

# Sickness Absence in Private Sector Establishments in Singapore

O Y Chan, S L Gan, S E Chia

## ABSTRACT

**Aim:** A study was conducted in June 1995 to determine the current level of sickness absence in Singapore.

**Method:** The questionnaire survey was part of a larger labour market survey conducted quarterly by the Ministry of Labour, and covered 3,553 private sector establishments employing 25 or more employees.

**Results:** Overall, 14.4% of the 628,477 employees took sick leave, while the percentage of working days lost due to sick leave, excluding maternity leave, was 1.1%. An average of 3.2 days of medical leave were taken per person per year. Industry specific characteristics seemed to have more influence on sickness absence than establishment size, employee's sex and occupation (viz, professional versus clerical versus production staff), number of hours worked and overtime work. Over 60% of the establishments, particularly larger companies and those in manufacturing, implemented measures to control sickness absence, most commonly counselling, disciplinary procedures and attendance allowance or bonus. Over 13% monitored sickness absence using computerised records.

**Conclusion:** Comparing with overseas sickness absence (lost time) rates, the rates observed in this study do not appear high.

**Keywords:** sickness absence, sick leave, Singapore

## INTRODUCTION

Absenteeism is a cause of considerable loss of productivity and a significant cost burden to industry. While it is often assumed that the vast majority of absences from work is due to sickness, this may not be so. It has been reported that only 20% - 25% of such absences are caused by illness sufficient to render the individual unfit to attend work<sup>(1)</sup>.

There have been a few published reports and studies on sickness absence in Singapore<sup>(2-6)</sup>. Unpublished data from a study in 1991, covering 5,415 private sector establishments employing 25 or more paid employees showed that, on the average, employees took 4.0 days of medical leave<sup>(7)</sup>. The latter was the only parameter on sickness absence determined in that study.

The objective of the present study is to document the current extent of sickness absence in Singapore.

Such information is of interest not only to employers and those concerned with the health of our workforce, but also to sociologists and economists.

## METHOD

This ad hoc study was part of a larger labour market survey conducted quarterly by the Ministry of Labour. The questionnaire survey covered all 3,765 private sector establishments employing 25 or more paid employees, based on Central Provident Fund records as at June 1994. At the time, there were 70,931 private sector establishments in Singapore, employing a total of 1,135,845 persons<sup>(8)</sup>. The response rate for the survey was 99%. Of the 3,719 establishments that responded, 3,553 were active firms employing a total of 628,477 employees and which provided complete returns. The findings reported refer to these active establishments. The reference period was June 1995.

Respondents were asked to provide separately for male and female employees under the following categories: professional, clerical and production staff with the following information - total number of paid employees as at 30 June 1995; total number of working days, total number of days of sick leave and total number of paid employees who took sick leave in the month of June 1995. The companies were also asked to indicate the measures, if any, taken to monitor and manage absenteeism.

In Singapore, under the Employment Act<sup>(9)</sup>, an employee who has served his employer for not less than 6 months (reduced from 12 months since 1 March 1996) is entitled to paid sick leave of 14 days. This can be extended to 60 days if hospitalisation is necessary. The sick leave must be certified by a registered medical practitioner appointed by the employer, or, in the absence of one, a government medical officer. Under the Workmen's Compensation Act<sup>(10)</sup>, the medical leave entitlement is 14 days for outpatient leave and 60 days for hospitalisation leave. If the incapacity exceeds these periods, further medical leave is payable at two-thirds the monthly earnings for up to one year.

In the present study, sick leave was defined as both paid and unpaid leave, including outpatient and hospitalisation leave, as well as medical leave under the Workmen's Compensation Act<sup>(10)</sup>. Maternity and annual leave were excluded.

