Socio-demographic differences in general practice consultation rates for psychiatric disorders among patients aged 16–64

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Data from the Fourth National Survey of Morbidity in General Practice was analysed to examine the relationship between socio-demographic factors and consultation rates for psychiatric disorders. In England and Wales in 1991/92, 5.7 per cent (64,657/1,141,770) of all consultations with general practitioners were for psychiatric disorders. Consultation rates increased for all diagnoses from Social Class I to V. Women had consultation rates 82 per cent higher than men. Although overall consultation rates were highest in Whites, Afro-Caribbeans had higher consultation rates for schizophrenia and personality disorders. Age, sex and ethnicity were associated with substantially differing consultation rates for psychiatric disorders in general practice.

Introduction

Most patients with psychiatric disorders are treated in primary care, with only a minority being referred to specialist psychiatric services.[1] Patients consulting with psychological symptoms constitute a significant proportion of primary care workload, and one previous study reported that one quarter of routine general practice consultations concerned mental health problems.[2] The National Service Framework for Mental Health has emphasised the importance of primary care in the assessment and treatment of people with mental health problems.[3] It is therefore important that the patterns of utilisation for psychiatric disorder in primary care are investigated and understood.

The Government has emphasised the importance of tackling health inequalities.[4] Inequalities in psychiatric morbidity have been demonstrated repeatedly.[5] For example, the recent British psychiatric morbidity survey demonstrated a significant relationship between socio-demographic variables (unemployment, marital status, female gender) and prevalence rates of psychiatric disorder.[6] Socio-demographic differences in the use of psychiatric services have also been demonstrated but much of this research has been carried out in secondary care (on admission rates to psychiatric wards).[7] In this paper, we report the results of a large-scale study of the association between socio-demographic variables and consultation rates for psychiatric disorders in primary care.

Methods

The Fourth National Survey of Morbidity in General Practice was carried out between September 1991 and August 1992.[8] The objective of the survey was to examine the workload and pattern of disease in general practice by the age, sex, and socio-economic status of patients. The analysis presented in this paper examines patterns in psychiatric consultations among patients aged between 16 and 64 years.

Sixty volunteer general practices took part in the study covering 1 per cent sample of the population of England and Wales (502,493 patients). The sample was representative of the population for age, sex, social class, and housing tenure, but there was under-representation of ethnic minority groups because relatively few inner city practices participated in the survey.

Recording and validation of morbidity data

Before the survey started doctors and staff from each practice attended three 2-day training sessions on the recording of morbidity data. Practices then collected data for 2 to 4 weeks before the start of the survey. These data were analysed and any errors or inconsistencies reported to the practices. Once the morbidity survey started, general practitioners and practice nurses recorded information on all face to face contacts with patients. Each reason for consulting and the place of contact was entered into patient records on the practice computer and defined as one consultation. Every consultation was given a Read code and the data were transferred on disk to the Office of Population Censuses and Surveys where an International Classification of Diseases, Ninth Revision (ICD 9) code was assigned. Validation studies at the end of the study showed that 96 per cent of surgery contacts and 95 per cent of contacts at home had been recorded by the practices and that 93 per cent of diagnoses had been recorded correctly.

Socio-economic data

Trained field workers successfully collected socio-economic and demographic data (occupation, housing tenure, ethnicity and marital status) on 83 per cent of the patients in the survey. Social class was derived from information on occupation status. Ethnicity was categorised as White, Afro-Caribbean, Asian, and Other (based on the categories used in the 1991 Census).

Classification of disorders

Psychiatric disorders were defined as all diagnoses within ICD 9 Chapter 5 (Mental Disorders). ICD 9 codes were aggregated to produce diagnostic categories used in this paper; Schizophrenia ICD 295, Bipolar Affective Disorder ICD 296, Neurotic Disorders ICD 300 excluding 300.4, Personality Disorders ICD 301, Alcohol Dependence ICD 303, Drug Dependence ICD 304, Depression ICD 298.0, 300.4, 309.1, 311. Annual consultation rates are expressed as the number of consultations per 1,000 patients and have been adjusted to take into account differing lengths of follow-up (by using person years at risk as the denominator).

Multifactorial analysis

Relative risks for consultation rates adjusted for social class, ethnic group, marital status, employment, age group and sex were calculated using a generalised linear model. Only the 257,314 patients (79 per cent of the total sample) with complete socio-economic data were included in this analysis.

