Self-reported illness and general practice consultations in Asian-born and British-born residents of West London

Joanna Murray and Paul Williams

Institute of Psychiatry, De Crespigny Park, London, England

Summary. Using data collected in a large scale community survey, some aspects of illness behaviour were compared in Asian-born and British-born residents of West London. Asian-born men were found to be far more likely to consult a general practitioner than British men, although the former group reported less long-standing illness and emotional distress than the latter. Self-assessed health among Asian men was significantly worse than among "native" men, and it was this health measure which was found to have the greatest effect on general practice consultations when a linear model was constructed. Differences in illness behaviour between Asian-born an indigenous women were not significant.

Introduction

The way in which illness and pain are experienced is both highly subjective and culturally influenced. A condition which is regarded as normal in one society because of its frequency, may be seen as a serious and disruptive condition in another where it rarely occurs (Offer and Sabshin 1966). In the individual, the process of perceiving, defining and acting upon symptoms is crucially influenced by demographic and sociocultural factors. Mechanic (1962) has suggested a theoretical framework within which these influences might lead to different patterns of "illness behaviour". He contends that the individual's characteristics predispose him to act in particular ways in response to discomfort, determining whether, for example, he disregards the problem, seeks informal help from among his social network or consults a health professional. Culturally determined beliefs about illness and the appropriate response to make will form part of these internal predispositions.

Only a partial explanation for illness behaviour is to be found in the patient's symptoms, and studies of the behavioural variations within society can provide a more complete picture of the potential demand for medical services. For example, at what level of sickness do different groups seek medical intervention and under what circumstances are they likely to take medication? Surveys of these patterns of behaviour (e.g. Dunnell and Cartwright 1972; OPCS 1980) have described the variations among men and women of different ages and occupational groups, and, in the latter survey, among people of different ethnic groups.

Ethnic and cultural variations

Epidemiological evidence has existed for many years of differences between ethnic and cultural groups in the rates and forms of presentation of disease, and the illness behaviour contingent upon the experience of symptoms. Although these studies have involved comparisons of the indigenous population with immigrants, or of the latter group with the home population from which they came, there are problems in distinguishing the underlying determinants of observed differences. The phenomenon of social drift, for example, in which individuals with psychiatric or personality disorders may gravitate towards the poorer inner city areas, clearly has little similarity to the pattern of upward social mobility represented by migration to the city in search of better economic prospects.

The overlay of ethnic and cultural differences in patterns of migration may confound the interpretation of health and behavioural differences. In his classic study Odegard (1932) found the prevalence of schizophrenia to be greater among Norwegians who had emigrated to the USA than among those who re-

mained at home. Similarly, Mezey (1960) found a higher rate of this disorder among Hungarians who left their homeland during the 1956 uprising, particularly among those who did not express political reasons for emigrating. On the other hand, Wing (1972) cites studies which suggest that those who migrate to "better themselves" are at lower risk of mental illness than those who remain behind (Astrup and Odegard 1960; Walsh 1971; Camberwell Register, unpublished data).

It is clearly not the case that immigrants are always at a disadvantage in social, linguistic and financial conditions and in competing for jobs. Restrictions on entry generally favour younger, fitter and more employable immigrants. Hence, the risks of physical and mental disorder in these newcomers may be substantially less than in the inner-city dwellers they initially live among (see Cochrane and Stopes-Roe 1981). New immigrants may also be joining established communities of their own cultural group, thereby reducing the impact of an unfamiliar host community.

In addition to variations in the prevalence of diseases, the possible links between socio-cultural environment (including ethnic group) and responses to illness and medical care have been studied in the USA among those from Jewish and Italian backgrounds (e.g. Zborowski 1952; Croog 1961; Mechanic 1963; Zola 1966). The last study, in particular, illustrated the cultural differences in describing symptoms and the ways in which different aspects of a disorder affected Jewish and Italian patients.

In the United Kingdom, ethnic and cultural diversity in health has most often been studied in the Asian community (Cochrane and Stopes-Roe 1977, 1981; Ananth 1978; Brewin 1980) and in the present paper we set out to explore differences in selected illness behaviours between Asian-born and British-born residents. The study makes use of data from a probability sample survey of West London conducted in 1977 with the prime purpose of investigating the effects of aircraft noise on health.

