The Pattern of Sickness Rates among Employees of the Posts and Telecommunications Corporation of Rhodesia

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SUMMARY

Sickness absenteeism from the Posts and Telecommunications Corporation of Rhodesia over the period July 1972 - June 1973 was reviewed. The 5 709 employees took on average 1,5 days sick leave not covered by a doctor's certificate (a period of 3 days or less) and 3,1 days medically certified leave, giving a total average loss per person of 4,6 days (1,7% of working time).

The commonest cause of medically certified leave was upper respiratory tract infections for Whites and off-duty injuries for Blacks. White females were absent twice as commonly as White males and 5 times as commonly as Black males. These differences were not due to an age disparity between the three groups.

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Because disease has economic implications in an industrial enterprise, it was decided to investigate the pattern of disease as seen in the Posts and Telecommunications Corporation of Rhodesia. It is understood that this is the first investigation of such a kind to be carried out in this part of the world. Similar investigations have been carried out in the UK by the British Post Office and some of our work has made use of previous methodology which has been reported by that organisation in their Annual Reports on Health and Sickness Absence.[1]

Sickness rates are a challenge to both doctors and management to improve health, and as a result, economic efficiency. In Rhodesia different ethnic groups are employed in the Posts and Telecommunications Corporation and this offered an opportunity of looking at the different patterns of disease not only in different sexes, age groups, job categories and regions of the country, but in relation to the different ethnic groups. It is further believed that medically certified causes of disease are not only of administrative, but of medical importance.

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METHOD

Fig. 1 shows the card on which each employee's information was recorded. Each individual incident of sickness was reviewed by one of the authors (W.S.) who

MEDICAL RECORDS KEPT

Employee number	Station
Age	Branch
Sex	Job category
Race	Year of appointment

Diagnosis details if discharged on medical grounds or death

SHORT SICK

Month	Days	Days of week	Diagnosis (if possible)

SICK LEAVE:

Month of onset

Total number of days

Number of working days

Diagnosis category

Whether an inpatient

GENERAL REMARKS

Fig. 1. Employee's information card (see text).

is employed as Medical Adviser to the Corporation. Any period of sickness during the period 1 July 1972 - 30 June 1973, whether or not it was covered by a medical certificate, was recorded.

A medical certificate is required by the administration of this organisation when the absence is 4 days or more. This is known as 'sick leave' and includes public holidays and weekends. Out of each 'sick leave' absence the number of working days lost was also collated, as this is of greater administrative importance. A medical certificate is not required for periods of sickness of 3 days or less ('short sick'). Actually recorded as 'short sick' was the number of working days lost, but to all intents and purposes this can be equated with the actual number of days' sickness.

The sickness rate used in this article is the annual number of days of sickness (whether medically certified 'sick leave' or 'short sick') per employee. The working time lost is similarly the total annual number of working days lost due to sickness per employee. The working time lost is expressed as a percentage of the total annual working days less annual and occasional leave.

A mid-period census was taken of those employed by the Corporation in December 1972 and this information was used as a baseline for calculating the sickness rates.

RESULTS

The 5 709 employees between them took 8 456 days medically uncertified 'short sick' leave in the year, an average of 1,5 days each. They also took 17 982 days medically certified 'sick leave', an average of 3,1 days per annum per person, giving an over-all sickness rate of 4,6 days per annum per person. This represents 4,2 working days lost by each person per year, a percentage of working time lost of 1,7 (based on an average number of working days of 251 per year). These results are shown along the bottom line of Table I. This table also shows the results broken down into sex and ethnic groups. Females have a higher sickness rate and percentage working time lost than the males. Comparing the males of the different races, the Whites have the higher sickness rate and the Blacks the lower.

Considering the same information in terms of the number of occurrences of leave, the females took on average 2,4 periods of 'short sick' and 0,6 periods of 'sick leave', an over-all average of 3 periods of sickness absence per year. This is 10 times greater than the Black males as far as both 'sick leave' and 'short sick' periods are concerned, and twice as many sickness periods as the White males. It is also worth noting that virtually all White females took some kind of sick leave as opposed to 75% of White males and 34% of Black males.

As crude sickness rates *per se* can give misleading comparisons, further study is necessary, e.g. White males may be more commonly sick because they are older men than their Black counterparts. However, the over-all average ages are 34,5 years for Black males, 36,9 years for White females and 37,2 years for White males. The composition of the three race sex groups by numbers in different age groups is shown in Table II, and in Fig. 2 is shown the sickness experience at different ages. The sickness rates are less for the Blacks in all age groups.

