

Ethnic differences in certified sickness absence

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ABSTRACT The certified sickness absence of 4482 employees in one plant of a large manufacturing company in South-east England was studied for 12 months. The absences in the principal ethnic groups, Caucasian, Asian, and West Indian were compared. After standardisation for age and job grade in each department the Asians had twice the spells per man and nearly twice the days lost per man compared with the Caucasians. Compared with the Caucasians there was slightly more absence in West Indians. Various factors affect absence, and one reason for these differences may be that the three ethnic groups appreciate painful or unpleasant stimuli to a different degree.

Ethnic group is an important factor that should be considered in any epidemiological investigation.¹⁻³ In the United Kingdom, however, there is a dearth of studies on ethnic differences in health and attitudes to work. This is a study at one factory of certified sickness absence in three ethnic groups—Caucasian, Asian, and West Indian.

The prevalence of disease varies in different ethnic groups,⁴ but there is no real evidence to support the existence of racial differences in the physical work capacity of men.⁵

Collins⁶ conducted a survey of three ethnic divisions in the industrial employees of HM Dockyard, Singapore, over a calendar year 1955-6. He compared the certified sickness absence between Chinese, Indian, and Malay and found the Indian group had more spells of absence and lost more shifts than the other groups, and he concludes, "it is evident that the ethnic grouping of the population concerned must be taken into consideration in studies of sickness absence." This difference in sickness absence between ethnic groups was noted by others⁷⁻⁹ when working abroad.

In Europe, where in 1973 the WHO¹⁰ estimated that there were about 8-11 million migrant workers, there are two articles on the subject. Girard¹¹ and

Bresson *et al*¹² both show that the immigrant is absent more than the indigenous employee. This finding is repeated in an annual insurance report¹³ from Germany in a sister company to the one studied here and also in a personal communication from a Swedish company.

In the United Kingdom scientific publications on the effects of ethnic groups and race have probably been inhibited by the Race Relations Act, 1976. The study of ethnic differences in patterns of disease has often spilled over into the political and philosophical areas, stifling objective investigation and rational discussion.¹⁴ An example is that no question on the subject was included in the 1981 census. There are no previous publications on the effect of ethnic group on sickness absence in the United Kingdom.

Methods

A survey was conducted at one plant of a large manufacturing company in South-east England. The following information was recorded for each male manual worker employed for the whole of 1979:

Certified sickness absence—The number of new spells of certified sickness absence in 1979 and the total number of working days lost due to certified sickness absence in 1979 were recorded by the nursing staff and each absence was more than three working days. Company regulations require such employees to report to the medical department before resuming work. All employees in this study may subscribe voluntarily to the sick benefit scheme and be entitled to payments for certified absence.

Ethnic group—The nursing staff or the physician (CCB) would classify the employees as Caucasian,

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Asian (from India, Pakistan, Bangladesh, or East Africa), or West Indian by appearance and place of birth. Other ethnic groups (African, for example) were excluded from further study since there were too few for reliable comparisons.

Other factors—Each man's age, duration of service, job grade, and department (production or non-production) was obtained from personnel records as these were useful factors that might be associated with sickness absence. The classification of job grades used the company's system of grading from unskilled production workers up to the highly skilled tool makers and repairmen.

Results

A total of 4482 employees was included in the study; 2954 (68%) were Caucasian, 972 (22%) Asian, and 556 (12%) West Indian.

PERSONAL FACTORS AND ETHNIC GROUP

Before considering their absence behaviour it is useful to classify the ethnic groups in other respects. Table 1 shows that the Caucasian employees tended to be older (mean age 45.8 years) compared with the Asians (mean age 35.7 years) and the West Indians (mean age 41.6 years). Similarly Caucasians had a greater mean duration of service with the company. These differences are to be expected in view of the national pattern of postwar immigration with a greater preponderance of younger immigrants.

Most (60%) Caucasians were in the non-production department compared with only 15% of the Asians and 15% of the West Indians. The Asians (92%) and West Indians (91%) were mainly in the unskilled jobs—job grades 1 and 2—compared with 65% of the Caucasians.