The following parameters of sickness absenteeism were determined: percentage of employees who took

Department of  
Industrial Health  
Ministry of Labour  
16 Havelock Road  
Singapore 059764

O Y Chan, MBBS, FFOM  
(Lond), FAMS  
Deputy Director

S L Gan, MBBS, MSc (OM),  
FAMS  
Specialist Medical Adviser

Department of Community,  
Occupational & Family  
Medicine  
National University  
of Singapore  
10 Kent Ridge Crescent  
Singapore 119260

S E Chia, MBBS, MSc (OM),  
FAMS  
Senior Lecturer

Correspondence to:  
Dr O Y Chan

sick leave; percentage of working days lost, due to sick leave or percentage work time lost (total number of sick leave days divided by total number of scheduled working days multiplied by 100) and average number of days of medical leave taken per person per year (projected from the June 1995 data multiplied by 12). Where appropriate, the proportions and their differences were tested for statistical significance using the Confidence Interval Analysis programme<sup>(11)</sup>.

## RESULTS

The distribution of the establishments studied by industry and size of workforce is in Table I, while Table II gives a breakdown of paid employees in these establishments by industry, occupation and sex.

During the reference period, the percentage work time lost was 1.1%, with over 14.4% of employees taking sick leave. Overall, an estimated average of 3.2 days of medical leave were taken per person per year (Table III).

**Table I - Distribution of establishments by industry and size**

Industry	No. of establishments by size of workforce				
	All establishments	<50 employees	50-99 employees	100-499 employees	≥500 employees
All industries	3,553	979	1,044	1,324	206
Manufacturing	1,110	173	310	512	115
Construction	890	389	290	198	13
Commerce	614	185	176	221	32
Transport	280	85	90	92	13
Finance	455	94	125	214	22
Service	185	44	46	84	11
Others**	19	9	7	3	0

\*\* include agriculture, fishing, mining and quarrying activities

**Table II - Distribution of employees by industry, occupation and sex**

Industry	All employees	No. of employees by occupation and sex*			
		All occupations	Professional	Clerical	Production
All industries	628,477	351,957 [276,520]	98,656 [55,606]	68,095 [110,153]	185,206 [110,761]
Manufacturing	271,667	137,719 [133,948]	37,052 [14,058]	11,215 [18,463]	89,452 [101,427]
Construction	78,638	72,887 [5,751]	9,217 [1,773]	1,895 [3,389]	61,775 [589]
Commerce	96,269	48,469 [47,800]	13,107 [7,313]	26,338 [38,679]	9,024 [1,808]
Transport	65,736	43,242 [22,494]	14,994 [3,318]	12,971 [17,384]	15,277 [1,792]
Finance	78,655	36,707 [41,948]	19,312 [15,875]	11,396 [21,939]	5,999 [4,134]
Service	36,237	11,959 [24,278]	4,872 [13,227]	4,230 [10,235]	2,857 [816]
Others**	1,275	974 [301]	102 [42]	50 [64]	822 [195]

\* male [female]

\*\* include agriculture, fishing, mining and quarrying activities

## Industry type

The construction industry reported the lowest sickness absenteeism in terms of percentage work time lost (0.5%), proportion of employees taking sick leave (5.8%) and average number of days of medical leave taken per person per year (1.5 days) (Table III).

The highest sickness absenteeism was reported in the transport sector, with 1.5% work time lost, 16.3% employees taking sick leave and 4.3 days medical leave taken per person per year. A separate analysis within the transport sector showed that land transport reported the highest sickness absenteeism: 1.8% work time lost, 27.4% employees taking sick leave (95% confidence intervals: 0.00 to 0.00 and 0.11 to 0.13, respectively) and averaging 5.4 days of medical leave taken per person per year, compared to other transport industries (1.4%, 15.5% and 4.2 days, respectively).