Method

A detailed description of the methods of sampling and interviewing is given elsewhere (Tarnopolsky and Morton-Williams 1980). To summarise, the data were obtained from a stratified sample of 5904 people living in West London. The strata corresponded to two areas of different intensities of aircraft noise (high and low), but for reasons to be described later, the present analysis need take no account of the different sampling fractions of the two strata.

Each respondent answered a comprehensive questionnaire designed to yield information about their environment, social and demographic status, health and use of health services. They were also asked their country of birth, and the present paper concerns those aged between 16 and 64 years, who were born in Great Britain and in India, Pakistan or Bangladesh ("Asian-born"). Immigrants from other parts of the world were excluded from the present analysis. All interviews were conducted in English.

Four health measures included in the questionnaire have been used for the present analysis:

1. A global self-assessment of health in which respondents were asked to rate their health over the previous 2 weeks as "very good", "good", "average", "poor" or "very poor". We have reduced this measure to two categories: "in good health", comprising those who made either of the first two self-ratings, and "not in good health", for those making self-ratings of "average" or below.

2. The 30-item General Health Questionnaire (Goldberg 1972), a self-completion inventory designed to yield a dichotomous classification of individuals into "low-scorers" (0–4), having a low probability of being regarded as a psychiatric case if assessed by a psychiatrist, and "high scorers" (5 or more), having a high probability of being assessed as a psychiatric case.

3. Self-reported presence of a long-standing illness or disability.

The analysis includes the following illness behaviours, reported by respondents as having occurred in the 2 weeks prior to interview: (i) general practitioner consultations; (ii) consumption of psychotropic and other prescribed drugs; (iii) consumption of over-the-counter medication.

Tables 1–4 present comparisons of the selected health measures and illness behaviour. Since the age structures of the two groups (i.e. indigenous and Asian-born) were different and for reasons of simplicity, age-standardised results are presented (more detailed age breakdowns are available from the authors).

Also given are:

1. The Mantel-Haentzel (1959) estimate of combined relative risks, to estimate the strength of any association between the variable and group membership.

2. An association χ^2 (Fleiss 1981) to estimate the significance of any association between the variable and group membership.

3. A homogeneity χ^2 (Fleiss 1981), to estimate the consistency of any association across the three age groups. An insignificant χ^2 here indicates a consistent relationship.

A linear logistic model was then constructed (see Dunn 1981), to describe the joint effects of group membership (i.e. indigenous vs. Asian-born), age and the selected health measures on general practice consultation. The model was fitted using the computer package GLIM (Baker and Nelder 1978) and its construction is described later in the paper.

Results

Of the 8510 people selected, 5904 (69.3%) were successfully interviewed. The principle reasons for non-response are given elsewhere (Tarnopolsky and Morton-Williams 1980). Analysis of response rate by country of origin was not possible, since this was not known for the non-responders. However, only 47 (0.6%) potential respondents were excluded by reason of their inadequate command of English, and the demographic characteristics of the sample compared well with the results of the 1971 Census of the area (Tarnopolsky and Morton-Williams 1980).

Of the men between the ages of 16 and 64 years, 1586 were indigenous and 144 Asian-born; of the women 1990 were indigenous and 115 Asian-born. Table 1 shows that immigrants of both sexes tended to be concentrated in the middle age group when compared with natives.

Health measures

Although there were no significant differences between the two groups in self-assessments of health by the women, the Asian-born men were significantly less likely than the British-born to rate their own health as good or very good (Table 2).

There was no statistically significant difference between the Asian-born and the British-born with regard to the proportion with high GHQ scores (Table 2), although in both groups, proportionately more women than men were probable cases.

Significantly fewer Asian- than British-born men admitted to a long-standing illness or disability (Table 2). The homogeneity χ^2 was 0.98, indicating that the effect of age on this difference was not significant. Overall, more British- than Asian-born women reported long-standing illnesses or disabilities, although this difference was not statistically significant because of the consistency of the association across age groups.

