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First Admissions of Native-Born and Immigrants to Psychiatric Hospitals in South-East England 1976

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Summary: In the past, birthplace has frequently been omitted in completing the Sheet, but in 1976, over 91 per cent of all first admissions to psychiatric hospitals in South-East England were analysed by birthplace, sex, age-group and marital status. First admissions for schizophrenia were five times the expected number for immigrants from New Commonwealth America (the West Indies), four times the expected number for immigrants from New Commonwealth Africa (mostly ethnic Asians) and three times the expected number from India. Immigrants from Pakistan and the remaining New Commonwealth Asian countries did not show a significantly higher than expected number of admissions for schizophrenia, and their first admissions for alcoholic psychosis and alcoholism, psychoneuroses and personality and behaviour disorders were significantly fewer than expected. First admissions for schizophrenia were also significantly more than expected among immigrants from Ireland, Germany and Poland, but not from Italy.

Studies in many countries have found higher rates of admission to psychiatric hospitals among immigrant groups than among the native-born population of the host countries, (Malzberg, 1969) while immigrant groups have been found to have particularly high admission rates for schizophrenia. However, many of these studies did not allow for differences in age, sex, marital status and social class structure between immigrant and host populations.

Cochrane (1977) studied all admissions to psychiatric hospitals in England and Wales in 1971 by place of birth. He found that those who had migrated from Scotland, Ireland and Poland had high admission rates, those from India, Pakistan, Germany and Italy had low admission rates and those from the West Indies and the United States of America had rates which were similar to those of the native population. However, information on place of birth was not available for 30 per cent of patients admitted in 1971.

We now report here a study of first admissions to psychiatric hospitals in South-East England, comparing admissions of the native-born population with admissions of New Commonwealth-born and European-born immigrants.

Method

The 1971 census provided the age and sex structure of the United Kingdom-born and of the immigrant populations from the New Commonwealth countries of Asia, including Pakistan, from New Commonwealth America (mostly the West Indies) and from New Commonwealth Africa (OPCS, 1971). In South-East England, there was little change in the total population between 1971 and 1976. The 1976 New Commonwealth immigrant populations were estimated by taking account of net immigration to Great Britain, less deaths, between 1971 and 1976. The Labour Force Surveys of 1973, 1975 and 1977 (1980) showed that the proportion of New Commonwealth immigrants in the main groups in South-East England, compared with the rest of England and Wales, did not change between the 1971 census and 1977. In this study, it was assumed that the populations were distributed in the same proportion as those resident in the 1971 census and that they kept the same sex and age structure (age-groups 0–19, 20–34, 35–54 and 55+). Between 1971 and 1976, the greatest change in the New Commonwealth-born population was among immigrants from New Commonwealth Africa of Asian ethnic origin, mostly from Uganda. During these five years, there was a net immigration to Great Britain of 84,000 ethnic Asians and 13,000 ethnic Africans from New Commonwealth Africa (Office of Population Censuses and Surveys, 1977). During the same time, there was a net immigration to Great

Britain of 28,000 ethnic Indians from India, 35,000 ethnic Pakistani from Pakistan and 36,000 ethnic Asians from the remainder of New Commonwealth Asia. The immigrant population from New Commonwealth America changed very little between 1971 and 1976; there was a net loss by emigration from Great Britain of 5,000 during that time. The 1971 census populations were used for the ethnic Europeans who were born in the New Commonwealth countries and also for the United Kingdom-born in South-East England and for the immigrants from Europe.

First admissions to psychiatric hospitals and units in the areas of the four Thames Regional Health Authorities and to the London Boards of Governors Hospitals were studied. These hospitals and units cover the geographical region of Greater London, Bedfordshire, Essex, Hertfordshire, Kent, Surrey and East and West Sussex, which has a total population of 15 million. The staff of the Department of Health and Social Security (DHSS) made a special effort to obtain the co-operation of the hospitals to ensure that place of birth and other data for each first admission were accurately recorded. Some hospital staff demurred at the request that birthplace should be noted on all admissions, and special meetings were arranged to convince the medical and records staff of the importance of recording birthplace in order to study the prevalence of psychiatric morbidity among the immigrant groups who had come from a different background than the United Kingdom-born. The confidentiality of personal data in the study was stressed. The Office of Population Censuses and Surveys, London, also assisted in the preparation of the data.

