

Psychological and Behavioural Disturbance in West Indians, Indians and Pakistanis in Britain:

A Comparison of Rates Among Children and Adults

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SUMMARY Data are presented from four studies which compare rates of psychological disturbance for three groups of immigrants to Britain and natives respectively. Children of West Indian and Asian parents are compared to native British children on the Rutter Teachers' Questionnaire and on rates of admission to psychiatric hospitals. Asian children have lower rates of behavioural deviance and mental hospital admissions than do British children. Children of West Indian immigrants show no more behavioural deviance in schools than do British children, but have considerably higher rates of admission to mental hospitals. The pattern for adults is remarkably similar to that shown by children, even though different definitions of psychological disturbance are used. The findings are discussed in the context of previous studies of immigrants to Britain and contemporary theories of immigrant adjustment.

Recently, there has been an upsurge of interest in the psychological and social adjustment of immigrants to Britain, stimulated by research in other countries and by the increasing proportion of the British population composed of recent immigrants and their descendants. The results of that research have been marked more by ambiguities than by consistencies, but it can be concluded tentatively that the rate of serious psychological problems, as measured by psychiatric hospital admissions, is very variable between ethnic groups and that there is no justification for regarding all immigrants as comprising one group, with which natives can be compared. Cochrane (1977) found some groups of immigrants to have notably higher rates of mental hospital admission than natives (e.g. Irish, Poles), some to have broadly similar rates (e.g. West Indians) and some to have conspicuously lower rates (e.g. Italians, Pakistanis). Only for the diagnosis schizophrenia was there a consistent, marked excess of

immigrants of all ethnic origins compared to natives.

However, the results of earlier British studies did not support these two conclusions at all strongly (Bagley, 1972; Hashmi, 1968; Hems, 1967), though in other countries, Malzberg (1969) and Sauna (1969) found a generally similar pattern, both for all admissions and admissions for schizophrenia in particular.

Other previous conclusions were that the magnitude of adjustment required of different immigrant groups correlated not at all, or perhaps *negatively* with the extent of psychiatric disturbance in those groups and that other measures of psycho-social adjustment, so far as they are available, show a similar pattern to that shown by psychiatric hospital admission rates. In other words, immigrant groups low on these admission rates do not compensate by being excessively deviant in other respects. Similarly, Cochrane and Stopes-Roe (1977) were able to show that, for Asian immigrants

at least, sub-clinical measures of psychological disturbance reflected fairly accurately the picture obtained from admission rates.

These generalizations have been based upon adult first-generation migrants. Young immigrants and the children of immigrants have received much less attention, partly no doubt because definition of psychological adjustment is so much more difficult with young people. There have been two systematic studies of behavioural deviance in school children belonging to minority ethnic groups. Rutter *et al* (1974) compared rates of behavioural deviance and psychiatric disorder in 10-year-old West Indian and English children in London. Using a questionnaire completed by teachers for each of the children in their classes, the authors found that over 40 per cent of West Indian, compared to less than 20 per cent of native children, received a score categorized as deviant. The difference between the two groups was significant and almost entirely accounted for by the high rate of 'conduct' deviance among the West Indian children. Conduct deviance refers to behaviour such as fighting, lying and being destructive. The children did not differ on behaviours such as worrying, being anxious, stuttering or thumb sucking, which were taken to be indicative of emotional problems. Interestingly, however, total prevalence of psychiatric disorder, as judged on the basis of an interview with parents was higher, but not significantly so, in the native group. The excess of behaviour deviance among the West Indian group was specific to the school situation.

Subsequently, Kallarackal and Herbert (1976), using the same teachers' questionnaire, examined the behavioural deviance of children of Indian origin. Using a sample of 9–12-year-olds in Leicester, they found a rate of maladjustment of 10 per cent among the Indian children, compared to 26.5 per cent in the English group, and explain the significantly lower rate of behavioural deviance in the former by reference to possible, but not yet established differences in family life. The supposedly 'strong and protective' nature of the Indian family was considered to reduce the likelihood of emotional and behavioural prob-

lems, but interesting as they are, no evidence was offered to support these explanations.