Results

There were 324,395 patients aged 16–64 registered with participating practices during the study year. A total of 64,657 consultations for psychiatric disorder were made during the year among 16- to 64- year olds and these consultations accounted for 5.7 per cent (64,657/1,141,770) of all consultations in this age group. This compared with 16 per cent and 11 per cent of total consultations for respiratory and musculoskeletal disorders respectively.

In total, 7.7 per cent (24,928/324,395) of adult patients consulted at least once for a psychiatric disorder. Neurotic disorders made up the highest percentage of total psychiatric consultations (32 per cent), followed by depression (27 per cent), bipolar affective disorder (9.4 per cent), drug dependence (7.1 per cent), schizophrenia (2.9 per cent), alcohol dependence (2.3 per cent), and personality disorders (2.0 per cent).

Differences in consultation rates across social class

Consultation rates for all the psychiatric diagnoses studied combined increased from social class I to class V. For both sexes, rates were higher in people from social class V compared to people from social class I. Social class V had 3 fold and 2.6 fold higher consultation rates than social class I in men and women, respectively (Table 1).

In men (Table 2), rates for social class V compared to class I were 17 fold higher for schizophrenia, 8 fold higher for drug dependence, and 2.6 fold higher for depression and neurotic disorders, there was no clear social class gradient for bipolar affective disorder. In women (Table 3), rates in Social Class V compared to Class I were 4 fold higher for schizophrenia, 12.8 fold higher for drug dependence, about 2.5 fold higher for depression and bipolar affective disorder, and 2 fold higher for neurotic disorders.

Sex differences in consultation rates

Unadjusted consultation rates for all psychiatric disorders combined were 82 per cent higher in women than in men. The highest psychiatric consultation rates were seen among women aged 45–64 years, in whom the consultation rate was 3.6 fold higher than in the group with the lowest consultation rates, 16- to 24- year old men (Table 1). Men however had higher consultation rates than women for schizophrenia (32 per cent higher), alcohol dependence (3.8 fold higher), and drug dependence (43 per cent higher) (Table 3).

Differences in consultation rates across ethnic groups

Consultation rates for all psychiatric diagnoses combined were highest in Whites (20 per cent and 94 per cent higher than Afro-Caribbeans and Asians respectively). This relationship held consistently when overall consultation rates were stratified by gender (Table 1)

Afro-Caribbeans had the highest consultation rates for schizophrenia. Afro-Caribbean men had rates 7 fold and 18 fold higher than Whites and Asians respectively. Among women, Afro-Caribbeans had rates 8 fold and 27 fold higher than Whites and Asians respectively. Afro-Caribbeans also had the highest consultation rates for personality disorders. For this disorder, Afro-Caribbean men had rates 5 fold and 2 fold higher than Whites and Asians respectively (Table 2), and Afro-Caribbean women had rates 4 fold and 3 fold higher than Whites and Asians respectively (Table 3).

White men and women had highest consultation rates for drug dependence. Asian women in the study sample had no consultations for alcohol and drug dependence (Table 3). The rate in Asian men for drug dependence was also substantially lower than the other groups. Asian men had the lowest consultation rates for depression (85 per cent and 60 per cent lower than White and Afro-Caribbean men respectively, Table 2).

Table 1 **Mean annual consultation rates for psychiatric disorders per 1,000 person years at risk, by age**

	Age							
	Men				Women			
	16–24	25–44	45–64	All	16–24	25–44	45–64	All
Social Class								
I	58	94	153	116	111	192	196	190
II	91	108	158	127	172	259	278	258
IIIN	95	182	207	171	158	322	386	291
IIIM	116	187	192	178	265	312	336	316
IV	126	236	257	220	243	408	398	371
V	164	450	368	360	276	498	565	496
Ethnic group								
White	105	184	205	176	185	321	347	304
Afro-Carribean	153	193	87	157	158	217	374	237
Asian	65	96	118	96	75	183	179	156
Other	60	204	108	152	81	207	333	198
Employment status								
Employed Full Time	65	104	128	106	150	233	253	218
Employed Part Time	114	318	188	212	214	274	297	280
Unemployed	257	503	361	396	332	604	606	500
Student	59	333	159	86	110	330	394	137
Permanently sick	1181	1461	699	928	998	1846	1071	1322
Other	168	438	211	227	312	363	358	356
Marital Status								
Single	102	298	346	196	174	351	534	252
Married	122	104	166	134	225	262	288	272
Separated / divorced	229	459	438	446	353	562	600	569
Widowed	750	841	346	402	1720	665	456	480
All patients	91	155	184	152	164	290	325	276

Table 2 **Mean annual consultation rates per 1,000 men years at risk for specified psychiatric disorders**