Within the manufacturing sector, a separate analysis indicated that the textile industry, which employed 13,622 persons, had the lowest sickness absenteeism, with 0.7% work time lost, 10.9% employees taking sick leave (95% confidence intervals: -0.01 to -0.06 and -0.06 to -0.05, respectively) and averaging 2.2 days of medical leave taken per person per year, compared to non-textile manufacturing industries (1.3%, 16.4% and 3.4 days, respectively). The basic metal industry, which includes iron and steel mills and foundries, with a total of 2,741 employees, reported the highest sickness absenteeism: 2.0% work time lost, 26.1% employees taking sick leave (95% confidence intervals: -0.01 to -0.01 and 0.08 to -0.12, respectively) and averaging 5.7 days of medical leave taken per person per year, compared to non-basic metal manufacturing industries (1.2%, 16.0% and 3.3 days, respectively).

## Establishment size

With all industries combined, there seemed to be an association between sickness absenteeism and the size of the establishment, the larger companies having higher absenteeism (Table III), although this association was not universally apparent within the specific industry sectors. Nevertheless, the more elaborate monitoring systems and record keeping in the larger establishments may in part account for the apparently higher sickness absence reported.

## Occupation and sex

When all industries were combined, professional staff and male employees seemed to have lower sickness absenteeism in terms of percentage work time lost, proportion of employees taking sick leave and sick leave days per person per year (Table IV). However, these associations were also not universally apparent within the specific industry sectors.

## Overtime work and days worked per employee

The parameters studied did not seem to be influenced by the number of hours worked or percentage of employees doing overtime work. In 1995, the average weekly hours worked was 47.1, ranging from 42.0 in the service sector to 51.4 in the construction

**Table III - % Work time lost, % employees taking sick leave and average sick leave days per employee by industry and size of establishment**

Industry	% work time lost, % employees taking sick leave and average sick leave days per employee				
	All establishments	<50 employees	50-99 employees	100-499 employees	≥500 employees
All industries	1.1 % 14.4 % 3.2	0.7 % 9.1 % 2.2	0.9 % 11.0 % 2.5	1.0 % 14.1 % 3.0	1.3 % 16.3 % 3.6
Manufacturing	1.2 % 16.1 % 3.3	0.9 % 11.5 % 2.6	1.0 % 14.0 % 2.9	1.2 % 16.1 % 3.3	1.3 % 16.7 % 3.5
Construction	0.5 % 5.8 % 1.5	0.4 % 4.8 % 1.4	0.6 % 5.6 % 1.8	0.5 % 6.2 % 1.4	0.4 % 5.7 % 1.3
Commerce	1.0 % 13.4 % 2.8	0.9 % 12.0 % 2.6	0.9 % 12.5 % 2.6	1.0 % 14.3 % 2.9	1.0 % 12.9 % 2.7
Transport	1.5 % 16.3 % 4.3	1.1 % 11.7 % 3.4	0.8 % 11.5 % 2.5	1.1 % 14.4 % 3.4	1.7 % 18.2 % 5.0
Finance	1.2 % 16.3 % 3.4	1.0 % 12.9 % 2.7	1.1 % 14.1 % 3.0	1.1 % 15.5 % 3.2	1.3 % 19.0 % 3.9
Service	1.3 % 14.9 % 3.8	0.8 % 10.1 % 2.3	1.0 % 11.0 % 2.8	1.3 % 15.5 % 3.9	1.4 % 15.7 % 4.0
Others**	0.7 % 8.0 % 2.1	0.9 % 10.8 % 2.8	0.3 % 3.3 % 0.9	0.9 % 10.8 % 2.8	0 % 0 % 0

\*\* include agriculture, fishing, mining and quarrying activities

Significant differences noted in:

- % work time lost between construction and transport sectors (95% confidence interval: - 0.01 to - 0.00)
- % employees taking sick leave between construction and transport sectors (95% confidence interval: - 0.11 to - 0.10) and between construction and finance sectors (95% confidence interval: - 0.11 to - 0.10)

industry<sup>(12)</sup>. Our study showed that, overall, 46.7% of the employees worked overtime, ranging from 21.6% in the service sector to 63.4% in the manufacturing sector. Under the Employment Act<sup>(9)</sup>, work in excess of eight hours in a day or 44 hours in a week would be considered overtime work. While employees are permitted to work up to a limit of 72 hours of overtime in a month, the average weekly overtime hours of employees who worked overtime in 1995 was 10.0, ranging from 5.8 in the service sector to 12.9 in the construction industry<sup>(12)</sup>.