The purposes of the present paper are three-fold. First, to examine sub-clinical behavioural deviance in several groups of children of immigrants and native children in the same schools. Second, to examine more dramatic forms of psychiatric disturbance in children, as reflected in psychiatric hospital admission statistics. Thirdly, to examine the overall pattern of psychological disturbance in immigrants and natives, as measured in a variety of ways in both adults and children, to determine whether any consistencies exist. Finally, the relevance of the whole set of findings for theories of immigrant adjustment will be considered. In this paper, the term 'immigrant' will be reserved for those people who have actually migrated.

Method

Data on the school children were collected in five schools in Birmingham, selected for their high levels of ethnic diversity. A Rutter Children's Behaviour Questionnaire (form B2) was completed by teachers for each nine-year-old in the school. The questionnaire consists of 26 statements concerning the child's behaviour and the teacher is invited to state whether the statement 'Doesn't Apply', 'Applies Somewhat', or 'Certainly Applies'. The scale may be scored in two ways: a total score is obtained by weighting the teachers' ratings of each item 0, 1, 2 and summing across the 26 items, giving a range from 0–52. Rutter (1967) demonstrated that with this method of scoring, the scale was reliable (test-retest correlation over two months of +0.89) and had high inter-rater reliability (+0.72). The discriminative power or validity of the scale was examined by comparing the scores of groups of psychiatric clinic children with general population groups. Adequate discrimination was achieved and the best cut-off point for this purpose was a total score of 9. Using this as a starting point, a second score for each child scoring 9 or more can be derived. If the child was awarded the high score for predominantly emotional problems, then he is labelled as being 'emotionally deviant'; if, on the other hand, antisocial behaviours account for the high score then 'conduct deviance' is

assumed. A final 'mixed' category is reserved for those whose high score is equally derived from the two types of behaviours. This method of scoring the questionnaire was justified by Rutter (1967), who showed that the 'diagnoses' derived from the questionnaire were in close agreement with clinical diagnoses for two groups of children attending clinics.

A total of 319 questionnaires were completed, one for each of the nine-year-olds in the five schools participating in the study. Eighteen questionnaires were subsequently discarded because the *parents* of the children involved did not fall into one of the four groups of interest, viz—both parents born in India, Pakistan, the West Indies or Britain. In addition to the Rutter questionnaire, details of each child's school progress and background were collected from teachers and school records.

Psychiatric hospital admission figures by place of birth for the year 1971 were made available by the DHSS and were converted to rates per 100,000; the rates for adults and the problems involved in calculating them, have been discussed elsewhere (Cochrane, 1977). Clearly, these rates are not necessarily an accurate measure of true rates of psychological disturbance or even of treated disturbance in children; they will be affected by what can be considered extraneous factors, such as what constitutes a psychiatric hospital (e.g. some units attached to Children's Hospitals are excluded). The number of beds available may have an influence on admission statistics equal to that of the clinical need for admission, as will the availability of residential resources for children other than in-Patient Units. However, the figures are presented here because they are the only material available on a national basis with sufficient standard information on age, place of birth and diagnosis to be useful. There is no reason to believe that the admitted weakness of this measure of psychological disorder in childhood affects the various ethnic groups differentially. Evidence is also presented later that the relative rates found across different ethnic groups are quite consistent with other independent evidence of behavioural disorders. The rates for children refer to all admissions for in-patient treatment to psych-

iatric hospitals in England and Wales in 1971; in that year, over half of all children's admissions were accounted for by personality and behaviour disorders, while admissions for mental handicap are excluded.

The definitions of the groups used in the psychiatric hospital admission figures are not directly comparable with those used for the questionnaire study of school children. In the latter case, the child's parents were immigrants but a majority of the children were born in Britain. The DHSS data, however, refer to place of birth *not* ethnic origin. The children (and adults) included in these figures were born abroad and may conceivably include individuals of ethnic origins (including British) other than that of the country in which they were born. Similarly, some of the British-born group may very well be of non-British ethnic origin. Psychiatric hospital admission figures based upon ethnic origin, as opposed to place of birth, are not available.

Finally, the questionnaire-derived psychological disturbance scores of adult immigrants and natives were taken from a study reported elsewhere (Cochrane and Stopes-Roe, 1977). The assessment of psychological disturbance was based on scores derived from a version of the Twenty-Two Item Scale (Langner, 1962) which has been specifically validated for use with immigrants to Britain (Cochrane, Hashmi and Stopes-Roe, 1977; Cochrane, 1978). West Indian immigrants were not included in this survey.