	Specified Psychiatric Disorder						
	Bipolar affective disorders	Schizophrenia	Neurotic disorders	Personality disorders	Alcohol dependence	Drug dependence	Depression
Social Class							
I	17.0	1.5	33.2	2.0	8.5	9.6	21.6
II	13.4	1.4	40.4	1.8	4.9	6.6	32.8
IIIN	13.1	7.1	55.9	7.4	7.8	15.9	35.0
IIIM	13.3	4.6	48.2	3.2	8.8	23.6	41.7
IV	16.3	12.1	58.4	8.1	13.0	25.4	50.9
V	19.4	25.7	84.8	16.5	23.9	78.5	56.7
Ethnic group							
White	14.5	7.7	49.4	4.6	8.9	20.7	38.5
Afro-Carribean	5.7	50.9	21.2	24.1	5.7	7.1	14.2
Asian	9.1	2.8	39.1	9.8	4.2	0.7	5.6
Other	7.6	0.0	50.8	5.1	1.3	10.2	25.4
Employment status							
Employed Full Time	8.6	1.1	37.4	1.6	3.9	5.4	25.0
Employed Part Time	31.7	23.2	51.6	5.7	8.0	22.2	39.7
Unemployed	24.4	16.0	84.8	15.3	24.3	102.4	66.3
Student	7.7	4.8	22.2	2.3	0.5	13.4	16.6
Permanently sick	79.8	102.5	195.7	41.0	66.0	113.4	201.4
Other	24.8	7.1	58.3	5.8	10.7	17.0	59.3
Marital Status							
Single	13.7	16.2	48.1	8.0	8.5	38.6	27.9
Married	13.2	1.7	43.8	2.6	4.0	5.2	37.0
Separated / divorced	26.4	21.1	101.2	11.0	57.7	60.6	101.4
Widowed	25.9	17.6	97.3	4.1	9.3	70.4	73.5

Table 3 **Mean annual consultation rates per 1,000 women years at risk for specified psychiatric disorders**

	Specified Psychiatric Disorder						
	Bipolar affective disorders	Schizophrenia	Neurotic disorders	Personality disorders	Alcohol dependence	Drug dependence	Depression
Social Class							
I	20.4	2.3	70.4	3.0	0.6	3.0	59.5
II	28.8	2.6	91.6	2.6	1.9	6.7	80.7
IIIN	34.1	7.9	97.0	3.8	2.1	14.1	84.7
IIIM	31.0	3.0	114.0	3.3	1.9	16.8	100.7
IV	36.2	9.8	131.3	8.3	2.4	15.2	116.7
V	51.4	9.2	147.3	16.1	4.2	38.5	156.8
Ethnic group							
White	31.5	5.1	105.5	4.5	2.0	13.4	94.3
Afro-Carribean	19.5	41.4	68.9	18.4	4.6	2.3	28.7
Asian	3.1	1.5	59.3	5.4	0.0	0.0	47.8
Other	12.2	2.4	62.4	9.8	0.0	11.0	44.1
Employment status							
Employed Full Time	20.0	2.4	81.4	1.3	1.6	4.7	67.7
Employed Part Time	33.0	1.0	103.3	3.2	1.0	7.1	88.7
Unemployed	36.5	12.4	151.5	10.3	6.7	58.5	149.1
Student	7.9	2.8	52.1	1.4	0.3	0.8	33.2
Permanently sick	161.9	95.0	386.0	61.2	10.6	89.0	361.8
Other	36.7	6.1	118.8	5.3	2.2	20.6	114.0
Marital Status							
Single	25.4	8.5	83.4	6.3	1.6	15.7	67.0
Married	28.4	2.8	99.7	2.9	1.7	7.8	88.4
Separated / divorced	57.7	11.0	184.6	10.8	5.2	36.4	182.0
Widowed	45.2	18.8	136.5	6.6	0.5	25.7	131.1

Differences in consultation rates according to marital status

For both men and women, the highest overall consultation rates were found in patients who were divorced or separated. In men, the lowest overall consulting rates were found in those who were married (70 per cent lower than divorced or separated men; Table 1). Among women, single women had lowest overall consulting rates (55 per cent lower than in divorced or separated women, Table 1).

Differences were particularly marked in consultation rates for alcohol dependence in men, where divorced or separated men had rates 7 and 14 fold higher than those who were single or married respectively. Consultation rates for depression in both men and women were lowest in single people (Tables 2 and 3). Rates in single women were 63 per cent lower than in divorced or separated women. Rates in single men were 72 per cent lower than in divorced or separated men.

