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The impact of personality disorder in UK primary care: a 1-year follow-up of attenders

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ABSTRACT

Background. The usefulness of the concept of personality disorder has not been properly tested outside psychiatric services. We set out to examine this in primary care, by examining the ability of the diagnosis to predict health status and patterns of service use.

Method. A cohort of consecutive attenders, who had previously been rated for the presence of personality disorder using a standardized assessment, was followed-up at 1 year. The participating general practitioners also rated the personalities of, and their attitudes towards, a proportion of this sample of attenders.

Results. After adjusting for the effects of all covariates, a rating of personality disorder (generated by the standardized assessment) was associated with frequent attendance to general practice and fewer referrals to secondary care. A GP rating of personality disorder was associated with the prescription of psychotropic medication. The level of agreement between a GP rating of personality disorder and the standardized assessment was poor. GPs rated personality disorder more frequently in participants who were perceived to be less compliant, less likeable and more stressful to deal with. Participants with a psychiatric rating of personality disorder did not attract these negative perceptions.

Conclusions. Personality disorder, as rated by a research interview, is a predictor of health service usage. There is a significant disparity between a research rating of personality disorder and the diagnostic ratings made by GPs. The GP ratings of personality disorder were strongly associated with adverse perceptions of the patient's consulting behaviour.

INTRODUCTION

Personality disorders are currently the subject of great debate. However, the evidence supporting the current classification of these disorders is slender. Both the ICD-10 (World Health Organization, 1992) and DSM-IV (American Psychiatric Association, 1994) classification schemes for personality disorder were developed for use in psychiatric practice. Consequently, their usefulness has not been properly tested outside psychiatric services. For instance, the fourth UK National Survey of Morbidity in General Practice showed that the diagnosis of personality disorder is used relatively infrequently by GPs (RCGP, OPCS, DH, 1995). However, the prevalence of personality disorder has been reported to be greater than 25% among primary care patients with conspicuous psychiatric morbidity (Casey & Tyrer, 1990; Patience *et al*. 1995). Personality-disordered individuals have significantly higher rates of contact with psychiatric services (Saarento *et al*. 1997), but their impact on primary care has not been explored. It might also be considerable.

In a previous paper reporting on cross-sectional baseline data, we showed that the prevalence of personality disorder in a consecutive sample of UK primary care attenders, as measured using a standardized informant-based assessment, was 24% (Moran *et al*. 2000).

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This paper reports on a one-year follow-up of that cohort. The main objective of the follow-up was to examine the predictive validity of the diagnosis of personality disorder, by testing its power to affect the outcomes of associated psychiatric and physical morbidity and of patterns of health service use. We also examined how closely a psychiatric rating of personality disorder agreed with a GP rating of personality disorder and whether the attitudes of GPs were associated with the attenders' personality disorder status. We tested the hypothesis that a diagnosis of personality disorder (research interview or GP) would be associated with the following: frequent attendance over a 1-year period, persistence of common mental disorder, increased referrals to secondary care, increased prescription of psychotropic medication, and dissatisfaction with care. These outcomes would all constitute additional burden in general practice.

METHOD

Recruitment and baseline assessments

The study was a follow-up of a cohort of consecutive primary care attenders who had been recruited and assessed 1 year previously for the presence of personality disorder. Full details of the method of recruitment and characteristics of the study sample have been published elsewhere (Moran *et al*. 2000). Fig. 1 shows the numbers of patients recruited, assessed at baseline and successfully followed-up.

In brief, 374 attenders were recruited from a convenience sample of four practices in the London area. Baseline assessments included: a demographic schedule, the 12-item General Health Questionnaire (GHQ-12) (Goldberg, 1972) and the physical functioning subscale of the MOS SF-36 (Brazier *et al*. 1992). Assessment of personality disorder was undertaken using the Standardized Assessment of Personality (SAP) (Pilgrim *et al*. 1993). The SAP is a semi-structured interview for the assessment of personality disorders, designed for use with an informant. The data generated allows a diagnosis of personality disorder to be made according to ICD-10 and DSM-IV criteria. The personalities of 303 participants were rated using the SAP.

Assessments conducted at 1 year

One year after recruitment, a postal survey of all participants was undertaken. Each participant was again asked to complete the GHQ-12 and the physical functioning subscale of the MOS SF-36. Participants were also asked to complete the List of Threatening Experiences Questionnaire (Brugha & Cragg, 1990) and the brief Client Satisfaction Questionnaire (CSQ) (Larsen *et al*. 1979). In addition, the case notes of all participants were examined for attendance frequency, medication prescribed and all secondary care referrals made over the year.