Because of the diversity of sources of information, all scores and rates were converted to ranks for use in comparisons between sets of data.

Results

Children's adjustment based on teachers' questionnaires

A comparison of the four groups studied revealed that they were broadly similar in terms of sex composition, age (mean = 9.0 years) and social class, as defined by father's occupation, with the majority being from working class backgrounds. Most of the children were born in this country—81 per cent of Indians, 76 per cent of Pakistanis and 94 per cent of West Indian origin children. A somewhat small proportion

of minority ethnic group children than of the British group were first born or only children. Christianity was the dominant nominal religion of the British and West Indian children, most of the Pakistanis were Muslim and a majority of the Indians were Sikh; there was insufficient overlap between religious groupings to enable this variable to be analysed in isolation from ethnic origin. The proportion of each group attending remedial classes varied from 11 per cent of Indians to 26 per cent of Pakistanis; the differences in these proportions were not significant (chi square = 5.35, df = 3).

The overall scores derived from teachers' ratings of behaviour deviance were subjected to a two-way analysis of variance, with the results shown in Table I. Both main effects of sex and ethnic group membership were significant. Overall, boys had significantly higher deviance scores than girls, although the mean scores for Pakistani and West Indian children were higher in girls than boys; Pakistanis scored significantly lower than either West Indians or British children. However, the proportion of the variance accounted for by these two variables was very small (sex = 1 per cent, ethnic group

= 3 per cent, Hays, 1964, p. 407). The interaction between sex and ethnic group was not significant.

Using a cut-off score of 9, as suggested by Rutter, to identify children with behavioural deviance revealed a pattern similar to that from using mean scores, but there were no very large differences between any of the groups and no single comparison of any of the three ethnic minority groups with the British group yielded a statistically significant difference, either for total deviance or for conduct or emotional deviance separately. However, when the sample was broken down into separate ethnic groups by sex categories, the numbers became small and it is not surprising that the differences between deviancy scores were not significant. The trends are in line with Rutter *et al's* (1974) finding, except that Pakistani as well as West Indian girls had higher rates of conduct disorders than British or Indian girls. As found previously, there was a consistent tendency for a greater proportion of boys than girls to show anti-social behaviour or 'conduct deviance'.

Each child was assigned a score by teachers in each of five areas of school performance: comprehension, vocabulary, reading, written work and number work, ranging from 4 for 'very good' to 0 for 'very poor'. These scores and a combined performance score based on the sum of all four ratings were correlated with the behavioural disturbance ratings. The correlations obtained were extremely consistent, ranging from -0.31 to -0.51, and were all significant statistically. The correlations for the total performance score and behavioural deviance scores were: British -0.42; Indian -0.40; Pakistani -0.51; West Indian -0.44; all significant at $p < 0.01$. There is known to be an association between psychiatric disorder and educational retardation which is particularly true for conduct disorders in boys and this was borne out in the present study. Boys with conduct disorders or emotional deviance scored significantly lower on the combined academic performance measure than those who were not deviant on the Rutter Questionnaire (means = 6.57, 5.71, and 10.31 respectively; $F = 12.28$, $p < 0.001$). Girls also showed the same pattern, with those classified as behaviourally deviant

TABLE I
Analysis of teachers' ratings of behavioural deviance by sex and ethnic group

A. Means	Males		Females		Total	
	N	X	N	X	N	X
British	39	6.95	35	4.23	74	5.66
Indian	52	4.33	46	2.78	98	3.60
Pakistani	20	3.50	22	4.86	42	4.21
West Indian	36	6.42	51	6.76	87	6.80
Total	147	5.44	154	4.11	301	5.07

B. Analysis of variance summary					
Source	S.S.	d.f.	M.S.	F	p
Sex	118.32	1	118.32	3.86	< .01
Ethnic Group	372.20	3	124.07	3.92	< .05
Sex X Ethnic Group	115.41	3	38.47	1.27	N.S.
Error	8884.96	294	30.22		

getting lower academic performance scores (F = 9.14, p < 0.001).