Table 1. Age structure and country of origin

	British-born n (%)	Asian-born n (%)
Males		
16–29	540 (34)	37 (26)
30–44	423 (27)	69 (48)
45–64	623 (39)	38 (26)
Total	1586 (100)	144 (100)
Females		
16–29	615 (31)	38 (33)
30–44	539 (27)	48 (42)
45–64	836 (42)	29 (25)
Total	1990 (100)	115 (100)

Table 2. Country of origin and self-reported health

	British-born n (%)	Asian-born age[a] standardised %	Mantel-Haentzel relative risk (Asian/British)	χ^2		
Males						
Not in good health	509 (33)	42	1.43	A	4.96	*df* 1, <0.05
				H	0.63	*df* 2, n.s.
High GHQ score (≥5)	313 (20)	17	0.86	A	0.45	*df* 1, n.s.
				H	1.20	*df* 2, n.s.
Chronic disability	399 (25)	13	0.48	A	8.50	*df* 1, <0.01
				H	0.98	*df* 2, n.s.
Females						
Not in good health	860 (43)	42	0.93	A	0.01	*df* 1, n.s.
				H	2.50	*df* 2, n.s.
High GHQ score (≥5)	478 (24)	28	1.15	A	0.16	*df* 1, n.s.
				H	1.18	*df* 2, n.s.
Chronic disability	442 (22)	19	0.63	A	2.72	*df* 1, n.s.
				H	5.48	*df* 2, <0.06

[a] Direct standardisation to age structure of the British sample
A: association; H: homogeneity; *df*: degrees of freedom; n.s.: not significant

Table 3. Country of origin and illness behaviour

	British-born n (%)	Asian-born age[a] standardised %	Mantel-Haentzel relative risk (Asian/British)	χ^2			
Males In previous 2 weeks							
GP consultation on own account	162 (10)	22	2.46	A	13.61	df 1,	<0.001
				H	0.06	df 2,	n.s.
Consumed prescribed psychotropic drug	105 (7)	2	0.21	A	5.69	df 1,	<0.025
				H	0.05	df 2,	n.s.
Consumed prescribed non-psychotropic drug	300 (19)	29	1.76	A	8.14	df 1,	<0.01
				H	0.03	df 2,	n.s.
Consumed OTC drug	333 (21)	8	0.50	A	6.91	df 1,	<0.01
				H	0.21	df 2,	n.s.
Females GP consultation on own account	319 (16)	19	1.22	A	0.66	df 1,	n.s.
				H	1.82	df 2,	n.s.
Consumed prescribed psychotropic drug	241 (12)	10	0.89	A	0.59	df 1,	n.s.
				H	0.43	df 2,	n.s.
Consumed prescribed non-psychotropic drug	526 (26)	36	1.18	A	3.01	df 1,	n.s.
				H	0.96	df 2,	n.s.
Consumed OTC drug	495 (25)	15	1.18	A	0.63	df 1,	n.s.
				H	4.37	df 2,	n.s.

[a] Direct standardisation to the age structure of the British sample
A: association; H: homogeneity; df: degrees of freedom; n.s.: not significant

Illness behaviour

More than twice as many Asian- as British-born men had consulted their general practitioners in the previous 2 weeks (Table 3), and this difference was consistent across the age groups. In contrast, the inter-ethnic group difference in consulting for the women was insignificant.

Table 3 also shows the 2-week prevalence of drug consumption. The only significant differences were found among the men: Asian-born men were less likely to have taken prescibed psychotropic drugs and over-the-counter medicines, but more likely to have taken non-psychotropic prescribed drugs.

The linear model

The joint effects on the probability of GP consultation of the five independent variables (self-assessment of health, GHQ, long-standing illness or disability, age and country of origin) were examined by linear logistic modelling. Since the proportion of Asian-born respondents was small, the number of variables included in the model had to be restricted, and as far as possible dichotomised, in order to reduce the number of empty cells. In particular, the sampling variable (the aircraft noise stratum used in the sampling) was excluded from the model to be described here, since earlier analyses showed its effects

to be insignificant (see Tarnopolsky and Morton-Williams 1980).

The results are displayed in Table 4. It can be seen that for the men, the model to fit the data (deviance 33.67, df 36, NS) included all five variables, and that none of the pairwise interactions involving country of origin was significant. That is, each of the variables exerted an independent (of each other) effect on the probability of GP consultation. It can be calculated from the parameter estimate that Asian-born men, irrespective of self-assessment of health, GHQ of chronic ill-health or disability were more than twice as likely as British-born men to have consulted a general practitioner during the previous 2 weeks.

For the women, the main effects model did not fit the data well (deviance 62.64, df 36, P<0.001). Even so, it can be seen that the effect of country of origin was not significant (difference in deviance 2.25, df 1, NS), and that none of the pairwise interactions involving country of origin was significant.