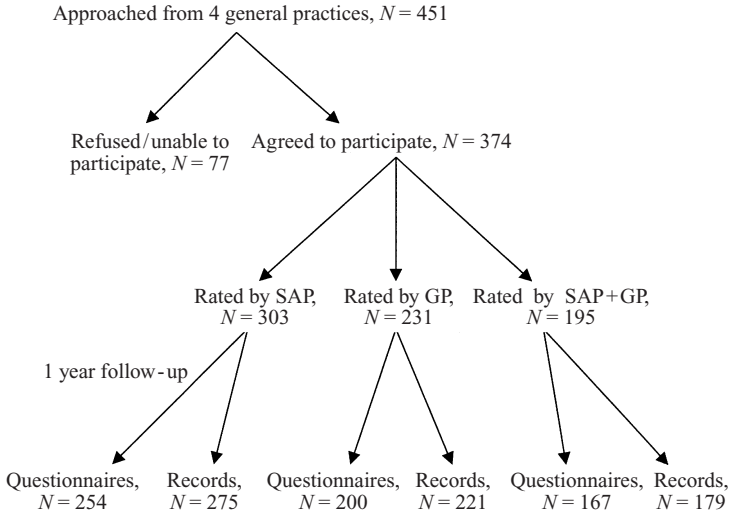

FIG. 1. Flow diagram showing numbers of patients recruited, assessed and followed-up.

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Of the attenders, 231 were rated by their GPs as to whether they had a personality disorder (Fig. 1). The GPs, who were blind to the SAP status of the participants, were asked the following question about each participant: 'Do you think that this patient has a personality disorder?'. The GP's attitude to each patient was then rated using a visual analogue scale along the following dimensions: compliant/non-compliant with treatment, reliable/unreliable attender, likeable/unlikeable, clarity/absence of clarity in presenting problems; and high stress/low stress experienced when encountering the patient. Of the 14 GPs who contributed data, 13 had attended a training course in psychiatry, although only four had undertaken a 6-month job in psychiatry.

Statistical analysis

Analyses were performed using STATA 6.0 software (StataCorp, 1999). Participants were dichotomized on the following characteristics: (1) SAP case for personality disorder (yes/no) (an SAP case of personality disorder means that the participant had a personality disorder according to either ICD-10 or DSM-IV taxonomies); (2) GP case for personality disorder (yes/no).

The following four outcome variables were highly skewed in their distribution and were therefore grouped in order to facilitate analyses.

1 Frequency of attendance: frequent *v*. non-frequent. There is no consensus definition of 'frequent attendance.' Previously used cut-off points have ranged from six to 14 visits per year (Gill & Sharpe, 1999). The attendance data were heavily skewed to the right (see Results section) and inspection of these data indicated that the top third of attenders was a suitable cut-off point. This corresponded to eight or more visits over the year.

2 Number of referrals: one or more referrals to secondary care *v*. no referrals.

3 Psychotropic medication prescribed: one or more times *v*. none.

4 Satisfaction score: the CSQ generates a score of between 0–12, with higher scores indicating increasing levels of satisfaction with services. The following categories were generated: high (CSQ score = 12); medium (CSQ = 10/11); low (CSQ < 10).

The following two additional variables were created.

1 GHQ-12 case: case *v*. non-case. A cut-off score of 2/3 on the GHQ-12 was used to define psychiatric caseness. This score has been shown to produce optimal sensitivity and specificity for the detection of common mental disorder in primary care attenders (Bashir *et al*. 1996). The two sets of GHQ-12 data were combined to form a single variable with four categories: 'never a case', 'persistent case' (case at baseline and at follow-up assessments); 'better' (case at baseline but non-case at follow-up); and 'worse' (non-case at beginning, but case at follow-up).

2 SF-36 physical function status: above average v. below average. Data were dichotomized using the general population mean (88·40, S.D. 17·98) as the cut-off point (Jenkinson *et al*. 1993). The two sets of physical function data were then combined into a single variable with three categories: persistently above average; persistently below average; and changing physical function status (includes improving and deteriorating).

The following outcome variables were examined: persistence of common mental disorder; persistence of below average physical function; frequent attendance; referrals to secondary care, prescription of psychotropic medication and participant's satisfaction. Univariate associations between the outcomes and the ratings of personality disorder were initially examined using chi-square tests. Crude odds ratios (with 95% confidence intervals) were generated for the associations and logistic regression was then used to investigate associations between personality disorder and the outcome variables controlling for the effect of potential confounding factors. The levels of agreement between the GP ratings and the SAP rating of personality disorder were determined by calculating kappa coefficients. The GPs' attitudes were analysed as continuous variables using Mann–Whitney U tests.

