
6	Emotionally unstable (2), Personality trait (3), Inadequate (1)	Drug dependency	Drug dependency
3	Schizoid (2), Personality trait (1)	Schizophrenia	Schizophrenia
4	Passive aggressive (2), Character disorder (1), Personality trait (1)	Alcoholism	Alcoholism
2	Inadequate (1), Personality trait (1)	Alcoholism and anti-social personality	Alcoholism and anti-social personality
3	Inadequate (1), Hysterical (1),	Mental retardation	Mental retardation
2	Mixed (1), Obsessive compulsive (1)	Obsessive compulsive phobic neurosis	Obsessive compulsive phobic neurosis
1	Hysterical (1)	Hysteria	Hysteria
1	Hysterical (1)	Hysteria	Hysteria and alcoholism
1	Immature (1)	Bipolar affective	Bipolar affective
1	Character disorder (1)	Transsexuality	Transsexuality Secondary depressive
1	Character disorder (1)	Homosexuality	Homosexuality
1	Personality trait (1)	Anxiety neurosis	Anxiety neurosis
24	Personality trait (7), Schizoid (3), Passive aggressive (6), Immature (2), Emotionally unstable (3), Character disorder (2), Borderline psychotic (1)	Undiagnosed, too few symptoms	Undiagnosed, too few symptoms
1	Passive aggressive (1)	Undiagnosed, too few symptoms	Homosexuality and secondary depressive
3	Personality trait (1), Passive aggressive (2)	Undiagnosed, too few symptoms	No mental illness
2	Unspecified (1), Character disorder (1)	Undiagnosed, too few symptoms	Undiagnosed, too many symptoms
2	Schizoid (2)	Undiagnosed, too few symptoms	Schizophrenia
1	Inadequate (1)	Undiagnosed, too few symptoms	Anxiety neurosis
2	Passive aggressive (1), Character disorder (1)	Undiagnosed, too few symptoms	Antisocial personality
3	Character disorder (1), Emotionally unstable (1), Passive aggressive (1)	Undiagnosed, too few symptoms	Depression
1	Immature (1)	Undiagnosed, too few symptoms	Bipolar affective Illness
1	Passive aggressive (1)	Undiagnosed, too few symptoms	Drug dependency
2	Character disorder (2)	Undiagnosed, too many symptoms	Undiagnosed, too many symptoms

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sonality disorder diagnoses that were related to the record study diagnoses arrived at by diagnostic criteria, and the subsequent follow-up diagnosis in relation to the same record diagnosis. There was consistent agreement and continuity between the record diagnosis and the follow-up diagnoses. Forty per cent of the 40 patients who were undiagnosed because of too few symptoms in the record study could be diagnosed at the time of the follow-up study, a finding which was almost identical with the one that in a previously reported study (Liss, Welner, and Robins, 1972), 36 per cent of patients undiagnosed because of too few symptoms could be diagnosed at the time of follow-up.

(b) *Grouping of patients presented in Table I*

In order to study this heterogeneous population the patients were grouped in five categories:

Group (I). Twenty-four patients undiagnosed because of too few symptoms. These patients were analogous to the ones in Group I of the record study (Liss, Welner, and Robins, 1973).

Group (II). Twenty-six patients with affective disorder consisting of unipolar depression—24, and bipolar affective illness—2.

Group (III). Sixteen patients with either antisocial personality—13, or hysteria—3.

Group (IV). Twelve patients with drug dependency—7, or alcoholism—5.

Group (V). Twenty patients with other diagnoses.

The three patients who were diagnosed as having no mental illness were not included in any of the groups.

(c) *Mean age of onset, length of illness and number of hospitalizations*

As shown in Table II, the mean age of onset of the psychiatric illness was significantly lower in Group III (antisocial personality and hysteria) than the mean age of onset of the total population ($p < \cdot 02$).

