

## Personality Disorder and Psychiatric Illness in General Practice

PATRICIA R. CASEY and PETER TYRER

In a one-year prevalence study of conspicuous psychiatric morbidity in two group general practices, one urban and the other rural, personality disorder was diagnosed in 5.3% by the GP and in 5.6% by the psychiatrist, but this increased to 28% when personality disorder was assessed using a structured interview. The prevalence of personality disorder was higher in the urban practice than in the rural one but there was no consistent association between personality disorder and mental state disorder, with the exception of alcohol abuse and dependence. The high rate of personality disorder found using the interview schedule is likely to be a true finding, and failure to recognise this hidden morbidity is important in both general and psychiatric practice.

Despite the sizeable literature on various aspects of psychiatric disorder in general practice, few of these studies have investigated personality disorder. Those that have done so on the basis of clinical assessment, and generally have regarded illness and personality as mutually exclusive (Cooper, 1965; Shepherd *et al*, 1966). Shepherd *et al* found that 5% of patients with psychiatric morbidity had personality disorder, and Cooper assessed 8% of chronic psychiatric patients as having disorders of personality. Studies assessing illness and personality separately are sparse; Kessel (1960) found that 5% of patients in a single general practice had abnormal personalities independent of illness, and Hoepfer *et al* (1979) found that 2.7% of primary care attenders met Research Diagnostic Criteria for labile personality and 2% for cyclothymic personality.

The role of personality in psychiatric illness is likely to be of no less importance in general practice than in hospital populations, where personality affects symptom patterns (Snaith *et al*, 1971; Paykel *et al*, 1976), outcome (Vaillant, 1964; Sims, 1975), response to treatment (Hobson, 1953; Tyrer *et al*, 1983), and, in the opinion of some, plays an aetiological role (Goldstein & Linden, 1969; Cutting, 1985). The sparsity of good data on the personality status of patients in primary care reflects difficulties in recording valid and reliable information, the failure to recognise personality as a separate axis of classification from illness, and the hospital-orientated bias of previous work. The development of measures of personality which do not confound traits and current symptoms has overcome the first of these obstacles, and since the introduction of DSM-III (American Psychiatric Association, 1980), there has been increased interest in recording personality status independently from mental illness. As part of a comprehensive assessment of patients with

conspicuous psychiatric morbidity in primary care we therefore included full personality assessment.

### Method

The study was carried out between 1981 and 1983. All patients over the age of 15 (with the exception of those with organic psychoses, mainly senile dementia) who presented to the general practitioner (GP) and were recognised as having a primary psychiatric abnormality (conspicuous psychiatric morbidity) were referred to PRC for a full psychiatric assessment. The first year of the study was carried out at an inner-city general practice in Nottingham, with a registered population of 5328, and the second in a rural practice 20 miles away, with a population of 5395. This was to allow a comparison to be made between the annual prevalence rates for conspicuous psychiatric morbidity in urban and rural practices. Full details of the methodology for the urban part of the study have already been published (Casey *et al*, 1984) and the same general methodology was used in the rural practice.

Formal psychiatric diagnosis was assessed using the ninth edition of the Present State Examination (PSE; Wing *et al*, 1974). The GP was also asked to make an independent diagnosis (based on the current classification at that time, ICD-9; World Health Organization, 1978). The assessor (PRC) also made an independent clinical diagnosis using the ICD-9 notation. Present and past alcohol abuse and dependence was assessed using the Michigan Alcoholism Screening Test (MAST; Selzer, 1971).

Personality was assessed using the Personality Assessment Schedule (PAS; Tyrer & Alexander, 1979). The PAS is a structured interview which has satisfactory inter-rater and cross-national reliability (Tyrer *et al*, 1979, 1984). The schedule consists of 24 personality characteristics, each of which is rated on a nine-point scale depending on the degree of social dysfunction caused by the characteristic in question. Strenuous attempts are made to record habitual pre-morbid personality function to avoid the contaminating effects of mental illness. This is particularly important in major psychiatric disorders because of loss of judgement and insight. The PAS has both subject and informant

versions, and the latter is preferred. However, in studies in which there is little or no mental state disorder assessment of the subject alone is acceptable.

The PAS classifies patients into five major categories (normal, sociopathic, passive-dependent, schizoid, and anankastic personality disorders) using a computer program based on cluster analysis (Tyrer & Alexander, 1979). Nine further subcategories have been identified using the same clustering technique (Tyrer *et al*, 1988). As many of these are close to the categories described in ICD-9, the terminology of the latter was used to facilitate comparison with clinical diagnoses.