RESULTS

Completeness of follow-up

Of the 303 participants who had SAP ratings at baseline, 254 returned completed postal questionnaires (Fig. 1). Participants with SAP-

Table 1. *Baseline characteristics of the sample according to personality ratings*

Characteristic	SAP PD status ($N = 72$)			GP rating of PD ($N = 62$)		
	Yes *N* (%)	No *N* (%)	*P*	Yes *N* (%)	No *N* (%)	*P*
Age (years)						
Median	39	40	0·38	44	41	0·51
[25, 75]	[30, 49]	[30, 54]		[33, 51]	[31, 54]	
Gender						
Male	26 (36)	73 (32)	0·48	27 (44)	45 (27)	0·01
Female	46 (64)	158 (68)		35 (56)	124 (73)	
Social class						
Manual	23 (32)	58 (25)	0·34	17 (27)	44 (26)	0·59
Non-manual	48 (67)	164 (71)		42 (68)	121 (72)	
Missing data	1 (1)	9 (4)		3 (5)	4 (2)	
Marital status						
Single	40 (56)	96 (42)	0·04	31 (50)	74 (44)	0·4
Married	32 (44)	135 (58)		31 (50)	95 (56)	
Ethnicity						
White	55 (76)	186 (81)	0·45	55 (89)	124 (73)	0·01
Non-white	17 (24)	45 (19)		7 (11)	45 (27)	
GHQ case						
Yes	39 (54)	96 (42)	0·04	36 (58)	69 (41)	0·04
No	30 (42)	131 (57)		26 (42)	95 (56)	
Missing data	3 (4)	4 (2)		0 (0)	5 (3)	
Physical function						
Below average	26 (36)	89 (39)	0·71	33 (53)	65 (38)	0·04
Above average	46 (64)	142 (61)		29 (47)	104 (62)	

Table 2. *Comparison of classification of* 195 *participants for the presence of personality disorder by SAP and GP*

GP rating of PD	SAP rating of PD		Total
	Yes	No	
Yes	13	37	50
No	35	110	145
Total	48	147	195

defined personality disorders were not over-represented among those lost to follow-up ($\chi^2 = 0{\cdot}06$; $P = 0{\cdot}81$). Those lost to follow-up were, however, more likely to be male ($\chi^2 = 3{\cdot}97$; $P = 0{\cdot}05$) and of a younger age (*t* test, 2-tailed $P = 0{\cdot}005$) compared with those successfully followed-up. GP case records were available for 275 participants. Participants with SAP-defined personality disorders were not over-represented among those with incomplete notes data ($\chi^2 = 2{\cdot}90$; $P = 0{\cdot}09$). Complete case record and postal survey data were available for 221 participants and the final logistic regression models for the effect of SAP-defined personality disorder were based on this restricted sample of 221.

Of the 231 participants who received GP ratings, 200 completed postal questionnaires. Participants with GP-defined personality disorders were not over-represented among those lost to follow-up ($\chi^2 = 0{\cdot}54$; $P = 0{\cdot}46$). There was no difference in the gender ($\chi^2 = 1{\cdot}93$; $P = 0{\cdot}16$) or age (*t* test, 2-tailed $P = 0{\cdot}1$) of those lost to follow-up. Case notes were available for 221 participants. Participants with GP-defined personality disorders were not over-represented among those with incomplete notes data ($\chi^2 = 0{\cdot}56$; $P = 0{\cdot}76$). Complete case note and postal survey data were available for 179 participants and the final adjusted logistic regression models for the effect of GP-defined personality disorder were based on this restricted sample.

GP ratings of personality disorder

GP ratings of personality were available for 231 of the 374 participants (62%). Ratings could not be obtained for 143 participants, as the GPs could not recall the participants accurately enough to rate. These participants differed only

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in terms of being younger than those who were rated (Mann–Whitney U test $P = 0{\cdot}02$). Of the 231 participants rated by their general practitioner, 62 (26·8%; 95% CI: 21·1–32·6) were classed as personality-disordered. An SAP rating of personality disorder was associated with being single and being a GHQ-12 case at baseline (Moran *et al*. 2000). A GP rating of personality disorder was associated with being male, white, being a GHQ-12 case at baseline and being of below average physical function status at baseline. A comparison of the baseline associations with SAP and GP ratings of personality disorder is shown in Table 1.