Discussion

The survey from which these data have been extracted was designed and executed for a purpose unconnected with the subject of this paper, and this raises

Table 4. Joint effects on general practitioner consultation

	B (s.c.)	Difference in deviance	df, P
Males			
GM	−3.307 (0.188)	–	–
SAH (2)	1.198 (0.170)	50.71	1, <0.00001
GHQ (2)	0.382 (0.190)	3.96	1, <0.05
MIG (2)	0.893 (0.241)	12.33	1, <0.001
AGE (2)	0.428 (0.215)	7.55	2, <0.05
AGE (3)	0.519 (0.199)		
DISAB (2)	0.640 (0.182)	11.72	1, <0.001
SAH (2) MIG (2)	−0.364 (0.469)	0.59	1, n.s.
GHQ (2) MIG (2)	−0.326 (0.582)	0.32	1, n.s.
AGE (2) MIG (3)	−0.109 (0.603)	0.16	2, n.s.
AGE (3) MIG (2)	0.115 (0.648)		
DISAB (2) MIG (2)	0.107 (0.597)	0.03	1, n.s.
Females			
GM	−2.158 (0.127)	–	–
SAH (2)	0.995 (0.134)	56.76	1, <0.00001
GHQ (2)	0.531 (0.135)	15.14	1, <0.001
MIG (2)	0.394 (0.255)	2.25	1, n.s.
AGE (2)	−0.279 (0.156)	12.77	2, <0.01
AGE (3)	−0.533 (0.150)		
DISAB (2)	0.336 (0.144)	5.30	1, <0.05
SAH (2) MIG (2)	−0.093 (0.507)	0.04	1, n.s.
GHQ (2) MIG (2)	0.007 (0.524)	0.00	1, n.s.
AGE (2) MIG (2)	1.008 (0.632)	5.16	2, n.s.
AGE (3) MIG (2)	1.508 (9.072)		
DISAB (2) MIG (2)	−0.026 (0.693)	0.00	1, n.s.

SAH (1), GHQ (1), MIG (1), AGE (1), and DISAB (1) were constrained to be zero by the model

KEY: GM=grand mean; SAH=self-assessment of health; GHQ=General Health Questionnaire score; MIG= whether born in Britain or Asia; DISAB=presence of a long-standing illness or disability

at least two problems. First, the primary subject of the survey (aircraft noise) might have had an effect on the health variables being studied here. However, preliminary analysis, as well as previously published work (Tarnopolsky and Morton-Williams 1980) shows that it did not. Secondly, country of origin, the variable of prime concern in this paper, was only of secondary interest to the designers of the survey. Thus, Asian-born respondents constituted only a small proportion of the sample and all interviews were conducted in English; persons whose command of the language was inadequate for interview were excluded. This may have biased the results, although only 47 out of 8510 (0.6%) people selected for interview were rejected on these grounds.

There is no information on the relationship between country of origin and refusal rate. Furthermore, the age structure of the native and immigrant groups was different. This, however, was controlled for in the statistical analyses of the cross-tabulations and treated as a variable in the linear model, where its effect was insignificant. These shortcomings and problems should be borne in mind when considering the results.

In summary, the results showed that Asian-born men tended to give poorer assessments of their own health than British-born men, while at the same time admitting to less long-standing illness and disability. There was no relationship between country of origin and emotional distress (as measured by GHQ score) but the Asian-born men were far more likely to consult a general practitioner. This last finding was *not* accounted for by group differences in the health variables. Also, the Asian-born men were less likely to be consuming a psychotropic drug or an over-the-counter medicine, and more likely to be consuming a non-psychotropic prescribed drug. These findings raise a number of interesting issues.

The between-ethnic group differences in perceived health

There are few British studies with which to compare these findings. The General Household Survey for 1978 (OPCS 1980) included some similar health measures, and compared "white" with "coloured" respondents. Nonetheless, a similar pattern emerged: the coloured respondents of both sexes reported less chronic disability and short-term ill-health than their white counterparts, even after age was taken into account.

Cochrane and Stopes-Roe (1981) examined psychological symptoms in a group of Indian immigrants and a matched group of British-born respondents. They found significantly lower levels in the former, a finding not replicated in the present study at least in the case of minor psychiatric morbidity. However, their suggested explanation that Indian immigrants who settle in this country are a highly selected resilient group may well apply to our findings on the lower long-standing health problems.