A separate assessment of social functioning was carried out using the Social Functioning Schedule (SFS; Remington & Tyrer, 1979), a semistructured interview in which each of the major areas of social function was assessed for the previous month and scored on analogue scales, and a mean social functioning score calculated.

Patients eligible for the study were first given an ICD-9 diagnosis by the GP. The patient was then seen, usually at home, within a week of referral, and assessments were carried out in the following order: SFS, MAST, PSE, PAS. PRC was unaware of the GP's diagnosis until the interviews and assessments were completed. In addition to the research diagnosis, a clinical diagnosis based on ICD-9 was made by PRC, the latter by collating all the information available from medical records, previous history, and current symptoms.

## Results

### Clinical diagnoses

Of 358 patients (127 male) interviewed, the GP and psychiatric assessor (PRC) clinically diagnosed 1 in 20 as having a personality disorder (Table I). Because the numbers were relatively small, all types of personality disorder were examined together. However, although the overall diagnostic rates were similar, in only one in three cases (34.5%) did both assessors agree on the presence of

personality disorder. Only the diagnosis of adjustment reactions showed lower agreement, and this compared with a level of agreement between the GP and psychiatrist of 60% for all diagnoses combined, and of 73% for schizophrenia and 78% for alcohol abuse. Examination of the poor agreement for the clinical diagnosis of personality disorder showed that most of the cases (52%) in which personality disorder was diagnosed by one assessor and not by the other had a diagnosis of anxiety or depressive neurosis.

### Formal personality assessment

Of the 358 patients, 34 were interviewed using the subject version of the PAS alone, 304 also using an informant, and 6 using an informant only; 14 subjects were not assessed.

Of all patients in the sample, 69% had normal personalities; of those assessed, 28% had a personality disorder (Table II). Significantly more of those in the urban practice than in the rural one had personality disorder ( $\chi^2=8.9$ , d.f. 1,  $P<0.01$ ). Explosive personality disorder was the most common overall and particularly in the urban group, while anankastic personality disorder predominated in the rural practice. There were no significant sex differences for all personality disorders combined (male 32.3%, female 23.8%), but explosive personality disorder was more common in men (male 16.5%, female 6.9%),  $\chi^2=4.56$ , d.f. 1,  $P<0.05$ .

### Relationship between personality status and mental state diagnosis

The 28% of patients categorised as having a personality disorder using the PAS were distributed roughly equally across all diagnoses. Only alcohol abuse and dependence was associated more commonly with a diagnosis of personality disorder than other diagnoses ( $\chi^2=42$ , d.f. 1,  $P<0.001$ ). The GP and interviewer made a clinical diagnosis of alcohol abuse in 6.1% and 5.6% of those seen, respectively. Using MAST this rose to 11.5%. The

TABLE I  
Interviewer and GP diagnosis of total sample and of personality disordered subsample

ICD-9 diagnosis	Total sample				Personality disorder present <sup>1</sup>			
	Interviewer		GP		Interviewer		GP	
	%	n	%	n	%	n	%	n
Normal <sup>2</sup> /adjustment reaction	25	89	9	32	16	15	4	4
Neurotic depression	29	103	33	118	19	18	18	17
Affective psychosis	9	32	17	60	1	1	12	11
Schizophrenia <sup>3</sup>	8	28	10	36	9	9	9	9
Anxiety/phobic neurosis	10	36	15	53	15	14	20	19
Personality disorder	6	21	5	17	14	13	12	12
Alcohol abuse	6	21	6	21	16	16	16	16
Other/not assessed	8	28	6	21	10	10	9	8
Total	100	358	100	358	100	96	100	96

1. As assessed by the PAS.

2. This was used only by the interviewer (GP diagnosis of disorder was a condition of entry to the study).

3. Includes paranoid psychosis.

TABLE II  
Formal personality assessment of total sample and of various subsamples (%)

Type	Total (n = 358)	Alcohol abusers <sup>1</sup> (n = 41)	Male (n = 127)	Female (n = 231)	Urban (n = 171)	Rural (n = 187)
Normal	69	27	62	73	61	76
Schizoid	4	5	5	3	4	4
Explosive/sociopathic	11	51	17	7	18	4
Anankastic	6	7	6	5	5	6
Hysterical	1	2	2	1	2	1
Asthenic	4	2	2	5	4	4
Other	2	0	0	3	2	2
Not assessed	4	5	6	3	5	4

#### 1. Diagnosed by MAST.

personality assessment of this group can be seen in Table II. A significant association was found between alcohol abuse and explosive personality ( $\chi^2 = 22.2$ , d.f. 1,  $P < 0.0001$ ).