CERTIFIED SICKNESS ABSENCE

Table 2 and fig 1 show the distribution of the number of new spells of sickness absence for each ethnic group. Asian employees have considerably more spells of absence (mean 1.70) than the other two groups, Caucasians (mean 0.55 spells) and West Indians (mean 0.72 spells). The Asians also have fewer individuals having no certified absence (33%) compared with the Caucasians (65%) or the West Indians (62%). At the other extreme, 11% of Asians have over five spells compared with 1% of Caucasians and 3% of West Indians.

A similar pattern emerges when one looks at the number of working days lost by ethnic groups (table 3 and fig 2). On average Asian employees had twice as many days off work as Caucasians. The mean duration of spell, however, is shorter for the Asians (10.99 days) compared with Caucasians

Table 1 *Distribution of ethnic groups by age on 1 January 1979*

Age (years)	Caucasian	Asian	West Indian	All groups
15-24	240	100	27	367
25-34	434	373	72	879
35-44	425	297	243	965
45-54	790	186	185	1161
55-64	1065	16	29	1110
Total	2954	972	556	4482
Mean age	46.79	35.66	41.57	41.01
SD	13.12	9.17	8.56	10.34

Table 2 *Number of new spells of certified absence for each ethnic group*

No of spells	Caucasian	Asian	West Indian	All groups
0	1939	320	345	2604
1	625	229	113	979
2	227	172	55	446
3 and 4	131	153	28	309
≥5	32	98	15	114
Total	2954	972	556	4482
Mean	0.55	1.70	0.72	0.82
SD	1.03	1.91	1.19	1.38

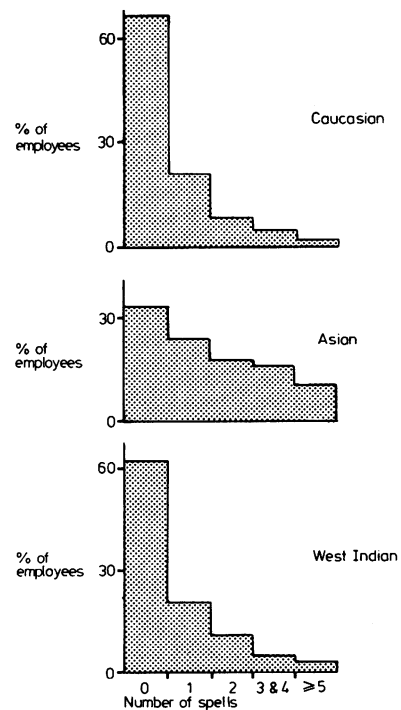


Fig 1 *Number of spells of certified absence in three ethnic groups.*

Table 3 Number of working days lost owing to certified absence in different working groups

Days lost	Caucasian	Asian	West Indian	All groups
0	1939	320	345	2604
1-10	439	185	72	696
11-20	242	162	59	463
21-60	252	245	61	558
≥61	82	60	19	161
Total	2954	972	556	4482
Mean	8.19	18.68	9.55	10.57
SD	23.50	26.94	22.15	24.47
Mean duration of spell (days)	14.89	10.99	13.26	12.89

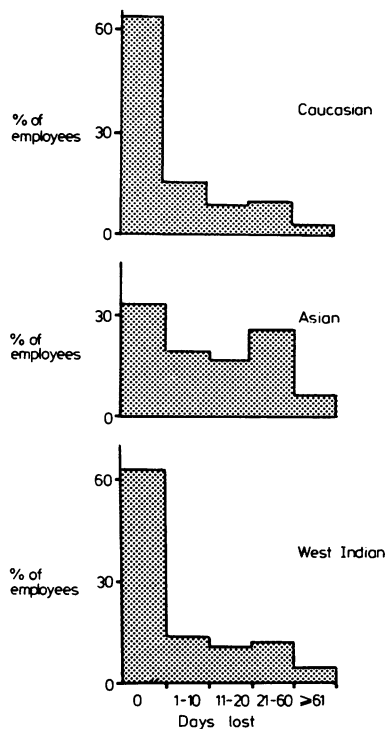


Fig 2 Number of working days lost due to certified absence in three ethnic groups.

(14.89 days) and West Indians (13.26 days). This indicates that the excess spells of absence among Asian employees are mainly of short duration.

Although the higher sickness absence among Asian workers is the main ethnic difference it should also be noted that the mean spells per man for the West Indians is also significantly higher than for Caucasians (0.72 compared with 0.55 spells per man, $t = 2.9$, $p < 0.01$).