The mean length of illness was the shortest for Group I (undiagnosed, too few symptoms) although it was not statistically significant. The longest mean length of illness was found in Group V (other) when compared to the total population ($p < \cdot 01$). Group V consisted of patients with mental retardation, homosexuality, transsexuality, schizophrenia, and 'undiagnosed, too many symptoms'.

TABLE II

Mean age of onset, length of illness, and number of hospitalizations for the five groups

	Group I N = 24	Group II N = 26	Group III N = 16	Group IV N = 12	Group V N = 20		
	Undiagnosed too few symptoms	Affective disorder	Antisocial personality and hysteria	Drug dependency and alcoholism	Other	Total N = 98	P*
Mean age of onset	19·2 ± 8·3	22·3 ± 10·2	12·6 ± 5·0	22·8 ± 10·2	14·5 ± 6·2	18·4 ± 9·1	Group III vs. Total P< ·02
Mean length of illness, months	103·1 ± 97·3	111·8 ± 90·3	156·8 ± 129·4	140·5 ± 121·5	242·4 ± 167·5	147·2 ± 129·6	Group V vs. Total P< ·01
Mean number of hospitalizations	1·50 ± 0·78	2·60 ± 2·49	3·13 ± 3·03	2·75 ± 2·22	2·60 ± 2·52	2·46 ± 2·30	Group I vs. Total P< ·02

*Statistical evaluation by t test. Significant only for those presented.

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The mean number of psychiatric admissions was lowest for Group I (undiagnosed, too few symptoms) and was statistically significant when compared to the total population ($p < \cdot 02$).

These results suggest that diagnosed patients are admitted to hospital more often and have a longer duration of illness than undiagnosed patients. An additional support to these findings is that the mean number of admissions was significantly higher for those undiagnosed patients who were subsequently diagnosed at follow-up than for the patients who remained undiagnosed ($2 \cdot 54 \pm 1 \cdot 86$ vs. $1 \cdot 50 \pm 0 \cdot 78$, $p < \cdot 05$). Also, the length of illness for the diagnosed patients was longer (but did not reach significance), than for those who remained undiagnosed ($132 \cdot 0 \pm 83 \cdot 3$ vs. $103 \cdot 1 \pm 97 \cdot 3$ months).

(d) *Suicide attempts and completed suicide*

The frequency of suicide attempts was highest in Group II (affective disorder), unlike the findings in the record study where the frequency of suicide attempts was highest in Group I (undiagnosed, too few symptoms). It is of interest that the frequency of suicide attempts in the record study in the total population was 40 per cent as compared to 43 per cent in the total followed up population (Table III).

Six patients were dead at follow-up. Of these, four were definite suicide deaths; one death was apparently accidental, although suicide could not be ruled out (car accident), and one was related to alcoholism (subdural haematoma). Two of the four definite suicides were cases of depression, one of alcoholism, and one was undiagnosed because of too few symptoms.

(e) *Major marital discord*

Major marital discord included separation and divorce. Seventy-seven per cent of the followed-up population had major marital discord, a finding consistent with the record

TABLE III

*Suicide attempt, marital maladjustment, behaviour symptoms, socio-economic status and premorbid assessment**

	Group I N = 24	Group II N = 26	Group III N = 16	Group IV N = 12	Group V N = 20	
	Undiagnosed too few	Affective disorder	Antisocial personality and hysteria	Drug dependency and alcoholism	Other	Total N = 98
Suicide attempts (as % of group) ..	38	58	38	33	40	43
Marital maladjustment (as % of group)	88	74	77	83	93	82
Impulsive behaviour (as % of group)	50	43	50	42	30	43
Manipulative behaviour (as % of group)	46	42	50	33	20	39
Temper tantrums (as % of group) ..	42	31	63	25	50	42
Violent and destructive behaviour (as % of group)	21	27	50	25	40	32
Job deterioration during illness (as % of group)	32	40	77	36	50	45
Social deterioration during illness (as % of group)	33	38	50	17	40	37
Premorbid assessment (as mean and standard deviation)	$-1 \cdot 42 \pm 2 \cdot 02$	$-1 \cdot 73 \pm 1 \cdot 51$	$-1 \cdot 87 \pm 2 \cdot 52$	$-0 \cdot 33 \pm 0 \cdot 89$	$-1 \cdot 95 \pm 1 \cdot 73$	$-1 \cdot 55 \pm 1 \cdot 69$