#### Measures to control sickness absence

Over 60% of the establishments, mainly the larger companies and those in the manufacturing sector, implemented measures to control sickness absence problems (Table V). The most common measures were counselling, disciplinary procedures and attendance allowance or bonus. Over 13% of the companies monitored sickness absence using computerised records.

#### DISCUSSION

We have documented the current extent of sickness absence in Singapore based on data obtained in our 1995 survey of private sector establishments with 25 or more employees. It should be pointed out that, within the constraints of the study design, some limitations to the amount of information obtained

were unavoidable. Thus, only grouped data was collected, as, unlike studies on selected companies, it was not feasible to ask for individual employee's sickness absence information, such as number and length of spells. As the data was based on a reference period of one month (June 1995), the information may not necessarily be representative of the situation throughout the year.

In our study, an estimated 3.2 days of medical leave were taken per employee per year, compared to 4.0 days observed in the 1991 study<sup>(7)</sup>. The study populations in both surveys were based on listings from Central Provident Fund records. However, while the 1991 survey covered all private sector establishments with 25 or more employees, in the present study, stratified sampling by industry and workforce size of establishment was used for establishments with 25-99 employees, with universal coverage of establishments employing 100 or more persons. In addition, unlike the present study, the 1991 survey covered a full one-year period and maternity leave was included. Taking these differences into account, the findings would seem to indicate that sickness absence rates have not changed considerably in the last five years. As in the present study, the 1991 survey found that sickness absenteeism seemed to increase with the size of the establishment and the construction industry had the lowest number of days of medical leave taken per employee per year.

Direct comparisons with previous local data may be difficult in view of the time lapse and because these earlier reports involved specific companies in selected industries. However, some general observations can be made. For example, in our study, the basic metal industry reported the highest absenteeism within the manufacturing sector. This finding seems consistent with the observations of Ng<sup>(5)</sup>, who reported the full year sickness absence experience in an iron and steel mill in 1982. He found that 81% of the employees had at least one spell of certified sick leave with 7.2 days of such leave taken per employee.

International comparisons of sickness absence are difficult to make<sup>(13,14)</sup>. Published national sickness absence rates (lost work time percentages) in 1983 have been reported to range from 1.5% in Japan and 3.2% in the United States of America (USA), to 7.7% in Germany and 13.8% in Sweden<sup>(15)</sup>. The rate in the United Kingdom (UK) in 1978 was reported as 8.0%<sup>(15)</sup>, while more recent reports<sup>(16,17)</sup> indicate an apparent down trend from 5.1% in 1987 to 4% in 1993. It was observed that the British-owned private sector companies had an absence rate of 3.9% while Japanese-owned companies in the UK reported rates of 2.4%<sup>(16)</sup>. The statistical abstract of the United States 1995<sup>(18)</sup> reported that the average days of illness or injury related disability per person in 1993 was 5.6 days.

Due to differences in social security arrangements and recording procedures, comparison of such crude aggregated data can only indicate some general trends in international sickness absence rates<sup>(14)</sup>. It has also been observed that countries with more liberal

**Table IV - % Work time lost due to sickness absence, percentage employees taking sick leave and average number of sick leave days per employee per year by industry, occupation and sex**

