

## Sickness absence pattern in developing countries

On reviewing twenty studies (eight published and twelve unpublished) on sickness absence carried out on an Iraqi population, it is possible to conclude that the behaviour of Iraqi people in taking sick leave does not differ from that of the people in the developed countries. Factors such as age, sex and occupation, which proved to have an effect on sickness absence among people in the developed countries, appeared to have more or less a similar effect on Iraqi people. The study recommends that occupational health physicians may benefit from studying sickness statistics to improve the employees health conditions.

### Introduction

Studying sickness absence may be valuable for many reasons. It can be a measure of the general health of people<sup>1</sup>, a way to avoid the occurrence of some illnesses<sup>2</sup> or a way to reduce sick leave<sup>3</sup>. In fact sickness absence is a complex phenomenon that involves several factors (social<sup>4</sup>, especially the conditions relating to where people work<sup>5</sup>, economic, ethnic or personal<sup>6</sup>) although some of them might not be directly related to illness<sup>7</sup>.

Data on sickness absence are not always available and at the same time are not easy to collect. Inaccuracies can exist in recording all sick leave or in clarifying the cause of illness<sup>8</sup> or the diagnosis. However, this does not invalidate the study of sickness absence as it still can determine the causes of sickness and also detect specific occupational hazards<sup>9,10</sup>.

The aim of this study was to show whether the pattern of sickness absence in developing countries (Iraq as an example) differs from that of the developed countries. It is known that there is little difference in sickness absence between different developed countries.

### Material and methods

This study is based on results obtained from twenty studies (eight published and twelve unpublished) on sickness absence carried out in different firms in Iraq (each firm in the study is represented by a number) for a period of ten years (1979-1988).

The data used were collected from the medical department of each firm and were checked with the health certificate usually kept in the personal file of each worker. These studies have examined the effects of a number of factors on sickness absence (each study examined the factors of the available data). The factors include age, sex, marital status, family responsibility, wage, length of service, level of responsibility, occupation, place of work, day of the week in which the sickness was granted, season and diagnosis. Different rates were examined (average number of spells per person (inception rate), average days lost per person and average

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days lost per spell) and the frequency distribution (Poisson and negative binomial) were studied<sup>8</sup> in some of them while it was possible in the others to classify the spells according to their duration. These studies were carried out by factory doctors working under my supervision.

Table I shows the frequency distribution of people according to the number of spells in some of these studies. As age, sex and occupation are the main factors affecting sickness absence, Tables II and III then show the inception rate of these factors in some others.

### Results and discussion

Although no consistent pattern was found in all of these studies, one can show that the rates of sickness absence are different from one firm to another and from one department to another, and the total number of spells of short duration (less than three days) were in the range between 70 to 90 per cent. On the other hand the number of people who had no sick leave during the study period was in the range between 10 to 56 per cent (Table I).