Differences in consultation rates according to employment status

For both men and women, the highest consultation rates for all psychiatric diagnoses combined were seen in those registered as permanently sick. Students and those in full time employment had the lowest consultation rates. Men classified as permanently sick had overall rates 11 fold and 9 fold higher than students and the full time employed (Table 1). For women classed as permanently sick, overall rates were 10 fold and 6 fold higher than students and the full time employed respectively (Table 1). Both unemployed men and women had high consultation rates; these rates were very similar to those found in patients from Social Class V.

Multifactorial analysis

After adjustment, social class, ethnic group, marital status, and employment status remained independent predictors of psychiatric consultation rates. Patients in Social Class V had an adjusted consultation rate over 70 per cent higher than patients from Social Class I. Patients from Asian, Afro-Caribbean and other ethnic groups had lower overall adjusted consultation rates than Whites. Patients unable to work due to permanent sickness had consultation rates six-times higher, and unemployed patients seeking employment over twice as high, as patients who were employed full-time (Table 4).

Discussion

This study is the first large-scale prospective analysis of the association of socio-economic factors on consultation rates for psychiatric disorders amongst adults aged 16–64 in primary care. The results highlight associations between socio-demographic factors and demand for primary care services for the management of psychiatric disorders. The move toward a primary care-led NHS and the greater commissioning role of general practitioners emphasises the importance of the study's findings.

Consultation rates increased progressively for all diagnoses from Social Class I to V; overall rates were over twice as high in patients from Social Class V compared to those in Social Class I and remained substantially higher after adjustment for potential confounding factors. However, our study can not answer the question of whether there is a direct causal association between low social class and higher consultation rates, or whether people with mental health problems 'migrate' down to lower social classes.

Table 4 **Consultation rates for psychiatric disorders: relative risks with 95% confidence intervals adjusted for social class, ethnic group, marital status, employment, age group and sex**

	Relative consultation rate	95% confidence intervals
Social Class		
I	1.00	-
II	1.17	1.12-1.22
IIIM	1.27	1.22-1.33
IIIN	1.35	1.30-1.41
IV	1.47	1.41-1.54
V	1.73	1.65-1.82
Other	1.15	1.09-1.21
Ethnic Group		
White	1.00	-
Afro-Carribean	0.75	0.68-0.84
Asian	0.54	0.49-0.60
Other	0.77	0.68-0.86
Employment status		
Working full time	1.00	-
Working part time	1.46	1.42-1.50
Unemployed	2.75	2.68-2.84
Student	1.00	0.94-1.07
Permanently sick	6.24	6.07-6.41
Other	1.81	1.77-1.86
Marital status		
Single	1.00	-
Married	0.68	0.67-0.70
Separated / Divorced	1.37	1.33-1.40
Widowed	1.06	1.01-1.11
Age group		
16–24	1.00	-
25–44	1.86	1.80-1.91
45–64	1.76	1.70-1.82
Sex		
Male	1.00	-
Female	1.63	1.60-1.67

For all psychiatric disorders combined, women had rates 82 per cent higher than men, though men had higher consultation rates for schizophrenia and alcohol and drug dependence. There were also significant differences across ethnic groups; whites had the highest overall rates, and Afro-Caribbeans had substantially higher rates for schizophrenia and personality disorders. Asians had particularly low consultation rates for alcohol and drug dependence. For all diagnoses, highest rates were found in patients who were divorced or separated, permanently sick, or seeking employment. These differences persisted after multifactorial adjustment.

The study findings are limited because the practices taking part in the survey were volunteers. This resulted in an under-representation of practices from inner city areas and hence also lower unemployed and ethnic minorities among the patients in the study. The diagnoses in the study relied on each GP's interpretation of the patient's problems. The data were collected prospectively, and validation studies have suggested that there was good recording of diagnostic data. The study sample was large (1 per cent of the population of England and Wales) and reasonably similar to the overall population for most socio-economic characteristics. Hence, it seems unlikely that biases could account for the large differences seen in consultation rates between patients with different socio-demographic characteristics.

Goldberg and Huxley[1] have described a 5-level 4-filter model for the pathway of care for psychiatric disorders. Our findings give an indication of the extent to which community morbidity presents to primary care services (filter 1) as well as the detection of conspicuous psychiatric morbidity in primary care (filter 2). The community prevalence of disorder may effect consultation rates, other factors may also have an effect on primary care consultation rates; Andersen *et al*[9] have described three sets of factors which account for utilisation of health care; *societal* (such as prevailing attitudes toward health) *system* (such as availability of health services) *individual* (such as health beliefs and illness factors). The results will also be influenced by the ability of GPs to detect mental disorder.