Industry	% work time lost, % employees taking sick leave and average sick leave days				
	All employees	All occupations	Professional	Clerical	Production
All industries	1.1%	1.0%	0.8%	1.1%	1.0%
		[1.3]	[1.3]	[1.4]	[1.3]
	14.4%	12.4%	10.1%	13.8%	13.1%
	[16.9]	[16.6]	[18.0]	[16.0]	
	3.1	2.8	2.2	3.1	3.0
	[3.6]	[3.6]	[3.6]	[3.9]	[3.3]
Manufacturing	1.2%	1.2%	0.8%	1.1%	1.4%
		[1.3]	[1.3]	[1.4]	[1.3]
	16.1%	15.6%	10.8%	14.8%	17.8%
	[16.6]	[17.2]	[19.0]	[16.1]	
	3.3	3.3	2.2	2.9	3.8
	[3.4]	[3.4]	[3.5]	[3.7]	[3.3]
Construction	0.5%	0.4%	0.5%	0.8%	0.4%
		[1.2]	[1.3]	[1.3]	[0.5]
	5.8%	4.9%	7.1%	9.1%	4.4%
	[17.1]	[17.8]	[18.1]	[8.8]	
	1.5	1.3	1.5	2.5	1.2
	[3.7]	[3.7]	[3.8]	[4.1]	[1.6]
Commerce	1.0%	0.9%	0.7%	0.9%	1.4%
		[1.0]	[1.2]	[1.0]	[1.7]
	13.4%	12.6%	10.1%	12.1%	17.5%
	[14.3]	[16.1]	[13.6]	[21.7]	
	2.8	2.7	2.1	2.5	3.9
	[3.0]	[3.0]	[3.5]	[2.8]	[5.0]
Transport	1.5%	1.3%	1.0%	1.4%	1.5%
		[1.8]	[1.4]	[1.8]	[2.1]
	16.3%	14.8%	11.6%	14.4%	18.2%
	[19.3]	[19.4]	[19.8]	[14.2]	
	4.3	3.9	3.1	4.1	4.4
	[5.1]	[5.1]	[4.2]	[5.2]	[5.9]
Finance	1.2%	0.9%	0.7%	1.1%	0.8%
		[1.4]	[1.3]	[1.6]	[0.8]
	16.3%	12.0%	9.7%	15.9%	11.6%
	[20.2]	[18.3]	[23.1]	[11.9]	
	3.4	2.5	2.0	3.4	2.4
	[4.1]	[4.1]	[3.9]	[4.7]	[2.4]
Service	1.3%	1.1%	0.6%	1.5%	1.6%
		[1.3]	[1.2]	[1.5]	[1.8]
	14.9%	13.3%	7.4%	17.3%	17.5%
	[15.8]	[13.4]	[18.3]	[22.2]	
	3.8	3.4	1.6	4.4	4.9
	[3.9]	[3.9]	[3.4]	[4.5]	[5.2]
Others	0.7%	0.6%	0.2%	2.0%	0.6%
		[0.8]	[0.9]	[1.2]	[0.6]
	8.0%	6.6%	4.9%	4.0%	6.9%
	[12.6]	[7.1]	[15.6]	[12.8]	
	2.1	2.0	0.6	6.0	1.9
	[2.3]	[2.3]	[2.9]	[3.6]	[1.8]

\* male [female]

\*\* include agriculture, fishing, mining and quarrying activities

attitudes towards medical certification of incapacity have the highest rates<sup>(13)</sup>. Thus, the relatively low overall sickness absence rates reported both in the 1991 survey and our current study may be attributed in part to the legislation in Singapore, in particular, the provisions concerning sick leave entitlement and requirement for medical certification.

Industry specific characteristics also influence absenteeism<sup>(19)</sup>. For example, the relatively low rates we observed in certain sectors, such as the construction industry and textile manufacturing, may be related to the fact that wages in these two sectors are daily-rated and piece-rated, respectively.

Our study showed a higher sickness absenteeism in the transport sector compared to other sectors. In the public transport industry, bus drivers may be under "occupational stress" from work schedules, "irregular working hours, automobile exhaust fumes and noise"<sup>(20,21)</sup>. The higher absenteeism we observed in the basic metal industry, compared to other manufacturing industries, appears consistent with previous findings by Ng<sup>(5)</sup> who attributed the higher absence rates he found among meltshop staff to the physically demanding work and the hot, dusty and noisy environment.