Mental hospital admissions

Following a procedure outlined previously (Cochrane, 1977), psychiatric hospital admission rates were adjusted to include those for whom place of birth was not available and the original figures expressed as rates per 100,000 population aged 15 years or less in 1971. Sex-specific rates are shown in Table II together with the age-adjusted, sex specific rates for adults with the

same country of birth for comparison. The children's rates require some comments because of the small numbers involved in some groups (e.g. there were only two Pakistani females under 15 admitted in England and Wales in 1971). Where small numbers are expressed as a rate of 100,000, there is a danger of exaggerating any small differences that may be present when populations are compared. Most of the admissions were for personality and behaviour disorders, whereas most adult admissions were for depression, schizophrenia and neurosis.

TABLE II

Sex specific rates of mental hospital admissions for children and sex specific age-adjusted rates for adults by place of birth (England and Wales, 1971)

Country of birth	Number of admissions per 100,000 population			
	Children (< 15 years)		Adults (15 + years)	
	Males	Females	Males	Females
England and Wales	76	53	434	551
India	28	13	368	436
Pakistan	6	24	294	374
West Indies	99	111	449	621

TABLE III

Rank ordering of ethnic x sex groups on various measures on psychological disturbance

		Children			Adults	
		Mental Hospital admissions	Questionnaire scores	% deviant	Mental Hospital admissions	Questionnaire scores
British	Male	3	1	2	5	3
	Female	4	6	4	2	2
Indian	Male	5	5	7	7	4
	Female	7	8	8	4	1
Pakistani	Male	8	7	5	8	6
	Female	6	4	6	6	5
West Indian	Male	2	3	1	3	NA
	Female	1	2	3	1	NA

Despite these differences, which reflect the differential diagnostic patterns found in child and adult psychiatry, the relative rates for children and adults showed remarkable consistencies. In both cases, West Indian females had the highest rates of admission and Pakistani males the lowest.

Consistencies in the measurement of psychological disturbance

Table III brings together all the material presented previously and adds results from a small community survey among adult immigrants and natives in Birmingham in 1975, in which psychological disturbance was measured by questionnaire (Cochrane and Stopes-Roe, 1977).

Although this table shows a mixed pattern of results, it also contains some remarkable consistencies. Even though the children's deviance scores from the questionnaire study were derived from a handful of schools in one city and were based on children born in Britain, there is still a strong similarity between the ordering of these scores and relative psychiatric hospital admission rates for the whole country. The admission rates for adults and children are also very similar in a relative sense. The other comparisons which can be made from Table III, while not so clear-cut, also show consistencies.

Discussion

The results derived from the Rutter teacher's questionnaire of behavioural deviance are of interest for several reasons. First, when total scale scores are analysed, they confirm the findings of Kallarackal and Herbert (1976) for the children of Indian ethnic origin (Table I). However, if the data are analysed in a way similar to that of the earlier authors, there are no significant differences between the proportion of Indian and native children found to be maladjusted. Kallarackal and Herbert do not present results for boys and girls separately, which is unfortunate in the light of the large sex differences found both by Rutter *et al* (1974) and in the present study. Allowing for this, however, the trend of results in this study and in the earlier study is very similar, with approximately

25 per cent of native children and 10 per cent of Indian children rated as maladjusted.

A comparison of the rates of behavioural deviance among West Indian and native children with that found previously shows strikingly similar results for native children, but a much lower rate of deviance for West Indians than that reported by Rutter *et al* (1974). On both the total scales and on the proportion of children found deviant, West Indians and natives are indistinguishable in the present study, although Rutter reports that West Indians had almost double the natives' rate of behavioural deviance. The only category where earlier findings of Rutter *et al* were confirmed is in the high rate of 'conduct disorder' among West Indian girls, although even this does not attain statistical significance here, probably because of the somewhat small numbers involved.

There are several possible factors which might account for the differences in results, although detailed information on some of the relevant variables is not available for the earlier studies. Rutter *et al's* data were collected in 1970, those of the present study in 1976; Kallarackal and Herbert's data were collected at some time in between. It is possible that the years between 1970 and 1976 saw a reduction in the overall level of deviant behaviour in West Indian youngsters, either in actuality or as perceived by teachers. By 1976, a sizeable proportion of non-white faces in the classroom had become the norm in some areas of major conurbations and both teachers and pupils may have adjusted to this, whereas in 1970, more than a few immigrant children in the classroom may still have seemed a novelty. Indirect evidence which gives some partial support for this hypothesis comes from Rutter *et al's* other finding that the rate of behavioural deviance at home, rather than in school, was very similar in West Indian and native children. Again, a more detailed interview with teachers failed to confirm the statistically significant difference found with the questionnaire, although the results of questionnaire and interview were somewhat similar. All these factors point to the possibility that in 1970, teachers were more 'sensitized' to behavioural problems of West

Indian children and more likely to consider such behaviour as deviant than are teachers today.