The first admissions to psychiatric hospitals in South-East England in 1976 were analysed by age (0–19, 20–34, 35–54, 55+), sex and place of birth. Those for whom place of birth was not stated were excluded from further analysis. An expected number of admissions was calculated for each age, sex and diagnostic category for each immigrant group, based on United Kingdom-born first admissions in South-East England, and categorized by age, sex and diagnosis. The chi-square test (χ^2) was used to determine the statistical significance of differences in admissions between the immigrant groups and the United Kingdom-born.

Results

First admissions in 1976 and first admission rates for the United Kingdom-born resident in South-East England by sex, age-group and diagnostic category are shown in Table I. The highest first admission rates for both males and females occurred in those aged 20 to 34 and in those aged over 55 years. Females had a higher first admission rate than males. The largest diagnostic categories for United Kingdom-born male first admissions were personality and behaviour disorders and psychoneurosis. For United Kingdom-born females, the most frequent diagnoses were psychoneurosis and senile and pre-senile psychoses. Birthplace was recorded in 91 per cent of all first admissions in 1976.

Actual and expected first admissions in each diagnostic category for male and female New Commonwealth immigrants in South-East England are shown in Tables II and III, excluding a small number from New Commonwealth Europe (Malta and the Mediterranean).

Schizophrenia accounted for 37.9 per cent of New Commonwealth male and 26.3 per cent female first admissions and was the diagnostic category which caused the excess in total first admissions, when compared with the United Kingdom-born. In both sexes, the actual number of first admissions diagnosed as schizophrenia was more than three times higher than the expected number—3.2 times higher in males and 3.4 times higher in females. The excess of actual over the expected number of admissions for schizophrenia is very apparent in each of the four age-groups studied (Table IV).

Depressive psychosis was also significantly increased in New Commonwealth females and 'other psychoses' in both males and females (Tables II and III). Admissions for alcoholic psychosis and alcoholism and for psychoneurosis were significantly less than expected among females, while only one male and no female was admitted with drug dependence (expected number 15.4).

The immigrants from New Commonwealth Asia and Pakistan combined showed no significant difference between overall actual and expected total first admissions. Immigrants from India had significantly more than the expected number, and immigrants from Pakistan, Bangladesh and the remainder of New Commonwealth Asia had significantly fewer than expected admissions. Immigrants from India had three times the expected number of first admissions for schizophrenia. Admissions among immigrants from India for 'all other conditions' were also greater than expected. Immigrants from Pakistan and the remaining countries of New Commonwealth Asia, except India, had significantly fewer than expected admissions for psychoneurosis, personality and behaviour disorders, alcoholic psychosis and alcoholism and 'all other conditions', when the sexes are combined. All first admissions among immigrants from Pakistan ($N = 30$) were significantly lower than expected ($N = 47.7$). The remaining New Commonwealth Asian immigrants were from Malaysia, Ceylon, Singapore, Hongkong, etc.

TABLE I

United Kingdom-born living in South-East England. First admissions to psychiatric hospitals (1976). Age and sex standardized 1971 census. Rates per 100,000

	Males					Females				
	0–19	20–34	35–54	55+	All ages	0–19	20–34	35–54	55+	All ages
Schizophrenia	3.5 (66)	21.2 (258)	11.0 (150)	6.1 (89)	9.6 (563)	3.4 (60)	15.1 (178)	12.8 (184)	10.4 (206)	9.9 (628)
Depressive psychoses	0.6 (11)	6.4 (78)	8.8 (120)	13.8 (199)	6.9 (408)	0.6 (10)	9.4 (110)	17.6 (253)	20.2 (399)	12.1 (772)
Senile and pre-senile psychoses	0	0	0.4 (5)	23.7 (342)	5.9 (347)	0	0	0.6 (9)	43.3 (855)	13.6 (864)
Alcoholic psychosis and alcoholism	0.2 (3)	11.3 (137)	21.9 (299)	8.9 (128)	9.7 (567)	0.2 (3)	5.9 (69)	8.7 (125)	3.1 (61)	4.1 (258)
Other psychoses	0.6 (11)	3.7 (45)	3.0 (41)	19.5 (281)	6.4 (378)	1.2 (21)	14.2 (167)	4.4 (63)	23.8 (470)	11.3 (721)
Psychoneuroses	2.7 (51)	21.4 (260)	18.4 (251)	7.9 (114)	11.5 (676)	5.1 (92)	41.3 (486)	29.1 (419)	13.2 (261)	19.7 (1258)
Drug dependence	0.7 (13)	7.6 (96)	0.7 (9)	0.1 (1)	2.0 (115)	0.6 (10)	2.0 (24)	0.6 (8)	0.3 (5)	0.7 (47)
Personality and behavior disorders	11.1 (207)	23.8 (289)	10.4 (142)	2.8 (41)	11.5 (679)	11.8 (210)	24.8 (291)	7.4 (106)	2.1 (42)	10.2 (649)
Mental handicap	0.2 (4)	0.4 (5)	0.2 (3)	0.1 (2)	0.2 (14)	0.2 (4)	0.6 (7)	0.4 (5)	0.2 (4)	0.3 (20)
Other psychiatric conditions	0.9 (16)	4.9 (60)	3.8 (52)	5.6 (81)	3.5 (209)	5.5 (98)	9.4 (111)	5.4 (77)	4.8 (94)	6.0 (380)
All other conditions	6.7 (124)	25.5 (310)	22.6 (308)	24.8 (358)	18.7 (1100)	8.7 (156)	47.5 (559)	38.0 (546)	31.8 (627)	29.6 (1888)
All diagnoses	27.2 (506)	126.2 (1534)	101.2 (1380)	113.2 (1636)	85.9 (5056)	37.3 (664)	170.2 (2002)	125.0 (1795)	153.2 (3024)	117.5 (7485)