Examination of the relationship between personality and severity of illness was examined by using the Index of Definition (ID) in the CATEGO program of the PSE. An ID of 5 or greater signifies 'caseness'. Personality disorder was not found to be more common in 'cases' compared with 'non-cases' ( $\chi^2 = 2.6$ , d.f. 1, NS). There was no significant association between personality disorder and any single CATEGO class.

#### Personality disorder and social functioning

Although it was expected that patients with personality disorder would have poorer social functioning than those with normal personality it was also suspected that other factors, including sex, alcohol abuse, and nature and severity of mental state diagnoses, could also impair social functioning. This was therefore examined by a five-way analysis of variance in which the influence of personality disorder in contributing to the variance in mean social

function score was assessed separately for each sex. Personality disorder ( $F = 7.7$ , d.f. 1,  $P < 0.06$ ) and severity of psychiatric disorder (ID) ( $F = 29.9$ , d.f. 2,  $P < 0.0001$ ) made significant contributions in men, and alcohol abuse ( $F = 9.1$ , d.f. 1,  $P < 0.003$ ) and severity of illness (ID) ( $F = 71.2$ , d.f. 2,  $P < 0.0001$ ) in women. Subsequent two-way interactions between the independent variables were also examined, but there were no significant interactions for either sex.

There were no significant differences between the mean social function scores of individual personality disorders. Because personality disorder might affect social functioning in different areas than mental state disorder, a separate analysis was made of the scores for the 12 different areas of social functioning covered by the SFS. Since many patients were both CATEGO 'cases' and had a personality disorder, it was decided to separate two groups from the patients examined. These were separately examined for each of the 12 areas of social function. Because many comparisons were made only those that reached significance at the 1% level are shown (Table III). Thus, from the original sample all those who were CATEGO 'cases' were excluded, and the remaining cohort divided into those with or without personality disorder.

Also from the original sample, those who had a personality disorder were excluded and the remaining cohort divided into those who were classified as cases in the CATEGO system and those who were not. Comparisons were made between the two groups as above (Table III). The results of these analyses, taken together, show that mental state disorder causes greater impairment in social function than personality disorder in the period covered by the assessment (one month).

#### Discussion

The major finding of this study was that personality disorder was much more common in patients with conspicuous psychiatric morbidity in general practice than was expected on the basis of previous studies. Taken together, these studies show that approximately 1 in 12 patients had a diagnosis of personality

TABLE III  
Areas of functioning effected by 'caseness' or by personality disorder

Areas affected by 'caseness' ( $P < 0.01$ )	Areas affected by personality disorder ( $P < 0.01$ )
Employment – stress/ behaviour	Household chores – stress/ behaviour
Household chores – stress/ behaviour	Money – behaviour
Money – stress	
Self-care	
Relationship with children	
Household relationships	
Social contacts	
Spare-time activities – stress/behaviour	

disorder (Kessel, 1960; Cooper 1965; Shepherd *et al*, 1966). The variation between these figures and epidemiological findings is considerable. One would expect that the prevalence of personality disorder in the community would be considerably lower than that in primary care, but figures vary from 3% to 15% in such studies (Srole *et al*, 1962; Leighton *et al*, 1963; Weissman *et al*, 1978; Robins *et al*, 1984). These findings suggest that there is no common threshold for defining personality disorder and that there are major variations in deciding whether personality disturbance is a primary condition or not. These differences probably account for the low level of agreement between the GP and the psychiatric assessor with respect to personality diagnosis in this study. This is in keeping with previous findings (Kendell, 1973; Presly & Walton, 1973), and suggests that the present clinical assessment of personality disorder is inadequate. Our findings suggest that in the presence of long-standing neurotic disturbance the differentiation between personality and neurotic disorder is extremely difficult, and the GP and psychiatrist have different perspectives of this.

When the PAS was used to assess personality 28% of all patients received a diagnosis of personality disorder. It first needs to be established whether this is a true finding. The threshold between normal personality and personality disorder is made in the PAS by a computer program, and it could be argued that the level of discrimination is not necessarily the level for diagnosis. However, there are several reasons for believing that the high figure found in our study is a true finding, and that the others are underestimates. Firstly, there was significantly greater social dysfunction in patients diagnosed with personality disorder compared with those with normal personalities, and the robustness of this finding was independent of mental state; this suggests that this threshold decided in the PAS is clinically useful.