* There was only one statistically significant difference: The premorbid assessment score was significantly higher for Group IV Drug dependency and alcoholism than for the total population ($-0 \cdot 33 \pm 0 \cdot 89$ vs. $-1 \cdot 55 \pm 1 \cdot 69$ $p < \cdot 02$).

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study where 78 per cent had marital discord. Major marital maladjustment included patients with major marital discord and patients who were single (never married) at the age of 26 or over, and these two accounted for 82 per cent of the total followed-up population. There were no significant differences of the frequency of marital maladjustment in the various groups (Table III).

(f) *Behavioural symptoms*

Behavioural symptoms included impulsive and manipulative behaviour, temper tantrums, and violent and destructive behaviour. Although impulsive, manipulative and immature behaviour were used as defined under 'Method', the definition for immature behaviour was not operational enough to categorize this behaviour at follow-up. The frequency of the behaviour symptoms described in Table III are higher than in the record study, probably because they were searched for specifically. However, there was no significant difference between the frequency in the five groups when compared to the total population.

This finding differs from that of the record study, where impulsive behaviour and temper tantrums were significantly more frequent in the undiagnosed group than in the diagnosed group.

(g) *Socio-economic evaluation and premorbid assessment*

An overall impression was obtained for socio-economic status associated with psychiatric disorder, and this was based on the following categories: *Work*—current employment status, demotion or promotion, number of jobs in a given period, and leaving or being dismissed; *Social status*—change in social activity, change in contacts with friends and relatives, and change in prestige. The frequencies of job and social deterioration for the various groups are presented in Table III. There were no significant differences; however, Group III patients (antisocial personality and hysteria) were noted to have the highest frequency of both job and social deterioration.

The premorbid assessment scale described under 'Method' was used to evaluate the premorbid period, and the results are shown in Table III. Group IV (alcoholism and drug dependence) had a significantly better premorbid history when compared to the total population ($p < \cdot 02$).

Discussion

This follow-up study of patients initially diagnosed as personality disorder (other than antisocial personality) confirms the findings of the previous record study (Liss, Welner, and Robins, 1973) in the following ways: (1) As can be seen in Table I the diagnoses that were arrived at using rigorous criteria at the time of the follow-up were consistent and continuous with the ones that were established when the patients' records were studied using the same criteria. An example of the continuity of diagnosis was a patient who at the time of the record study was diagnosed as having depression and during the follow-up period developed alcoholism. Another example of continuity is the finding that 40 per cent of patients who were undiagnosed when their records were studied became diagnosed at the time of follow-up, a frequency which is in agreement with the 36 per cent found in a study of undiagnosed patients (Liss, Welner, and Robins, 1972).

(2) The various types of the initial personality disorder diagnoses were not correlated for any of the diagnoses arrived at by using rigorous criteria, with the possible exception of hysterical personality and hysteria.

(3) For the readily available information about suicide attempts and major marital discord there was an essentially equal frequency recorded for the record study and the follow-up study (40 per cent and 43 per cent—suicide attempts, 78 per cent and 77 per cent—marital discord). On the other hand, the behavioural symptoms were found more frequently in all groups at follow-up, probably as the result of systematic investigation.