Actual numbers in brackets

TABLE II

New Commonwealth and Pakistani immigrants. First admissions psychiatric hospitals South-East England 1976. Expected numbers (E) at age-specific United Kingdom-born rates, South-East England, and actual admissions (A)

	Males														
	New Commonwealth Asia and Pakistan												New Commonwealth Asia, America and Africa and Pakistan		
	India			Pakistan and remaining countries			New Commonwealth America			New Commonwealth Africa					
	E	A	χ^2	E	A	χ^2	E	A	χ^2	E	A	χ^2	E	A	χ^2
Schizophrenia	10.4	35	**	13.8	16		11.0	55	**	11.9	47	**	47.1	153	**
Depressive psychoses	5.8	10		6.7	3		5.9	9		4.6	3		23.0	25	
Senile and pre-senile psychoses	2.5	6		1.7	0		1.3	0		0.3	0		5.8	6	
Alcoholic psychosis and alcoholism	10.3	12		12.7	5	*	11.8	5	*	8.8	9		43.6	31	
Other psychoses	4.0	6		4.0	6		3.2	7		2.5	4		13.7	23	*
Psychoneuroses	12.5	13		16.2	5	**	13.8	11		13.0	6		55.5	35	**
Drug dependence	3.5	1		2.3	0		2.4	0		3.4	0		11.6	1	**
Personality and behaviour disorders	11.5	8		16.2	4	**	12.6	15		14.6	7	*	54.9	34	**
Mental handicap	0.3	0		0.3	0		0.2	0		0.2	0		1.0	0	
Other psychiatric conditions	3.2	0		3.9	3		3.2	8		3.2	0		13.5	11	
All other conditions	17.1	30	**	21.4	12	*	18.0	23		16.8	20		73.3	85	
All diagnoses	81.1	121	**	99.2	54	**	83.4	133	**	79.3	96		343.0	404	**

χ^2 test. * = $P < 0.05$; ** = $P < 0.01$

TABLE III

New Commonwealth and Pakistani immigrants. First admissions psychiatric hospitals South-East England 1976. Expected numbers (E) at age-specific United Kingdom-born rates, South-East England, and actual admissions (A)

	Females														
	New Commonwealth Asia and Pakistan														
	India			Pakistan and remaining countries			New Commonwealth America			New Commonwealth Africa			New Commonwealth Asia, America and Africa and Pakistan		
	E	A	χ^2	E	A	χ^2	E	A	χ^2	E	A	χ^2	E	A	χ^2
Schizophrenia	8.2	23	**	9.0	11		10.2	53	**	7.6	33	**	35.0	120	**
Depressive psychoses	9.2	15		7.2	5		10.1	13		5.4	12	*	31.9	45	*
Senile and pre-senile psychoses	5.2	4		2.8	0		2.1	2		0.8	1		10.9	7	
Alcoholic psychosis and alcoholism	3.7	0		3.9	0		5.1	3		3.0	0		15.7	3	**
Other psychoses	7.5	8		7.3	5		7.8	16	**	6.4	15	**	29.0	44	**
Psychoneuroses	18.9	13		21.5	7	*	25.8	25		19.3	10	*	85.5	55	**
Drug dependence	0.9	0		0.9	0		1.0	0		1.0	0		3.8	0	
Personality and behaviour disorders	9.5	9		12.2	6		13.7	12		12.7	10		48.1	37	
Mental handicap	0.2	0		0.3	1		0.4	2		0.3	0		1.2	3	
Other psychiatric conditions	4.7	7		5.7	3		6.3	14	**	5.4	4		22.1	28	
All other conditions	24.8	35	*	27.1	16	*	32.4	39		23.4	25		107.7	114	
All diagnoses	92.8	114	*	97.9	54	*	114.9	179	**	85.3	110	**	390.9	456	**