Secondly, the findings of a greater proportion of personality disorders in the inner-city practice compared with the rural one and the relative excess of anankastic personality disorder in the rural practice are in keeping with the results of other investigators (Leighton *et al*, 1963; Kelleher, 1972). Thus the diagnosis of personality disorder by the PAS appears to be roughly similar to those of other investigators using different approaches. The main difference between this study and those of others in primary care is that all patients had a formal assessment for personality disorder. In other investigations the diagnosis of 'personality disorder' is listed together with other mental state disorders, and no allowances are made for their co-occurrence. This

represents the long-standing clinical attitude towards personality disorder and mental illness, in which a patient is presumed to have either a mental illness or a personality disorder; our findings suggest that when *all* patients are assessed on the personality dimension, the prevalence of personality disorder is higher, and may be as high as 13% in the general community (Casey & Tyrer, 1986).

Lastly, the long-term outcome of the patients described in this study has been examined by an investigator who was unaware of the original diagnoses (Tyrer & Sievwright, 1988). This showed the patients diagnosed originally as having personality disorder had significantly more contacts with all levels of the psychiatric services and showed greater morbidity than those without personality disorder in the three years following initial contact. This finding is in keeping with the clinical notion that personality disorder leads to recurrent problems and generally has a poor outcome.

Further prospective studies are needed to confirm our finding of a link between pre-morbid explosive personality disorder and alcohol abuse because of continuing dispute over which of these is primary (Syme, 1957; McCord & McCord, 1960; Kessel & Walton, 1969).

The findings with respect to social functioning confirm that personality disorder is only one of many factors that affect social adjustment. In the short term it is not surprising that mental state disorders have a greater impact on social function than personality disorder, which by definition is of long-standing and to which a degree of adaptation may have been made. Taken as a whole, the findings confirm that psychiatric patients seen in general practice have a significant degree of pathology, and that more attention should be given to personality assessment than has hitherto been the case. GP's should assess formally both mental state and personality, and pass on this information when referring patients to psychiatrists. After all, the GPs are in a special position to judge the presence of long-standing personality abnormality because they generally see patients over several years. It would be of benefit to all if this information could be conveyed concisely and precisely as a personality assessment.

#### Acknowledgements

We thank the GPs in Sneinton (Nottingham) and Collingham (Nottinghamshire) who took part in this study and those patients and their relatives who so willingly gave their time. The study was supported by grants from the Trent Regional Health Authority and the University of Nottingham Hospitals and forms part of one of the author's (PRC) MD thesis.