Rutter also notes that 'a high proportion of West Indian children are considerably retarded in their educational attainments . . .' (Rutter *et al* 1974, p. 258, see also Yule *et al*, 1974) and goes on to link educational difficulties with behavioural disturbance at school. In the present study also, a significant correlation (-0.41 , $p < 0.001$) was found between teacher's ratings of academic performance and behavioural deviance, but the school work of West Indian children was not judged inferior to that of British children. In the area of reading, which Rutter *et al* singled out as having a strong relationship with conduct disorders, 29.8 per cent of the British children and 28.4 per cent of the West Indian children were rated as 'poor' by their teachers. In addition, it was found that virtually the same proportion of West Indian as British children were attending remedial classes at their school. As the two studies differed in both time and place, it is not possible to state definitely that the academic performance of West Indian children has improved, but the generally adequate level of school achievement in the present sample may go some way towards explaining the lower rates of deviancy found here than in the 1970 study.

Two other factors were investigated with respect to the differences in rates of adjustment between different ethnic groups—the proportion of each group in the classroom and whether or not the child was born in Britain. Neither variable produced anything of interest. All of the classes studied had at least 50 per cent and up to 90 per cent minority ethnic group children and the fluctuations between classes in proportions for each group were quite unrelated to the amount of behavioural deviance which that group in that class exhibited. Similarly, there were only minimal non-significant differences in behavioural deviance between children of the same ethnic origin born in Britain or born abroad, although the numbers not born in Britain were quite low.

Psychiatric hospital admission rates among children born in Britain and those born elsewhere show very high relative rates of West Indian children of both sexes and an extra-

ordinarily low rate among Pakistani boys. For British and Indian children, the excess of female over male admissions among adults is reversed; this is consistent with the fact that boys are more frequently referred to psychiatric agencies than girls. Gove and Herb (1974) suggest a possible explanation. However, for Pakistanis and West Indians the pattern is similar for both adults and children, with female admissions exceeding male. Differences in diagnosis between children and adults have been mentioned earlier and are by no means novel or unexpected (DHSS, 1971). The year on which these data are based is, of course, closer to the year that Rutter *et al* made their assessment of behavioural deviance in the classroom than it is to that in which the first part of this study was carried out. Also, the figures in Table III refer to place of birth not ethnic origin, so that many children of West Indian descent will be classed as British. A particularly high rate of admission characterizes those actually born in the West Indies, but there is no way of knowing if the same is true of West Indian children born in Britain. Even though different definitions and different years were used as the base for the data, hospital admissions are very similar in their general pattern to that of teachers' ratings of behavioural deviance.

A wide variety of methodologies underlie the comparisons made in this paper and if no pattern had been discernable, this would have been difficult to interpret. The fact that a distinct patterning of results is visible, despite the lack of methodological and definitional homogeneity in the studies presented, does enable some tentative conclusions to be drawn. The rank order correlation of ethnic group \times sex-ranked mean scores on the behavioural deviance questionnaire and the rank of children's mental hospital admission rates is $+0.81$ ($P < 0.05$), even though the former variable was measured in a handful of schools in Birmingham and the latter is based on the whole country. The psychiatric hospital admission rates for adults and children also correlate $+0.74$ ($P < 0.05$). These findings, taken together with some evidence from other sources that mental illness rates for various ethnic groups are positively correlated with rates of other forms of deviance

(Cochrane, 1977), suggest that the level of psychological disturbance is lower among Asian immigrants to Britain than among natives, while among West Indians, rates are similar to or somewhat higher than those found among the British. This appears to be the case however psychological disturbance is measured, whether first or second generation immigrants are considered, and whether adults or children are studied.

Where does this leave current theories of the psychological adjustment of immigrants? In fact, most such work has been directed towards explaining the relatively *poorer* mental health of immigrants than natives (see Kuo, 1976, as an example). This type of explanation is not required here, as there is no consistent trend for immigrants to have poorer mental health, but some such theories might be adapted to explain the relative rates of disturbance among immigrant and native groups.