χ^2 test. * = $P < 0.05$; ** = $P < 0.01$

TABLE IV

First admissions in age groups for schizophrenia in New Commonwealth immigrants and for schizophrenia and alcoholic psychosis and alcoholism in Irish immigrants. Expected at United Kingdom-born rates and actual numbers in brackets

	New Commonwealth immigrants: schizophrenia and all diagnoses											
	Age group (Males)					Age group (Females)				
	0–19	20–34	35–54	55+	Total	0–19	20–34	35–54	55+	Total
India	0.5 (1)	6.2 (13)	3.1 (19)	0.6 (2)	10.4 (35)	0.4 (1)	3.9 (12)	2.7 (8)	1.2 (2)	8.2 (23)
Pakistan and remaining countries	0.8 (0)	9.0 (10)	3.6 (6)	0.4 (0)	13.8 (16)	0.6 (1)	5.1 (8)	2.6 (1)	0.6 (1)	9.0 (11)
New Commonwealth America	0.6 (8)	5.9 (20)	4.2 (25)	0.3 (2)	11.0 (55)	0.7 (2)	4.9 (23)	4.1 (25)	0.5 (3)	10.2 (53)
New Commonwealth Africa	0.9 (2)	8.8 (34)	2.1 (11)	0.1 (0)	11.9 (47)	0.8 (4)	5.6 (23)	1.0 (6)	0.2 (0)	7.6 (33)
New Commonwealth and Pakistan	2.8 (11)	29.9 (77)	13.0 (61)	1.4 (4)	47.1 (153)	2.5 (8)	19.5 (66)	10.4 (40)	2.5 (6)	35.0 (120)
All diagnoses	20.4 (36)	169.8 (179)	124.9 (157)	27.9 (32)	343.0 (404)	26.4 (45)	217.1 (234)	108.8 (143)	38.6 (34)	390.9 (456)
	Irish immigrants: schizophrenia, alcoholic psychosis and alcoholism and all diagnoses									
Schizophrenia	0.2 (1)	10.0 (19)	6.6 (18)	1.9 (6)	18.7 (44)	0.3 (3)	8.8 (11)	8.5 (24)	4.1 (14)	21.7 (52)
Alcoholic psychosis and alcoholism	0 (0)	5.4 (32)	13.3 (70)	2.8 (13)	21.5 (115)	0 (0)	3.4 (12)	5.8 (24)	1.2 (8)	10.4 (44)
All diagnoses	2.2 (6)	59.8 (112)	60.6 (158)	35.2 (64)	157.8 (340)	3.4 (11)	98.6 (127)	83.0 (167)	60.4 (100)	245.4 (405)

Immigrants from New Commonwealth America (mostly from the West Indies) had significantly more first admissions than expected among males and females aged 20–34 and 35–54 years. Schizophrenia was the largest diagnostic category for both males and females, accounting for 41.4 per cent of male and 29.6 per cent of female first admissions, and was five times the expected number in both sexes. Other psychoses and other psychiatric conditions were significantly more than expected in females and in the sexes combined, while alcoholic psychosis and alcoholism was significantly less than expected in males and in both sexes combined.

Immigrants from New Commonwealth Africa of Asian and African ethnic origin had significantly more first admissions than expected, when compared with the United Kingdom-born. Admissions were significantly increased among male and female New Commonwealth Africa immigrants aged 20–34 and 35–54 years. The diagnosis of schizophrenia caused the largest number of first admissions in both sexes, accounting for 49 per cent of male and 30 per cent of female first admissions, and in both sexes was four times the expected number. In males, admissions for personality and behaviour disorders and, in females, depressive psychosis and other psychoses were significantly higher than the expected number and psychoneuroses less than expected.

Admission to psychiatric hospitals for schizophrenia are relatively more frequent among the single than the married, widowed, divorced and separated. Among the United Kingdom-born male first admissions for schizophrenia, 60.9 per cent were single, among the male New Commonwealth immigrants 58.2 per cent and among the immigrants from Ireland (Irish Republic and Ireland part not stated) 52.3 per cent. Among the United Kingdom-born female first admissions for schizophrenia, 35.7 per cent were single, among the New Commonwealth female admissions 35 per cent and among the Irish female immigrants 44.2 per cent (Dean *et al*, 1981). There was no significant difference in the proportion of single in the three groups.