ALLOWANCE FOR OTHER FACTORS

Many studies¹⁵⁻¹⁷ have shown that sickness absence rates can vary enormously by age, department, and occupation. For instance, younger employees often have a higher number of spells per man, while unskilled occupations have a higher number of spells and working days lost per man. The results (table 4) indicate that this study has been consistent with these general findings. Hence, it is important to take account of these other factors affecting absence by using the method of indirect standardisation when comparing ethnic groups; especially since, as mentioned earlier, the Caucasians tended to be older, in more skilled occupations, and more in non-production.

In the indirect standardisation five 10-year age categories and four job grade categories were used in each ethnic group. (For an explanation of the method see Schilling and Walford¹⁸ and for its application to a study on sickness absence refer to Taylor and Pocock.¹⁹)

Firstly, since the great majority of non-Caucasians were in production departments we will confine further detailed results to such departments, though it should be noted that broadly similar results were observed in the non-production departments.

Tables 5 and 6 (five and 10-year age groups are used to standardise) show the age-standardised spells per man and working days lost per man for each ethnic group. Evidently age standardisation makes only a slight reduction to the excess sickness absence among Asian employees, such that they still have over twice the spells per man and nearly twice the days lost per man compared with Caucasians.

Tables 7 and 8 (four categories of job grade were used to standardise) show for each ethnic group the spells per man and working days lost per man stan-

Table 4 Certified sickness absence rates by age, department, and job grade

	No of men	Mean spells per man	Mean days per man
Age group (years)			
15-24	367	1.02	12.02
25-34	879	1.24	11.98
35-44	965	0.89	10.67
45-54	1161	0.66	9.49
55-64	1110	0.54	11.08
Department			
Production	2505	1.03	12.42
Non-production	1977	0.55	8.29
Job grade			
1 (cleaner, storeman, machine operator)	1528	1.17	14.76
2 (repairman, grinder)	1854	0.79	10.41
3 (millwright, welder, HGV driver)	312	0.72	9.93
4 (electrician, toolmaker, turner)	788	0.50	6.03

HGV = Heavy goods vehicle.

Table 5 *Certified spells of absence standardised for age in production departments*

Ethnic group	No of Employees	Spells/man		Age-standardised spells/man
		Observed	Expected	
Caucasians	1207	0.68	1.04	0.69
Asians	824	1.76	1.14	1.63
West Indians	474	0.78	0.95	0.86
All groups	2505			1.05

Table 6 *Certified days of absence standardised for age in production departments*

Ethnic group	No of Employees	Days lost/man		Age-standardised days/man
		Observed	Expected	
Caucasians	1207	9.05	12.11	9.37
Asians	824	19.21	13.29	18.12
West Indians	474	9.83	12.33	10.00
All groups	2505			12.54

Table 7 *Certified spells of absence standardised for job grade in the production departments*

Ethnic group	No of Employees	Spells/man		Grade-standardised spells/man
		Observed	Expected	
Caucasians	1207	0.68	1.12	0.64
Asians	824	1.76	1.02	1.81
West Indians	474	0.78	0.94	0.87
All groups	2505			1.05

Table 8 *Certified days of absence standardised for job grade in the production departments*

Ethnic group	No of Employees	Days lost/man		Grade-standardised days/man
		Observed	Expected	
Caucasians	1207	9.05	12.20	9.27
Asians	824	19.21	13.47	17.81
West Indians	474	9.83	11.79	10.41
All groups	2505			12.49

standardised for job grade. Again, higher absence rates in Asian employees are observed, indicating that this ethnic difference in absence cannot be attributed to ethnic differences in job grade. It should be noted that after standardisation for age (tables 5 and 6) and job grade (tables 7 and 8) that the West Indian appears to have more absence (both spells and days) than a Caucasian.

Discussion

COMPOSITION OF POPULATION

In this study the term "ethnic minority group" is used as meaning "an enclave community existing in a civilised country where the group's way of life differs from the dominant population from whom it is thus, to some extent, isolated."²⁰ The two largest ethnic minority groups in the company are Asian and West Indian.

The influx of immigrants in large numbers into the UK began about 20 years ago, and the composition of the workforce over the years has shown an increasing number of ethnic minority employees. All employees have to undergo a pre-employment examination and therefore the young and healthy man is more likely to apply for a position. The immigrants therefore have a younger age distribution and shorter service than the Caucasians. The company has never discriminated against any group of people, but the ethnic minority employees have less skilled jobs than the Caucasians. There are three possible reasons for this.