Our data indicate that such industry specific characteristics may have a greater influence on sickness absence than factors such as establishment size, employee's sex and occupation (viz, professional versus clerical versus production staff), number of hours worked and overtime work.

We found that over 60% of the establishments implemented measures to control sickness absence problems, with counselling, disciplinary procedures and attendance allowance or bonus being the most common measures. A survey of 75 UK organisations in 1994 showed that counselling, setting attendance targets, disciplinary procedures, occupational health departments and exclusion from sick pay schemes were the most common measures used to control sickness absence and costs<sup>(17)</sup>. Only 5% of the companies surveyed paid a cash attendance bonus. Over 79% of these companies monitored sickness absence using computerised records.

Interestingly, a separate analysis of our data showed that companies adopting measures to control sickness absence were those which reported higher sickness absenteeism. This may be because such companies have felt it necessary to take measures to reduce sickness absence. Evaluating the effectiveness of the various measures used would require a separate and more detailed study which is not within the scope of this report.

## CONCLUSION

It has been said that a 3% sickness absence rate is the unavoidable minimum that most firms could expect<sup>(22)</sup>. On this basis, the sickness absence rates we observed among the private sector establishments surveyed would not be considered high. Nevertheless, as any absenteeism brings with it costs (direct, indirect and hidden) for individuals, families, companies and the national economy<sup>(23)</sup>, innovative ways should be found to prevent and minimise absenteeism at the workplace, where possible. The current ongoing research and development programmes worldwide on this subject<sup>(23,24)</sup> will hopefully help to achieve this.

**Table V - Distribution of establishments by measures to control absenteeism**

Industry/ Establishment size	Total	Percentage establishments having:							
		No specific measures	Counselling	Disciplinary procedures	Attendance allowance/ bonus	Monitoring with computerised records	Target setting	Non- monetary awards	Other measures
All establishments	3,553 (100%)	39.4%	30.5%	27.0%	26.5%	13.6%	7.6%	2.5%	0.7%
Manufacturing	1,110 (100%)	20.8%	34.1%	20.8%	55.3%	20.3%	13.0%	2.3%	0.8%
Construction	890 (100%)	62.7%	17.8%	15.8%	7.5%	4.3%	3.9%	2.4%	0.3%
Commerce	614 (100%)	36.2%	36.8%	31.3%	21.2%	12.7%	5.9%	2.9%	0.7%
Transport	280 (100%)	40.4%	28.2%	29.3%	16.8%	16.8%	5.7%	3.6%	0.4%
Finance	455 (100%)	43.7%	37.4%	27.7%	10.3%	15.4%	3.3%	1.8%	1.5%
Service	185 (100%)	36.2%	37.8%	34.6%	18.4%	10.3%	8.1%	3.2%	0%
Others**	19 (100%)	57.9%	5.3%	10.5%	21.1%	26.3%	5.3%	0%	0%
< 50 employees	979 (100%)	58.9%	18.6%	14.9%	14.1%	5.0%	5.3%	1.7%	0.5%
50-99 employees	1,044 (100%)	42.6%	25.3%	22.9%	24.7%	9.9%	6.3%	1.5%	0.8%
100-499 employees	1,324 (100%)	27.0%	38.4%	35.0%	33.9%	18.6%	10.0%	3.2%	0.7%
≥ 500 employees	206 (100%)	10.7%	61.7%	52.9%	47.6%	40.8%	10.2%	6.8%	1.0%

\*\* include agriculture, fishing, mining and quarrying activities

**ACKNOWLEDGEMENTS**

We are grateful to the Ministry of Labour for permission to quote from departmental records. We deeply appreciate the invaluable assistance of the Director, Research and Statistics Department, Ministry of Labour, Mrs Tan Leng Leng and her staff, in particular, Miss Wong Yuet Mei and Mdm Ng Jwee Kim, who provided the survey and other data necessary for the preparation of this paper. Finally, we wish to acknowledge the generous co-operation of the management and staff of all the establishments involved in the survey.

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