## References

- AMERICAN PSYCHIATRIC ASSOCIATION (1980) *Diagnostic and Statistical Manual of Mental Disorders* (3rd edn) (DSM-III). Washington, DC: APA.
- CASEY, P. R., DILLON, S. & TYRER, P. J. (1984) The diagnostic status of patients with conspicuous psychiatric morbidity in primary care. *Psychological Medicine*, **14**, 673–681.
- & TYRER, P. J. (1986) Personality, functioning and symptoms. *Journal of Psychiatric Research*, **20**, 363–374.
- COOPER, B. (1965) A study of one hundred chronic psychiatric patients identified in general practice. *British Journal of Psychiatry*, **111**, 595–605.
- CUTTING, J. (1985) *The Psychology of Schizophrenia*. Edinburgh: Churchill Livingstone.
- GOLDSTEIN, S. G. & LINDEN, J. D. (1969) Multivariate classification of alcoholics by means of the MMPI. *Journal of Abnormal Psychology*, **74**, 661–669.
- HOBSON, R. F. (1953) Prognostic factors in electro-convulsive therapy. *Journal of Neurology, Neurosurgery and Psychiatry*, **16**, 275–281.
- HOEPER, E. W., NYCZ, G. R., CLEARY, P. D., *et al* (1979) Estimated prevalence of RDC mental disorder in primary medical care. *International Journal of Mental Health*, **8**, 6–15.
- KELLEHER, M. J. (1972) Cross-national (Anglo-Irish) differences in obsessional symptoms and traits of personality. *Psychological Medicine*, **2**, 33–41.
- KENDELL, R. E. (1973) Psychiatric diagnoses: a study of how they are made. *British Journal of Psychiatry*, **122**, 437–445.
- KESSEL, N. (1960) Psychiatric morbidity in a London general practice. *British Journal of Preventive and Social Medicine*, **14**, 16–22.
- & WALTON, H. (1969) *Alcoholism*. London: Penguin Books.
- LEIGHTON, D. C., HARDING, J. S., MACKLIN, D. B., *et al* (1963) Psychiatric findings of the Stirling County study. *American Journal of Psychiatry*, **119**, 1021–1026.
- MCCORD, W. & MCCORD, J. (1960) *The Origins of Alcoholism*. London: Tavistock Publications.
- PAYKEL, E. S., KLERMAN, G. L. & PRUSOFF, B. A. (1976) Personality and symptom pattern in depression. *British Journal of Psychiatry*, **129**, 327–334.
- PRESLY, A. S. & WALTON, H. J. (1973) Dimensions of abnormal personality. *British Journal of Psychiatry*, **122**, 269–276.
- REMINGTON, M. & TYRER, P. J. (1979) The Social Functioning Schedule – a brief semi-structured interview. *Social Psychiatry*, **40**, 151–157.
- ROBINS, L. N., HELZER, J. E., WEISSMAN, M. M., *et al* (1984) Lifetime prevalence of specific psychiatric disorders in three sites. *Archives of General Psychiatry*, **41**, 949–958.
- SELZER, M. L. (1971) The Michigan Alcoholism Screening Test: the quest for a new diagnostic instrument. *American Journal of Psychiatry*, **127**: 89–94.
- SHEPHERD, M., COOPER, B., BROWN, A. C., *et al* (1966) *Psychiatric Illness in General Practice*. Oxford: Oxford University Press.
- SIMS, A. (1975) Factors predictive of outcome in neurosis. *British Journal of Psychiatry*, **129**, 54–62.
- SNAITH, R. P., MCGUIRE, R. J. & FOX, K. (1971) Aspects of personality and depression. *Psychological Medicine*, **1**, 239–246.
- SROLE, L., LANGER, T., MICHAEL, S., *et al* (1962) *Mental Health in the Metropolis*. New York: McGraw-Hill.
- SYME, L. (1957) Personality characteristics and the alcoholic: a critique of current studies. *Quarterly Journal of Studies on Alcohol*, **18**, 288–302.
- TYRER, P. J. & ALEXANDER, J. (1979) Classification of personality disorder. *British Journal of Psychiatry*, **135**, 163–167.
- , ALEXANDER, M. S., CICCETTI, D., *et al* (1979) Reliability of a schedule for rating personality disorder. *British Journal of Psychiatry*, **135**, 168–174.
- , CASEY, P. R. & GALL, J. (1983) The relationship between neurosis and personality disorder. *British Journal of Psychiatry*, **142**, 404–408.
- , CICCETTI, D. V., CASEY, P. R., *et al* (1984) Cross-national reliability of a schedule for assessing personality disorders. *Journal of Nervous and Mental Disease*, **172**, 718–721.
- , ALEXANDER, J. & FERGUSON, B. (1988) Personality Assessment Schedule. In *Personality Disorders: Diagnosis, Management and Course* (ed. P. Tyrer). London: Wright.
- & SIEVEWRIGHT, H. (1988) Studies of outcome. In *Personality Disorder: Diagnosis, Management and Course* (ed. P. Tyrer). London: Wright.
- VAILLANT, G. E. (1964) Prospective predictors of schizophrenic remission. *Archives of General Psychiatry*, **11**, 509–518.
- WEISSMAN, M. M., MYERS, J. K. & HARDING, P. S. (1978) Psychiatric disorders in a U.S. urban community, 1975–1976. *American Journal of Psychiatry*, **134**, 459–462.
- WING, J. K., COOPER, J. E. & SARTORIUS, N. (1974) *The Measurement and Classification of Psychiatric Symptoms*. London: Cambridge University Press.
- WORLD HEALTH ORGANIZATION (1978) *Mental Disorders: Glossary and Guide to their Classification in Accordance with the Ninth Revision of the International Classification of Diseases (ICD-9)*. Geneva: WHO.

\*Patricia Casey, MD, MRCPsych, *Consultant Psychiatrist/Senior Lecturer, Department of Psychiatry, University College, Cork, Ireland*; Peter Tyrer, MD, MRCP, FRCPsych, *Senior Lecturer (Early Intervention Service), St Charles' Hospital, Exmoor Street, London W10*

\*Correspondence