(1) An increase in skill and job grade in certain circumstances is related to duration of service, and as these groups stay longer with the company their positions improve.

(2) Newly landed immigrants may be unaccustomed to working in a highly mechanical factory or

may not possess the suitable qualifications for skilled positions.

(3) Asian and West Indian men born and educated in Britain may not receive enough education or encouragement to achieve the required skills.

The skill of the job bears a close relation to social class. Khogali²¹ has shown that the immigrants in Britain are predominantly in semi-skilled or unskilled occupations (social classes IV and V). For instance, 75% of West Indians and 72% of Indians and Pakistanis come from social classes IV and V compared with only 48% of the indigenous population.

INFERENCE DRAWN FROM THE STUDY

In the introduction we referred to several other studies showing that immigrants have considerably more absence rates than employees born in the host country. This has been repeated in this study for the Asian group while the West Indian group had only slightly greater absence rates than the Caucasians. It is important to recognise that sickness absence cannot be considered solely as an objective means of morbidity²²; an individual's sickness absence experience may also reflect his personal perception of ill health and the extent of job satisfaction. Thus the interpretation of sickness absence behaviour is not obvious, but we would nevertheless consider it important to propose a hypothesis to account for the substantial ethnic difference we have found.

Other studies^{21, 23-25} have suggested that the immigrant is at a disadvantage because of language difficulties, accommodation problems, and not understanding the social benefits and health care to which he is entitled. In short, the ethnic minority groups are deprived groups and are more prone to ill health and therefore have a higher sickness absence than the indigenous employee. If this hypothesis were correct it could be expected that the Asian and West Indian groups would have similarly higher absence rates.

Therefore, we need to consider what specific aspects distinguish the Asian from the West Indian employee and might be responsible for the notably high absence in the former.

Language

Although all company employees have to have some comprehension of English, English is spoken in the West Indies as the national language, while it is often a foreign language to Asians. The Asian facility with the English language will therefore be limited, and this may reduce the extent of integration with the indigenous majority of employees. Any consequent effect on absence behaviour, however, is uncertain.

Family structure

The family circumstances of the Asian employee may be somewhat different in that they tend to live in larger more closely knit family units in which there will often be several wage earners in the house. The financial consequences of absence from work may thus be less acute so that there is less pressing need to continue to work when in a state of minor ill health. In the presence of a good company sickness benefit scheme, however, this would be a minor consideration.

Job satisfaction

Taylor²⁶ showed that employees who were frequently absent often had a low degree of job satisfaction. We have no evidence in this study, however, to suggest whether or not Asian employees have a reduced interest in their work.

Sensitivity to pain

Another hypothesis is that different races or cultures appreciate pain to different degrees and consequent disability from the same degree of ill health. This disability may be due to inherited genetic factors associated with race. It could be due, however, to environmental factors associated with culture and custom. Several studies²⁷⁻³⁰ in America have shown that the threshold to a painful stimulus varies in different groups such as Negroes, North American whites, American Indians, Italians, and Jews. Woodrow *et al*³¹ studied 41 119 individuals and found that the whites tolerated more pain than the Orientals while blacks occupied an intermediate position. Zborowski³² showed major differences in attitude towards pain and disease between Jews, the Irish, the Italians, and the "Old Americans." Similar results were obtained by Sternback *et al*³³ when they studied Yankee, Irish, Jewish, and Italian housewives.

In our study of ethnic groups the racial and cultural factors are combined. The painful stimulus may have a physical origin such as ill health from arthritis or muscular strain or it may have a psychological origin such as the requirement to undertake monotonous work or work thought to be demeaning. We accept that the objective standard of health of the ethnic minority groups might not be as high as the Caucasian group, but it seems unlikely that this would be the main cause for such pronounced variation in sickness absence among the different groups.

Conclusion

This study has shown that the Asian group of employees has more spells of absence and loses more

working days than the Caucasian and West Indian groups of employees after standardisation for age and job grade in both production and non-production departments.

Reports have shown that sensitivity to pain varies in different groups of people, and we have proposed the hypothesis that sickness absence may be associated with sensitivity to pain. Further investigation of the subject, however, is necessary to substantiate or refute our views.

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