Level of agreement between GP and SAP ratings and attitudes of GPs towards attenders

One hundred and ninety-five participants had both an SAP and a GP rating of their personality. The level of agreement between the GP and the SAP rating of personality disorder in these 195 participants was very low ($\kappa = 0{\cdot}03$; $P = 0{\cdot}64$) (Table 2). Participants rated as SAP positive but GP negative for personality disorder, were more likely to be persistent GHQ-12 cases ($\chi^2 = 12{\cdot}51$, $P = 0{\cdot}01$), compared to those rated as SAP negative and GP negative, although no other statistically significant differences emerged between the subgroups. As the SAP may overdiagnose cluster B personality disorders (Mann *et al*. 1999) the level of agreement between SAP and GP ratings was re-examined, excluding participants with a cluster B personality disorder ($N = 13$). The level of agreement remained poor ($\kappa = 0{\cdot}04$; $P = 0{\cdot}61$).

Those rated as personality-disordered by their GP, were perceived to be less compliant ($P = 0{\cdot}02$) less likeable ($P < 0{\cdot}0001$), less clear when presenting their problems ($P < 0{\cdot}0001$) and more stressful to deal with ($P < 0{\cdot}0001$). There was no difference in the perception of the reliability of their attendance ($P = 0{\cdot}65$). There were no significant associations of the attitudes of GPs towards participants rated as personality-disordered on the SAP.

The effect of an SAP rating of personality disorder on 1-year outcome

Of the 254 participants who had been rated by the SAP, and who returned a postal questionnaire (Fig. 1), 80 were of persistently below average physical function and 56 participants were persistent cases for common mental disorder. The median number of attendances over the year was five (range 0–42; interquartile range, 3–9) and 81 out of 275 participants whose records were examined, attended their GP on eight or more occasions, corresponding to the top third of attenders. One hundred and one participants were referred to any form of secondary care on at least one occasion and 46 participants were prescribed psychotropic medication on at least one occasion.

The effects of an SAP rating of personality disorder on the 1-year health status and service utilisation of participants are shown in Table 3. Personality disorder was associated with frequent attendance and this association remained statistically significant after adjustment was made for all covariates. In addition, personality disorder was significantly associated with a reduction in the likelihood of referral to secondary care. Although personality disorder was associated with the persistence of common mental disorder, this association failed to remain statistically significant after controlling for all covariates. No associations were found between personality disorder and physical function status, the prescription of psychotropic medication or participant satisfaction.

The effect of a GP rating of personality disorder on 1-year outcome

Of the 200 participants who had been rated by a GP, and who returned a postal questionnaire, 69 were of persistently below average physical function and 47 were persistent cases for common mental disorder. Of the 221 participants rated by a GP and whose case records were examined, 75 were frequent attenders (eight or more visits over 1 year). Ninety-three participants were referred to secondary care on at least one occasion and 45 participants were prescribed psychotropic medication on at least one occasion.

The effects of a GP rating of personality disorder on 1-year outcome are also shown in Table 3. A GP rating of personality disorder was significantly associated with the prescription of psychotropic medication, after adjusting for all covariates. A rating of personality disorder was also associated with the persistence of common mental disorder and below average physical function. However, neither of these associations,

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Table 3. *The effect of personality disorder, as rated by the SAP and GP, on clinical outcomes, at 1 year*

Outcome	SAP personality disorder ($N = 72$)		GP personality disorder ($N = 62$)	
	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)
Frequent attender	1·97 (1·10–3·52)	2·16 (1·06–4·4)[a]	2·21 (1·18–4·13)	1·99 (0·91–4·37)[a]
Referred to secondary care	0·55 (0·3–1·02)	0·46 (0·22–0·99)[a]	1·23 (0·67–2·24)	1·42 (0·65–3·11)[a]
Persistence of CMD	2·29 (1·09–4·78)	1·86 (0·79–4·37)[b]	3·79 (1·59–9·19)	2·39 (0·79–7·23)[b]
Persistence of below average physical function	0·94 (0·47–1·89)	0·94 (0·37–2·37)[c]	2·23 (1·05–4·73)	1·83 (0·66–5·09)[c]
Prescribed psychotropic medication	1·77 (0·89–3·51)	1·21 (0·51–2·9)[a]	4·60 (2·22–9·54)	3·58 (1·44–8·93)[a]
Satisfaction category				
Low	1·44 (0·69–3·0)[d]	1·18 (0·52–2·72)[a]	0·98 (0·42–2·28)[e]	1·0 (0·36–2·79)[a]
Medium	1·19 (0·59–2·4)	1·31 (0·59–2·91)[a]	1·21 (0·58–2·52)	1·07 (0·46–2·51)[a]
High	1·0 (baseline)	1·0 (baseline)	1·0 (baseline)	1·0 (baseline)