TABLE II. AGE DISTRIBUTION OF THE THREE MAIN SEX/RACE GROUPS

	Black males	White males	White females
<20	123	123	153
20 - 29	1 083	464	202
30 - 39	1 024	325	109
40 - 49	616	327	221
50 - 59	339	243	138
>60	(4)	116	62
Average	34,5	37,2	36,9

The patterns of sickness contrast interestingly in the three different sex/ethnic groups. 'Short sick' rates decrease with increasing age in all groups (Fig. 2, left). If 'short sick' is of administrative rather than of medical importance, the most common 'short sick' days would be Mondays and Fridays, thus extending the weekend. However, in each group Wednesday (22,4%) was the most frequent day, followed by Tuesday (21,1%), and Thursday (21,0%) and, in fact, Monday (17,5%) and Friday (18,0%) were least common.

The same information analysed by season was statistically significant (Table IIIa (χ^2_6 = 26,1, $P<0,001$) which was mainly due to the Black males taking most 'short sick' in autumn and the White males and females most 'short sick' in winter. This pattern is different as far as sick leave is concerned, where the marked statistically significant difference (Table IIIb) (χ^2_6 = 117,7, $P<0,001$) is due to the fact that White males take sick leave in autumn, White females in both autumn and winter and Black males in winter.

The commonest causes of sickness in each of the three groups are seen in Table IV. It must be emphasised that

TABLE I. SICKNESS RATES AND PERCENTAGE WORKING TIME LOST (BY RACE AND SEX)

	No.	Short sickness rate	Sick leave rate	Total sickness rate	No. of working days lost per employee	Percentage of working time lost
White females	904	3,5	8,0	11,6	10,5	4,2
White males	1 615	2,0	4,2	6,1	5,6	2,2
Black males	3 189	0,6	1,3	1,9	1,7	0,67
Over-all male	4 804	1,1	2,2	3,3	3,0	1,2
Grand total	5 709	1,5	3,1	4,6	4,2	1,7