The percentage of total consultations that were for psychiatric disorders (5.7 per cent) was lower than reported in some previous studies, particularly as research has indicated that primary care attenders have high levels of psychiatric morbidity.[2] The consultation rates observed in this study can be used as an indicator of the explicit service demand in primary care for psychiatric disorders. Using the General Health Questionnaire, Vazquez-Barquero et al found the prevalence rate of mental illness in primary care attenders was 33 per cent.[10] Previous studies indicate that general practitioners may fail to detect a substantial proportion of psychiatric morbidity,[11] and this may be one explanation for the low consultation rates found in our study. Another possible explanation is that where patients presented with both a physical problem associated with a mental heath problem, only the diagnosis for the physical problem was coded by the general practitioner.

Consultation rates for symptoms of schizophrenia were particularly low in our study, and this has been noted previously in other studies. Lang *et al* studied 131 patients with schizophrenia attending primary care, and found that only 6 per cent attended solely with regard to their mental state.[12] Nazareth *et al* found that patients with schizophrenia attending primary care had significantly lower disease specific assessments than a control group of patients with a chronic physical disease.[13] In a questionnaire study of the general practitioners of 100 patients with serious mental illness, Bindman et al found only a fifth regarded themselves as involved in the actual monitoring and treatment of the mental illnesses of these patients.[14]

Community epidemiological studies have repeatedly demonstrated that socio-economic status is inversely related to psychiatric morbidity.[5] Other demographic factors found to be related to a high prevalence of morbidity include, divorced or separated status, and unemployment.[6] Our study indicates that these factors are associated with significantly higher service demands at the primary care level, and complements studies that indicate a strong correlation between social deprivation and psychiatric service demand at secondary care level.[15, 16] However, we can not say that there is a direct causal association between low social class and higher psychiatric consultation rates.

The need for research into the recognition and treatment within primary care of common mental disorders among ethnic minorities has been commented upon.[17] Our study indicates that ethnic groups have substantially different consultation rates for psychiatric disorders, and that these differences are maintained when rates are adjusted for potential confounding factors such as gender, age and social class.

Afro-Caribbeans had particularly high consultation rates for schizophrenia and personality disorders. This result contradicts previous research that indicated that Afro-Caribbeans have low consultation rates for mental disorders.[18] Repeated studies appear to indicate that the Afro-Caribbean population in the United Kingdom has a higher incidence and prevalence of schizophrenia than other ethnic groups,[19, 20] and this may be one cause of the high consultation rates seen. Other factors may include misdiagnoses or inadequate treatment in secondary care, resulting in the patient attending primary care more often for treatment. There are no studies regarding ethnic differences in

the prevalence of personality disorder in the United Kingdom. Studies of the prevalence of non-psychotic disorders in Afro-Caribbeans and Asians have reported conflicting results. The low rates of consultation for depression, neurosis and drug dependence found in these groups may be due to low community prevalence rates, lack of recognition by general practitioners, or lack of willingness to consult for these problems.

Conclusions

The explanations for the relatively low psychiatric consultation rates found in this study require further research, particularly in the light of the previously reported high prevalence of psychiatric morbidity in primary care attenders and in the community. The particularly low consultation rates for schizophrenia highlight the importance of improving the primary care management of this condition. Means to achieve this may include; improving links between primary care groups and secondary care services,[21] and the development of practice policies and practice registers for the long term mentally ill.[22]

The association between ethnicity and consultation rates highlights the importance of research into the primary care management of psychiatric disorders in ethnic minorities. The high rates of consultation by Afro-Caribbeans for schizophrenia and personality disorder requires further study, as do the reasons underlying the low rates of consultations for alcohol and drug dependence in Asians.

Our study indicates that socio-economic and demographic factors are associated with widely differing demand in primary care for the management of psychiatric disorders. This will result in general practitioners working in areas of social deprivation having higher psychiatric-related workloads. Planners of health services need to be aware of the effect of such factors on the use of primary care services in primary care and their likely subsequent impact on secondary care services.

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Key Points

- About six per cent of all consultations with general practitioners are for psychiatric disorders.
- Among men and women aged 16–64, women aged 45–64 had highest overall consultation rates for psychiatric disorders.
- Neurotic disorders and depression accounted for a high proportion of primary care consultations for psychiatric disorders.
- Social class is associated with significant differences in consultation rates, particularly for schizophrenia and drug dependence.
- The highest consultation rates were found in patients who were divorced or separated, permanently sick or unemployed.
- Ethnic groups had widely differing consultation rates; for example, Afro-Caribbean's had higher consultation rates for schizophrenia.

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