[a] Adjusted for age, gender, marital status, class, ethnicity, employment status, life events, SF-36 subscale score, GHQ-12 score.
[b] Adjusted for age, gender, marital status, class, ethnicity, employment status, life events, SF-36 subscale score.
[c] Adjusted for age, gender, marital status, class, ethnicity, employment status, life events, GHQ-12.
[d] Score test for trend $P = 0·33$.
[e] Score test for trend $P = 0·98$.

nor that with frequent attendance, remained significant after adjusting for all covariates. No associations were found between a rating of personality disorder and referrals or participant satisfaction.

DISCUSSION

This study is characterized by two positive features. First, it is prospective in nature and enables examination of the predictive validity of the diagnosis of personality disorder. Secondly, the use of an informant-based instrument minimized the possibility of concurrent abnormal mental state biasing the assessment of personality. Despite these features, a number of biases may have operated. A convenience and not a random sample of practices was used and the London practices in this study will not be representative of general practices throughout the UK. The findings may not therefore be generalizable to other practices. A third of the case notes were assessed by a researcher (P.M.) aware of the hypothesis being tested. Furthermore, some visits may not have been recorded and a systematic under-recording of the visits made by non-personality disordered participants could explain the findings. Losses to follow-up were however, not associated with personality disorder status and therefore, selection bias (according to baseline personality status) is unlikely to explain the findings.

The standardized psychiatric diagnosis of personality disorder predicted frequent attendance to general practice and a reduced likelihood of referral to secondary care. Frequent attenders are more likely to be female, divorced or widowed, manual workers and to have chronic health problems (Gill & Sharpe, 1999). The association between personality disorder and frequent attendance was independent of the effects of these potential confounding variables. Alternative explanations for the finding could, however, be from a greater frequency of alcohol and drug-related disorders in attenders with a personality disorder, and residual confounding by psychiatric and physical function status. The prevalence of personality disorders steadily increases with each increasing level of psychiatric care (de Girolamo & Reich,1993). This suggests that personality disorder is a positive influence on referral, although our finding of an association with a reduction in referrals to all secondary care may be at odds with this. Our finding might reflect a trend in UK general practice towards referring patients with severe mental illness, but not personality-disordered patients who do not have severe mental illness.

We previously reported a prevalence for either

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ICD-10 research criteria or DSM-IV criteria of 24% (95% CI: 19·0–28·6) in this sample of attenders. The GPs in our study rated 27% of the attenders as having a personality disorder. These prevalence figures are strikingly high, although are comparable with each other and also with estimates of prevalence of personality disorder obtained from studies of primary care patients with conspicuous psychiatric morbidity (Casey & Tyrer, 1990; Patience *et al*. 1995). The high prevalence of personality disorder identified by the GPs, may reflect our use of a 'forced choice' method to ascertain whether personality disorder was present. In contrast, previous studies of personality disorder using clinicians as case detectors, have given GPs the option of giving a personality disorder diagnosis, rather than compelling them to make a rating (Casey & Tyrer, 1990). Nevertheless, a GP rating of personality disorder predicted the prescription of psychotropic medication over the course of the year.

The participants identified by the GPs as being personality-disordered were generally not the same as those identified as being personality-disordered by the SAP. Participants who were SAP-diagnosed personality disorder, but not so rated by GPs, were more likely to have persistent common mental disorder. The other subgroup analyses failed to find any other significant differences, perhaps because of the small numbers involved in these comparisons (type II error). It seems likely that the SAP and the GPs were rating different constructs. While the research interview relied on standardized criteria in order to allow a rating of personality disorder to be made, the GP ratings of personality disorder were strongly associated with the perception of the patient's consulting behaviour. The GPs rated personality disorder more frequently among patients who were perceived to be generally more difficult. These patients were also more likely to have physical and psychiatric morbidity at baseline and to be prescribed psychotropic medication over the course of the year. As with all psychiatric terms, personality disorder can be misapplied as a pejorative label. Doctors should therefore be cautious about making the diagnosis in the absence of clear information. However, this prospective study in a non-psychiatric setting, tentatively suggests that a standardized rating of personality disorder is useful in predicting health service usage and is not merely identifying patients who are disliked by health professionals (Lewis & Appleby, 1988).

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