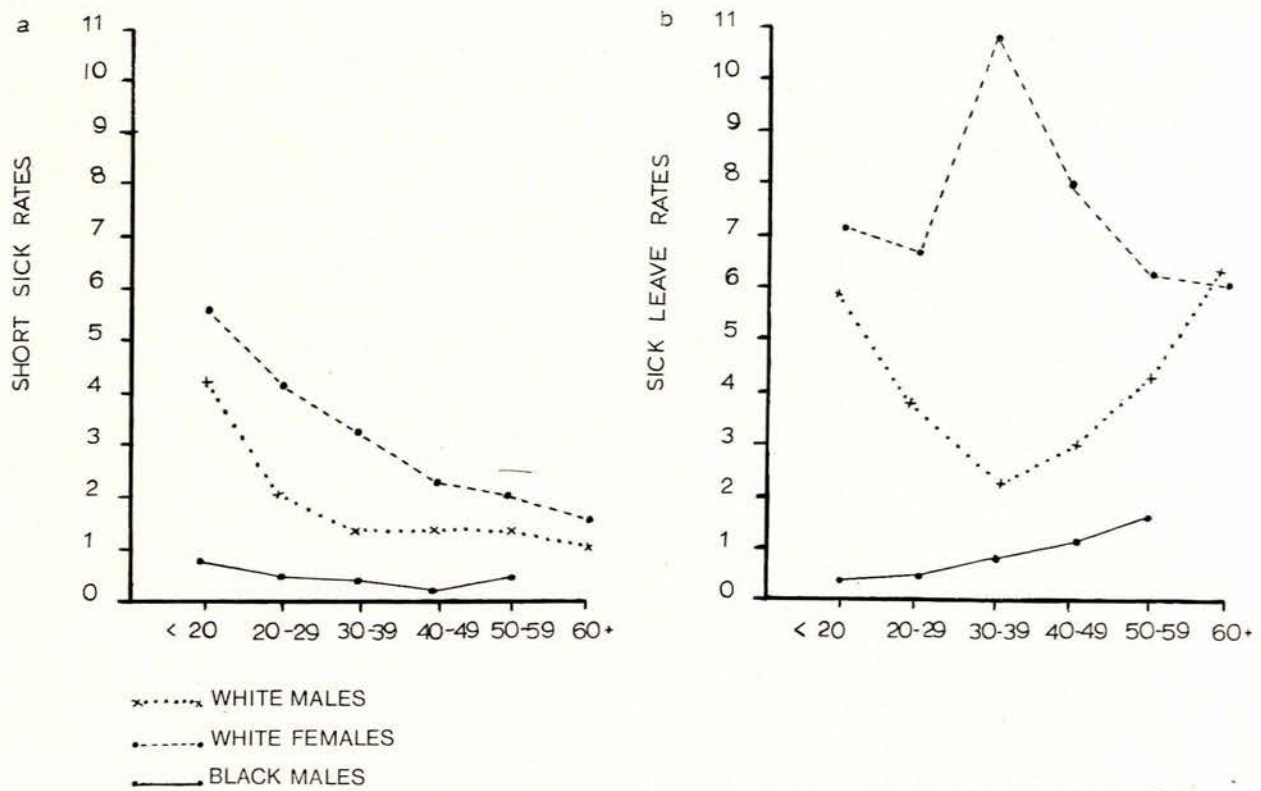

Fig. 2. Sickness experience at different ages (see text).

TABLE IIIa. 'SHORT SICK' BY SEASON

	Summer* (%)	Autumn (%)	Winter (%)	Spring (%)	Total (%)
White females	**23**	**25**	**29**	**24**	**100**
White males	**22**	**25**	**30**	**23**	**100**
Black males	**23**	**29**	**25**	**22**	**100**

TABLE IIIb. SICK LEAVE BY SEASON

	Summer* (%)	Autumn (%)	Winter (%)	Spring (%)	Total (%)
White females	**23**	**29**	**29**	**19**	**100**
White males	**20**	**31**	**25**	**24**	**100**
Black males	**24**	**23**	**28**	**25**	**100**

* Summer: Dec. - Feb. (inc.). Autumn: Mar. - May (inc.). Winter: Jun. - Aug. (inc.). Spring: Sept. - Nov. (inc.).

the percentages refer to numbers of days of sickness and not to individuals, e.g. 4 Blacks with tuberculosis account for the high percentage of days sick in this category. Of the 15 deaths during the year among all employees 6 were due to injuries off duty (average age 31,5 years) and 4 were due to diseases of the circulatory system (average age 42,0 years).

In order to further investigate the sickness rates, the information was considered by branches of the organisation and job categories in Table V. The Headquarters Branch has a higher sickness rate than either Posts or Telecommunications, who have comparable rates. In Headquarters 2,6% working time is lost due to sickness, but the telephone operators seem to be the worst individual category with 6,5% loss in working time due to sickness, which is more than 1 day out of every 16 working days for every telephone operator.

As far as region is concerned, no obvious pattern emerges (Table VI). Mashonaland North, Matabeleland South, Midlands and Victoria have the best records while

TABLE IV. COMMONEST CAUSES OF SICK LEAVE (IN ORDER OF TOTAL DURATION)

White females	(%)	White males	(%)	Black males	(%)
Upper respiratory tract infection	20	Upper respiratory tract infection	15	Injuries off duty	23
Gynaecological conditions	18	Rheumatism and other allied conditions	14	Tuberculosis	13
Bronchitis and pneumonia	9,5	Injuries off duty	11,5	Upper respiratory tract infection	11
Rheumatism and other allied conditions	9	Other diseases of the digestive system	7,5	Other diseases of the digestive system	10
Mental disorders	6	Bronchitis and pneumonia	6,5	Bronchitis and pneumonia	7
Other diseases of the digestive system	5,5	Mental disorders	4	Rheumatism and other allied conditions	6,5
All others	32	All others	41,5	All others	29,5
Total	100		100		100

TABLE V. SICK RATES AND PERCENTAGE TIME LOST BY BRANCHES OF THE ORGANISATION AND JOB CATEGORIES

	No.	Short sick rate	Long sick rate	Total sick rate	Estimated No. of working days per year	Working time lost (%)
Telecommunications branch						
Telephone operators	350	5,9	11,8	17,8	251	6,5
Technicians and mechanics	786	2,6	4,5	7,2	226	2,9
Others	1 997	0,4	0,6	1,0	251	0,4
Total telecommunications	3 133	1,6	2,9	4,4	245	1,7
Postal branch						
Postal officers	850	2,3	7,1	9,5	278	2,7
Others (including sorters and delivery men)	1 250	0,3	0,8	1,1	278	0,6
Total postal branch	2 100	1,1	3,4	4,5	278	1,4
Headquarters/Stores/ P.O.S.B.	476	2,4	4,2	6,5	226	2,6
Grand total	5 709	1,5	3,1	4,6	251	1,7