It is unfortunate that we do not know how long the Asian-born respondents had been resident in this country since Cochrane and Stopes-Roe (1977) found this to be relevant to the occurrence of psychological symptoms in immigrants.

The inconsistency in the health ratings by the immigrant males

Fewer immigrant than British-born men admitted to longstanding illness or disability, yet they rated their overall health as worse. There are at least two possible explanations for this inconsistency. First, there may be a greater tendency to "nay-saying" (Couch and Keniston 1960), at least as far as some illnesses

144

and disabilities are concerned, among the immigrants. If this is so, their self-assessments of health are seen to be consistent with the increased prevalence of GP consultation. We can offer no evidence on this possibility, but defensiveness in symptom reporting by immigrants was investigated by Cochrane and Stopes-Roe (1981), who found it did not provide an explanation for the lower levels of reported psychological symptoms in their sample of immigrants. Second, there may well be cultural differences in the meaning of the concept "health" and particular symptoms may be regarded as more serious in one culture than another (Offer and Sabshin 1966). In this particular case, the symptom threshold beyond which health is no longer regarded as good may be at different levels for Asian- and British-born men. There is evidence that this applies to samples of Italian and Irish immigrants to America (Zola 1966).

The differences in health behaviour

A significantly greater proportion of the Asian-born men than the British-born males had consulted their general practitioners in the 2 weeks prior to the survey. This difference was not accounted for by any of the other independent variables in the linear model (Table 4). It is also consistent with our findings that fewer Asian men had treated themselves with over-the-counter medicines during the same 2 weeks. Brewin (1980) compared GP consultations by 200 Indo-Pakistanis and 200 matched British-born respondents living in Oxfordshire, and found no differences between them. He had, in fact, anticipated lower rates of consultation by the immigrants, given their lower rates of psychiatric hospital admissions (Cochrane 1977). Brewin argued that GPs diagnosed psychological disorders less frequently among Asians, and that there might be a cultural taboo against admitting to certain psychological symptoms. The mechanism of "somatisation" (the expression of psychological distress in somatic terms), while occurring everywhere, is said to be especially common in Asian cultures (Teja et al. 1971; Sethi and Nathawat 1972; Venkoba Rao 1978). Indeed, Chakrabarti and Sandel (1984) have argued that somatization is a "normal coping mechanism" for Indians.

Although our findings on consultation rates differ from those of Brewin's study, they support such an explanation about group differences in symptom presentation and/or recognition. While there were no differences in the rate of prescribed drug consumption, more of the British- than the Asian-born men took psychotropics, while the reverse was true for non-psychotropic prescribed drugs.

Other issues concerning the health attitudes and illness behaviour in relation to country of origin require further research:

1. Are the sex differences in illness behaviour and symptom reporting found in so many studies (e.g. Dunnell and Cartwright 1972; Verbrugge 1976; Nathanson 1975, 1977; Murray et al. 1981) absent or even reversed in this particular ethnic group, as suggested by Ananth (1978)?

2. What illnesses or complaints are presented to the general practitioner by Asian-born men, given that the present sample reported less long-standing illness and yet consulted more often? Are they attending the GP with minor complaints rather than treating themselves with over-the-counter medications? A general practice study would be required to explore this issue.

3. Are there differences in the components of self-assessment of health between ethnic groups in this country? Since this measure has been regarded as a useful variable in health studies (Murray et al. 1982), any cultural differences in the determinants of self-assessment need to be defined.

Community studies of health and illness behaviour in the USA generally include the variable "race" as a potentially important influence in areas such as drug consumption (Parry et al. 1973; Uhlenhuth et al. 1978) and utilisation of health services (Tischler et al. 1975). The present study suggests the importance of including country of origin as a variable in health studies in this country.

References

Ananth J (1978) Psychopathology in Indian females. Soc Sci Med 12:177-178
Astrup C, Odegard O (1960) Internal migration and mental disease in Norway. Psychiatr Q 34:116-130
Baker RS, Nelder SA (1978) The GLIM system, release 3: Generalised linear interactive modelling. Royal Statistical Society, London
Brewin C (1980) Explaining the lower rates of psychiatric treatment among Asian immigrants to the United Kingdom: a preliminary study. Soc Psychiatry 15:17-19
Chakrabarti A, Sandel B (1984) Somatic complaint syndrome in India. Transcult Psychiatr Res Rev 21:212-216
Cochrane R (1977) Mental illness in immigrants to England and Wales: an analysis of mental hospital admissions, 1971. Soc Psychiatry 12:25-35