Admissions for alcoholic psychosis and alcoholism were higher than the expected number among immigrants from Ireland (Dean *et al*, 1981) (Table IV). Admissions for schizophrenia, but not for alcoholism, were also significantly higher than expected ($P < 0.05$) among immigrants from Germany (12 actual, 6.7 expected) and Poland (14 actual, 4.6 expected), but not among immigrants from Italy (8 actual, 7.0 expected).

Discussion

Previous studies of admissions of immigrants to psychiatric hospitals in England and Wales have been hampered by the omission of recording the country of birth on a high proportion of identification sheets, or have been conducted only in circumscribed areas of Britain. In this study, place of birth was ascertained for over 91 per cent of all first admissions, with the collaboration of the staffs of the psychiatric hospitals of South-East England. Exclusion of the group for whom place of birth was not stated probably leads to relative under-representation of those born in the United Kingdom or in Ireland (Cochrane, 1977). It is possible that some patients recorded as being admitted to a psychiatric hospital for the first time may actually have been at some other psychiatric hospital on a previous occasion. This may be more likely to be the case for immigrants than for the native-born, as the former may conceal or forget earlier admissions in their home countries prior to migration. Some of the countries from which patients represented in this study originated may have different thresholds for hospitalization than those obtaining in the United Kingdom. It is, therefore, possible that some immigrants may have been ill for a considerable time in their home countries without being hospitalized. On arrival in the United Kingdom, where lower hospitalization thresholds operate, some immigrants may have been admitted to hospital shortly afterwards. This taking up the slack of residual illness may artificially raise immigrant hospitalization rates. It must also be borne in mind that existing or incipient mental illness may have been a stimulus to migration (Odegaard, 1932) and that psychiatric symptomatology or its expression in immigrants may be more acute and more socially disruptive than in natives, and therefore more frequently lead to hospitalization (Gordon, 1965).

Finally, the rootlessness of some psychiatric patients, particularly migrants suffering from schizophrenia, may lead them to move frequently and rapidly from one area within the United Kingdom to another and also within the area of South-East England where this study was based. In these circumstances, multiple admissions in different parts of the country present greater possibilities for over-estimation of first admissions for this group than would be the case for a more stable native resident population.

In Europe and North America, the prevalence of schizophrenia, if not the incidence, is higher among lower socio-economic groups. However, in India the opposite may be true (Rao, 1966). Further studies are proposed to ascertain the socio-economic and occupation groups of the immigrant population in comparison with the United Kingdom-born.

Schizophrenia as seen in developing countries may be quite atypical, when compared with schizophrenia in Western countries, often having an acute onset and

rapidly changing clinical symptoms (Torrey, 1980). Such acute-onset psychoses, relatively uncommon for contemporary British psychiatrists, may be more likely to be labelled schizophrenia by them than if they were being adjudicated on by psychiatrists of their own race in their home countries. The standing of the acute psychotic episodes often seen in developing countries in relation to 'schizophrenia' is not clear (Littlewood and Lipsedge, 1981).

The extent to which immigrant status in its own right, rather than membership of a particular ethnic group, contributed to susceptibility to hospital admission for psychiatric illness is a matter of considerable importance. Clearly, no simple answer can be given, as each migration differs in its origins, characteristics and consequences. Equally, the status of the immigrant in the recipient country, the degree of social support available to him and the attitude of his native-born neighbours, in addition to more tangible realities such as a capacity to speak the language and to obtain employment, are of crucial importance in determining his mental health status. Since each immigrant situation is unique, it must be studied in its own context.

The general findings of this study, in showing increased first admissions for schizophrenia for immigrants from New Commonwealth countries and Pakistan and from some European countries, are in agreement with such earlier studies as those of Kiev (1965), Pinto (1970) and Rwegellero (1977). The numbers of migrants from some of the countries in our study were small; nevertheless, these preliminary findings are of sufficient importance to justify more extended studies, which would be controlled for marital status, socio-economic group and other relevant variables. It is hoped to initiate such studies shortly. Investigations of variations in disease incidence and patterns between ethnic groups are of great value in furthering knowledge of the origins and outcome of illness (*British Medical Journal*, 1981). Unfortunately, birthplace is very frequently omitted in the space provided in the Psychiatric In-patient Identification Sheet and, in general hospitals, on the Hospital Activity Analysis forms (Dean *et al*, 1976). It is of the greatest importance that birthplace should be noted on these forms, so that studies of the kind reported here can be carried out.

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