TABLE VI. SICK RATES AND PERCENTAGE TIME LOST IN REGIONS (MAJOR CENTRES IN BRACKETS)

	No.	Short sick rate	Sick leave rate	Total sick rate	Working time lost (%)
Manicaland	403	0,7	4,1	4,9	1,7
(Umtali)	(224)	(0,8)	(4,3)	(5,1)	(1,8)
Mashonaland N.	315	0,6	2,2	2,7	1,0
(Sinoia)	(47)	(1,0)	(2,7)	(3,7)	(1,3)
Mashonaland S.	2 875	1,9	3,5	5,4)	1,8
(Salisbury)	(2 558)	(2,1)	(3,6)	(5,7)	(2,1)
Matabeleland N.	1 155	1,5	3,4	4,9	1,7
(Bulawayo)	(1 015)	(1,7)	(3,6)	(5,3)	(1,9)
Matabeleland S.	93	0,7	2,0	2,7	1,0
Midlands	441	0,7	2,2	2,9	1,0
(Gwelo)	(245)	(0,8)	(1,5)	(2,3)	(1,8)
Victoria	256	0,9	2,2	3,1	1,1
(Fort Victoria)	(152)	(0,9)	(2,0)	(2,9)	(1,1)
Gangs	171	(0)	(0,1)	(0,1)	(0,0)
Total	5 709	1,5	3,1	4,6	1,7

Mashonaland South, Matabeleland North, and Manicaland have the worst. With the exception of the town of Fort Victoria the total sickness rate within urban areas is higher than in rural areas.

DISCUSSION

It is worthy of note that the Rhodesian experience of 1,7% working time lost for the year 1972/73 compares very favourably with the British experience in the Post Office for the year 1970/71 (the latest figures available), where 4,0% working time was lost. The reasons for this difference may be wide and varied, including such factors as age, sex, ethnic group distribution of employees, climate, job category and so on. It would appear that the Black employee has a much better sickness experience than the White employee, particularly the White female employee. With increasing numbers of Blacks seeking employment there would appear to be little doubt that the mild illness which might well fall under the 'short sick' category in the case of Whites, in which sector there is little unemployment, might not be taken as 'short sick' by the Blacks. A recent editorial in the *Medical Journal of Australia*[2] points out that at times of high unemployment in the past sickness leave absence was at a minimum, but that now when there is no massive unemployment the relationship of sickness absence to unemployment is not so obvious.

As practically all White females took some kind of sick leave during the year under review compared to the lower rates experienced by the men, particularly the Black men, it would seem worth while to investigate more fully the reasons for this loss of time which must have considerable economic impact on the organisation. A similar experience was found in the Post Office in Britain for men and women.

The fall in 'short sick' rates with increasing age as seen in Fig. 2 is also worthy of comment. It would be expected, as is the case in the Post Office in the UK, that older people might experience a greater incidence of minor ill health, but the opposite appears to be the case. This again merits further investigation concerning the real reason for absence in the younger age groups, particularly when it is remembered that the sickness is medically uncertified.

Further investigation is also merited as to why there is such a marked seasonal variation in sick leave as far as the seasonal distribution is concerned in relation to sickness incidence in different ethnic groups, the White male falling ill in autumn (March - May inclusive) and the Black in winter (June - August inclusive). There are many possible explanations, but the preponderance of upper respiratory, rheumatic and other allied conditions (29%) in the Whites compared with the Blacks (17,5%) may influence the differing experience, while the frequency of injuries off duty, which includes assaults, road accidents and sporting injuries, may tip the balance in favour of the Blacks' higher incidence of sick leave in winter.

As pointed out in the introduction, this is a study undertaken for the first time in this country and the authors intend to expand their investigations in future years to endeavour to answer some of the questions postulated. It is hoped that similar investigations could take place in other organisations employing large numbers of people in Rhodesia. Undoubtedly, high sickness rates in any one job category are always worthy of further analysis and in this preliminary work we are concerned at the higher sickness rate in the Headquarters branch than either the Postal or Telecommunications branch (Table IV). In the Telecommunications branch the experience of the telephone operators, with a loss of 1 working day out of every 16, calls for an investigation into the causes. The Post Office in the UK would seem to have a similar experience to that in Rhodesia in this category of employee.

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