| TABLE I                                                                                                          |                                     |      |     |           |     |     |     |     |
|------------------------------------------------------------------------------------------------------------------|-------------------------------------|------|-----|-----------|-----|-----|-----|-----|
| FREQUENCY DISTRIBUTION OF EMPLOYEES HAVING 0, 1, 2, ETC SPELLS IN DIFFERENT FIRMS (FIRMS ARE CODED FROM 1 TO 20) |                                     |      |     |           |     |     |     |     |
| No. of spell                                                                                                     | No. of employees in different Firms |      |     |           |     |     |     |     |
|                                                                                                                  | 1                                   | 2    | 3   | Firms No. |     |     |     |     |
|                                                                                                                  |                                     |      |     | 6         | 8   | 18  | 19  | 20  |
| 0                                                                                                                | 243                                 | 304  | 32  | 31        | 110 | 56  | 100 | 64  |
| 1                                                                                                                | 446                                 | 488  | 60  | 33        | 59  | 27  | 79  | 42  |
| 2                                                                                                                | 476                                 | 513  | 73  | 17        | 14  | 8   | 47  | 27  |
| 3                                                                                                                | 439                                 | 395  | 94  | 21        | 7   | 5   | 14  | 13  |
| 4                                                                                                                | 329                                 | 274  | 141 | 12        | 2   | 1   | 6   | 10  |
| 5                                                                                                                | 184                                 | 151  |     | 5         | 3   | 1   | 3   | 8   |
| 6                                                                                                                | 120                                 | 87   |     | 8         | 3   | 2   | —   | 3   |
| 7                                                                                                                | 74                                  | 70   |     | 3         | —   |     | 1   | 1   |
| 8                                                                                                                | 38                                  | 33   |     | —         | 2   |     |     | 1   |
| 9                                                                                                                | 20                                  | 28   |     | 9         |     |     |     | 1   |
| 10                                                                                                               | 22                                  | 15   |     | 2         |     |     |     |     |
| 11                                                                                                               | 8                                   | 10   |     | 3         |     |     |     |     |
| 12                                                                                                               | 4                                   | 8    |     | 1         |     |     |     |     |
| 13                                                                                                               | 2                                   | 2    |     | 1         |     |     |     |     |
| Total                                                                                                            | 2405                                | 2378 | 400 | 140       | 200 | 100 | 250 | 170 |

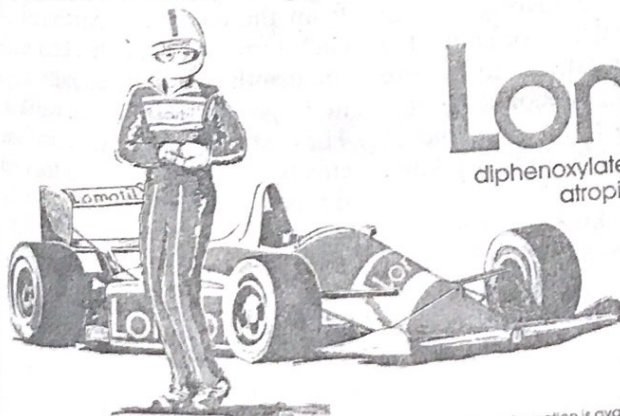
Rates of sickness absence increase with age (Table II), females show higher rates in comparison to males (Table III). Married women have higher rates than single women and married women with children have higher rates than married women without children. The rates are higher the more children she has.

The inception rate tends to decrease with the length of service

and the reverse is the case when the average days lost per spell or per person are considered. The level of sickness absence is inversely related to that of the responsibility of the employee. Wage levels show a negative association with sickness absence rates.

Saturday (the first working day of the week) tends to be always the day most favoured for the beginning of sick leave. The pat-

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TABLE II

## INCEPTION RATE (SPELLS) BY AGE GROUP IN DIFFERENT FIRMS

| Firm No. | Age group (Years) |       |       |     | Total |
|----------|-------------------|-------|-------|-----|-------|
|          | Under 24          | 25-34 | 35-44 | 45+ |       |
| 1        | 2.1               | 2.8   | 3.2   | 2.9 | 2.8   |
| 2        | 2.1               | 2.9   | 3.4   | 3.1 | 3.0   |
| 3        | 2.7               | 4.6   | 5.8   | 6.3 | 5.7   |
| 4        | 0.4               | 1.4   | 1.6   | 1.8 | 1.5   |
| 5        | 2.2               | 2.1   | 2.9   | 3.8 | 2.4   |
| 6        | 2.5               | 2.6   | 3.0   | —   | 2.7   |
| 7        | 0.5               | 0.7   | 1.6   | 0.8 | 0.9   |
| 8        | 0.5               | 0.6   | 1.3   | 1.7 | 0.7   |
| 9        | 0.4               | 0.7   | 1.2   | 1.7 | 0.8   |
| 10       | 2.5               | 2.0   | 2.0   | 2.2 | 2.1   |
| 11       | 0.2               | 1.4   | 1.7   | 2.1 | 1.5   |

tern declines throughout the remaining days of the week with Thursday as the least popular

duration. Again, one day spells were randomly distributed among the months of the year.