On the basis of the evidence presented here, it might be possible to dispose of the 'under-utilization of facilities' explanation of lower rates of recorded psychological disturbance among immigrants than natives. If foreign-born individuals, for one reason or another, are less likely than natives to be hospitalized at the same level of psychological symptomatology, then comparisons of different ethnic groups on the basis of treated psychiatric illness will be misleading. A recent study in Canada (Morgan and Andrushko, 1977) found evidence that immigrants in hospital were more severely ill, as measured by length of stay, and were much less likely to be admitted for neurotic disorders than were natives. In the present study, however, the close correspondence between the relative levels of in-patient treated rates of psychological disturbance and questionnaire-detected psychological disturbance argues against this explanation. Nevertheless, psychiatric hospital admissions are not a direct reflection of treatment rates, since out-patient treatment is considerably more common than admission, particularly in childhood. No tendency was found for immigrant treatment rates to be artificially low.

Theories of immigrant adjustment being affected by the stresses and strains of the process

of migration also received more disconfirmation than support from the studies reported here. It might have been anticipated that Indian and Pakistani immigrants to Britain would encounter more difficulties, because of greater language and cultural differences, than would West Indians. However, rates of psychological disturbance are considerably lower among Asians than among West Indians, or even than among natives. The only evidence supporting this hypothesis is the fact that British-born children of West Indian immigrants do not appear to have an elevated rate of psychological disturbance compared to natives, in the same way as do West Indian-born children and to a lesser extent adults, at least as measured by the imperfect index of psychiatric hospital admissions. Those West Indians who actually experienced the process of migration are more prone to hospital admission, relative to natives, than West Indian children born in Britain are prone to behavioural disturbance, compared to native children. However, the same cannot be said of either the Indians or Pakistanis whose rates of disturbance, however measured, are consistently lower than those of the native-born comparison group.

This leaves two hypotheses, which are difficult to disentangle because they might both predict the same set of outcomes in these studies. The rates of psychological disturbance exhibited by immigrants and the children of immigrants might reflect more or less accurately the rates of the home population from which the immigrants were drawn. The differences between ethnic groups might be accounted for by some combination of genetic, cultural, religious or family factors; for instance, Kallarackal and Herbert (1976) consider Indian family life to be an important variable in accounting for the low rate of maladjustment in Indian children. Any alternative explanation based mainly on genetic differences is less viable because for one of the mental disorders with a proven genetic aetiological component, schizophrenia, immigrant rates are uniformly higher than native rates, while for other disorders the relative rates vary considerably (Cochrane, 1977). To the extent that cultural factors are important in determining the rates of distur-

bance in different ethnic groups, it is to be expected that with increasing absorption into the wider society, there will be fewer differences in rates between various minority groups and between them and natives rates. In other words, there may be increasing deviance among Asians and decreasing deviance among West Indians.

The second type of explanation, which predicts a very similar set of results and makes similar prognostications, is based on the theory of differential selection for migration. Assuming basically similar 'true rates' of psychological disturbance around the world, it is possible that both different local conditions and requirements of the host country mean that immigrants are drawn from their home population partly on the basis of psychological characteristics. Immigrants from some areas will be selected more or less at random, while some will be selected (either by themselves or by some more or less formal process) because of their psychological stability and some because of instability. Thus, differences in rates of psychological disturbance exhibited in the receiving country will not be accounted for either by base rates in the sending country or by the stresses and strains of migration, but by differential selection. In the case of the groups studied here, the hypothesis would be that Asian immigrants, particularly Pakistanis, have self-selected on the basis of psychological stability, while West Indians have not been so selected. Elsewhere, this argument has been applied to a wider range of ethnic groups (Cochrane, 1977).

It might also be pointed out that disorders known to have a genetic contribution to their aetiology, particularly schizophrenia, may show one pattern of rates across ethnic groups in Britain, perhaps relating to the factors influencing predisposition to migrate in the first place, while other disorders—more susceptible to environmental factors—may show a different pattern of rates across the same ethnic groups.

To choose between these two hypotheses obviously requires evidence on the rates of psychological disturbance, not only in immigrant and native groups in the receiving country, but also on the rates of non-immigrants in the sending country. Comparisons based upon psychiatric hospital admission rates will

be affected by differences in facilities, so that estimates of true rates would be more valuable. Studies are underway which should make a direct test of these hypotheses possible.

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