Cochrane R, Stopes-Roe M (1977) Psychological and social adjustment of Asian immigrants to Britain: a community survey. Soc Psychiatry 12: 195–206

Cochrane R, Stopes-Roe M (1981) Psychological symptom levels in Indian immigrants to England: a comparison with native English. Psychol Med 11: 319–327

Couch A, Keniston K (1960) Yea-sayers and agreeing nay-sayers: response set as a personality variable. J Abnorm Soc Psychol 60: 151–174

Croog SH (1961) Ethnic origins and responses to health questionnaires. Hum Organisation 20: 65–69

Dunn G (1981) The role of linear models in psychiatric epidemiology. Psychol Med 11: 179–184

Dunnell K, Cartwright A (1972) Medicine takers, prescribers and hoarders. Routledge and Kegan Paul, London

Fleiss J (1981) Statistical methods for rates and proportions, 2nd edn. Wiley, New York

Goldberg DP (1972) The detection of psychiatric illness by questionnaire. Maudsley Monographs no 21. Oxford University Press, London

Mantel N, Haentzel W (1959) Statistical aspects of the analysis of data from retrospective studies of disease. J Nat Cancer Inst 22: 719–748

Mechanic D (1962) The concept of illness behaviour. J Chron Dis 15: 189–194

Mechanic D (1963) Religion, religiosity and illness-behaviour: the special case of the Jews. Hum Organisation 22: 202–208

Mezey AS (1960) Personal background, emigration and mental disorder in Hungarian refugees. J Ment Sci 106: 618–627

Murray J, Dunn G, Williams P, Tarnopolsky A (1981) Factors affecting the consumption of psychotropic drugs. Psychol Med 11: 551–560

Murray J, Dunn G, Tarnopolsky A (1982) Self-assessment of health: an exploration of the effects of physical and psychological symptoms. Psychol Med 12: 371–378

Nathanson CA (1975) Illness and the feminine role: a theoretical review. Soc Sci Med 9: 57–62

Nathanson CA (1977) Sex, illness and medical care. Soc Sci Med 11: 13–25

Odegard O (1932) A study of mental disease among Norwegian born population in Minnesota. Acta Psychiatr Neurol Scand [Suppl 4]

Offer D, Sabshin M (1966) Normality: theoretical and clinical concepts of mental health. Basic Books, New York

Office of Population Censuses and Surveys (1980) General household survey, 1978. H.M.S.O, London

Parry HJ, Balter MB, Mellinger GD, Cisin IH, Manheimer DI (1973) National patterns of psychotherapeutic drug use. Arch Gen Psychiatry 28: 769–783

Sethi BB, Nathawat SS (1972) Neurotic and depressive patterns in India. Transcult Psychiatr Res Rev 9: 133–135

Tarnopolsky A, Morton-Williams J (1980) Aircraft noise and prevalence of psychiatric disorders. Social and Community Planning Research, London

Teja JS, Narang RL, Aggarwal AK (1971) Depression across cultures. Br J Psychiatry 119: 253–260

Tischler GL, Henisz JE, Myers JK, Boswell PC (1975) Utilization of mental health services. I. Patienthood and the prevalence of symptomatology in the community. Arch Gen Psychiatry 32: 411–418

Uhlenhuth EH, Balter MB, Lipman RS (1978) Minor tranquillizers – clinical correlates of use in an urban population. Arch Gen Psychiatry 35: 650–655

Venkoba Rao A (1978) Some aspects of psychiatry in India. Transcult Psychiatr Res Rev 15: 7–23

Verbrugge LM (1976) Females and illness: recent trends in sex differences in the United States. J Health Soc Behav 17: 387–403

Walsh D (1971) Patients in Irish psychiatric hospitals in 1963 – a comparison with England and Wales. Br J Psychiatry 118: 617–620

Wing JK (1972) Epidemiology of schizophrenia. Br J Hosp Med 8: 364–368

Zborowski M (1952) Cultural components of response to pain. J Soc Issues 8: 16–30

Zola IK (1966) Culture and symptoms – an analysis of patients' presenting complaints. Am Sociol Rev 31: 615–630

P. Williams
General Practice Research Unit
Institute of Psychiatry
De Crespigny Park
Denmark Hill
London SE 5, 8 AF
England