Although not statistically significant, the highest frequency of manipulative, violent and destructive behaviour, temper tantrums and job and social deterioration was found in Group III (antisocial personality and hysteria). The highest frequency of marital maladjustment was recorded in Group V (mental retardation, sexual deviation, schizophrenia, etc.). An interesting significant finding was that Group

IV (alcoholism and drug dependence) had the best premorbid history score. This finding may be accounted for by a selective factor, in that all the patients who were followed up had been hospitalized in Renard Hospital, a private psychiatric unit admitting patients of a relatively high socio-economic status. This raises the possibility of a different personality make-up in alcoholics or drug addicts between patients of higher and lower socio-economic status.

The follow-up did not support the apparent impression and suggestion that a high frequency of behavioural symptoms, major marital discord and suicide attempts, in the absence of enough symptoms to meet the criteria for a diagnosis, makes up the characteristics of in-patient personality disorder. Group I of the record study, in which there seemed to be a relatively high frequency of the above symptoms, was reduced, because 40 per cent of this group were diagnosed at follow-up (Table I). Also, the group of undiagnosed patients in the follow-up study did not have a significantly or apparently higher frequency of the above symptoms than the other groups (Table III).

It appears, therefore, that when in-patients are diagnosed as personality disorders because of 'limited psychiatric symptomatology and socially disruptive behaviour' (as the record study suggested) the personality disorder diagnosis is tentative, for as the length of follow-up and number of admissions increases, these patients are likely to be diagnosed subsequently as having an established psychiatric disorder. There are at least two possible explanations for the patients being initially diagnosed as having personality disorders: (a) It is conceivable that private patients may be discharged with a euphemistic diagnosis of a personality disorder. (b) As can be seen from Table I, some of the patients had initially too few symptoms for an established psychiatric diagnosis, and therefore were diagnosed as personality disorders.

Summary

One hundred and one patients diagnosed initially as personality disorder (other than antisocial personality), and whose records had been reviewed, were followed up (90 per cent follow-up). Using rigorous diagnostic criteria for psychiatric research, there was consistent agreement and continuity of clinically established diagnoses between the follow-up and the record study.

At the time of the follow-up the primary diagnoses were as follows: Unipolar depression 24 (patient and per cent), anti-social personality 13, drug dependency 7, alcoholism 5, schizophrenia 4, anxiety neurosis 3, hysteria 3, no mental illness 3, mental retardation 3, bipolar affective illness 2, obsessive-compulsive-phobic neurosis 2, homosexuality 2, transsexuality 1, schizo-affective 1, undiagnosed, too few symptoms 24, and undiagnosed, too many symptoms 4. As in the record study there was no correlation between the personality disorder diagnosis and the diagnosis arrived at using rigorous criteria, with the possible exception of hysterical personality and hysteria.

The patients in this study were divided into five groups: Group I (undiagnosed, too few symptoms), Group II (affective disorder), Group III (antisocial personality and hysteria), Group IV (alcoholism and drug dependence) and Group V (other). Group I (undiagnosed, too few symptoms) had the lowest number of admissions to hospital ($p < \cdot 02$) and the shortest mean length of illness (not statistically significant). The difference in frequency of suicide attempts; marital maladjustment; behaviour symptoms (impulsive, manipulative, violent and destructive behaviour, and temper tantrums); job deterioration and social deterioration was not significant among the groups, although, some trends were noted, e.g. behaviour symptoms and job and social deterioration were more frequent in Group III (antisocial personality and hysteria) than in the other groups, and suicide attempts were highest in Group II (affective disorder). A premorbid assessment score was significantly better in Group IV (alcoholism and drug dependence) than in the other groups ($p < \cdot 02$). Forty per cent of the patients who were undiagnosed because of too few symptoms in the record study were diagnosed at follow-up.

It appears, therefore, that when in-patients are diagnosed as personality disorder because of 'limited psychiatric symptomatology and socially disruptive behaviour' (as the record study

suggested), the personality disorder diagnosis is tentative, and as the length of follow-up and number of admissions increases, patients are likely to be diagnosed as having an established psychiatric disorder.

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