Sickness absenteeism among health care workers in a public hospital in São Paulo, Brazil

Absenteísmo-doença entre profissionais de saúde de um hospital público estadual em São Paulo

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\textbf{ABSTRACT} | Background: Several studies showed that sickness absenteeism has considerable impact on civil service given the increasing number of sick leaves granted to and days off work among employees. Health care workers, especially those in hospitals, represent one of the occupational groups at higher risk of absenteeism. Therefore, establishing the pattern of sickness absenteeism in this group is crucial to implement efficacious preventive measures against work-related diseases. \textbf{Objective:} To characterize sickness absenteeism among the nursing and medical staff of a public hospital in São Paulo, Brazil, in the period from 2011 through 2013. \textbf{Methods:} Cross-sectional descriptive study conducted in a large hospital in which we analyzed data from January 2011 to December 2013. \textbf{Results:} Employees missed a total of 71,460 days of work along the analyzed period; 3,323 sick leave benefits were granted to 1,533 workers. Nursing assistants and workers in the adult emergency department accounted for the largest number of days off work to a total of 11,460. The most common reasons for sick leaves among emergency department employees were musculoskeletal diseases and mental and behavioral disorders. \textbf{Conclusion:} We detected changes in the morbidity profile of the nursing and medical staff along the analyzed period, characterized by conditions which demand longer time for recovery and return to work. \textbf{Keywords} | absenteeism; hospitals; occupational health; disease; health personnel.

\textbf{RESUMO} | \textbf{Introdução:} Pesquisas revelam que os estudos das ausências motivadas por doença são particularmente importantes na esfera do funcionalismo público em razão do número crescente de afastamentos por licença médica e de dias não trabalhados por parte desse importante grupo de trabalhadores. Entre as categorias profissionais mais expostas ao afastamento, estão os profissionais de saúde, particularmente os de instituições hospitalares. Torna-se imprescindível a análise do comportamento de suas ausências motivadas por doença no intuito de promover medidas de prevenção eficazes contra o adoecimento laboral. \textbf{Objetivo:} Caracterizar o perfil do absenteísmo-doença da equipe de enfermagem e da equipe médica de um hospital público estadual de São Paulo no período de 2011 a 2013. \textbf{Método:} Estudo descritivo e transversal realizado em um hospital estadual de grande porte no período de janeiro de 2011 a dezembro de 2013. \textbf{Resultados:} No período trienal ocorreu o total de 71.460 dias de afastamento, e 3.323 licenças médicas foram concedidas a 1.533 trabalhadores. A categoria profissional mais acometida pelo absenteísmo-doença foram os auxiliares de enfermagem, sendo o pronto-socorro adulto o setor com o maior número de afastamentos, alcançando 11.460 dias. Nesse mesmo setor, a maior parte dos motivos de adoecimento deveu-se a doenças do sistema osteomuscular e do tecido conjuntivo e a transtornos mentais e comportamentais. \textbf{Conclusões:} Com os resultados, foi possível verificar mudanças no perfil de morbidade da equipe de enfermagem e da equipe médica ao longo de três anos, com predominio de agravos cujo tempo de recuperação e de retorno ao trabalho é consideravelmente longo nessa população trabalhadora. \textbf{Palavras-chave} | absenteísmo; hospital; saúde do trabalhador; doença; pessoal de saúde.
INTRODUCTION

Absenteeism is the term used to designate the total number of unplanned days off work. When absences are due to disease or some other health problem, the term used is sickness absenteeism, a condition that requires due attention from employers and social security systems. This is a multidimensional and complex phenomenon within occupational health inasmuch as it involves interactions among several occupational factors with direct influence on health and safety. Such factors are related to the working conditions and might impair health as a function of the nature of the job content and work-related psychosocial, economic and social aspects.

Most studies of morbidity among workers in Brazil are based on social security data, which as a rule do not consider civil servants. As concerns the latter, mostly those in the health and education sectors have called the attention of investigators.

The nursing staff is the group of hospital health care workers most exposed to sickness absenteeism, especially nursing assistants and technicians. The main reasons for sick leaves as per the International Classification of Diseases (ICD-10) are diseases of the musculoskeletal system and connective tissue and mental and behavioral disorders.

Recent studies evidenced high prevalence of sickness absenteeism among physicians, particularly those in the public health system. The total duration of leaves varies from 15 to 30 days, reasons being the same as for the nursing staff — musculoskeletal and connective tissue diseases and mental and behavioral disorders.

Adopting sickness absenteeism monitoring systems is essential for organizations to develop strategies to continuously improve their working conditions based on an accurate understanding of illness among employees, its causes and efficacious preventive means. The International Labor Organization (ILO) emphasized the relevance of monitoring in its Recommendation R171 and Convention C161.

Sickness absenteeism indicators were developed for this purpose. Such indicators should be selected in a way to ensure the comparability of results, provide accurate descriptions of temporal trends and identify the most sensitive areas for future interventions.

Studies on sickness absenteeism are also needed to contribute to debates on aspects of the working conditions likely to impair the health of the nursing and medical staff, as well as to design policies for health promotion, prevention and rehabilitation targeting this population of workers. Analysis of these aspects might help reduce their effects on organizations and improve the quality and effectiveness of hospital care, with consequent positive impact on the work environment.

The aim of the present study was to characterize sickness absenteeism among the nursing and medical staff in a public hospital in São Paulo, Brazil, in the period from 2011 through 2013.

METHODS

The present cross-sectional and descriptive study was based on data collected in a large public hospital in São Paulo. The study population consisted of 1,1410 health care workers with permanent or provisional employment relationship as per the laws no. 10,261, from 28 October 1968, and no. 500, from 13 November 1974 — these categories correspond to most employees at the analyzed hospital and state civil servants in general.

The sample comprised employees who sought care at the hospital Safety and Occupational Medicine Department (SOMD). This department lacked an electronic record system at the time of data collection, therefore the information required was available on paper records only.

We chose to analyze data for the period from January 2011 through December 2013 to obtain a broad scoped view of absenteeism patterns over time. Among the many occupational groups, we selected the nursing (nursing assistants and technicians and nurses) and medical staff because these groups represent the largest number of employees at the analyzed hospital.

After having obtained authorization from the hospital director, we performed a retrospective analysis of secondary data on sickness absenteeism available at SOMD. Records included the following information: date of visits, occupational group, hospital department, number of days off work, employment relationship and reason for leave as per CID-10.
Sociodemographic information on the hospital employees was obtained from the human resources department (HRD) including: occupational history, employment relationship, organizational chart, departments, total number and distribution of employees, age, sex and length in the job.

The inclusion criteria were: sick leaves longer than one day (not considered in the legislation), permanent or provisional employees as per the abovementioned laws, nursing staff and physicians (all specialties). The data were entered on a Microsoft Excel 2013 spreadsheet.

The indicators selected for analysis were those recommended by the International Commission on Occupational Health (ICOH)\(^7\):

- Frequency–spells (FS): number of sick leave spells in year divided by population (person years);
- Frequency–persons (FP): number of persons having one or more spells in year % divided by population (person years).

We also calculated an indicator suggested by Hensing et al.\(^20\):

- duration of absence (DA): sick-leave days in new spells during study period divided by number of sick-leave spells during study period.

Once the dataset was completed we were able to calculate all the aforementioned rates.

The present study was approved by the research ethics committee of University of Mogi das Cruzes, ruling no. 2008425.

RESULTS

SOCIODEMOGRAPHIC PROFILE OF THE OVERALL EMPLOYEE POPULATION IN 2013

Analysis of the SOMD data showed a slight decrease of the employee population along the analyzed years. This might have been due to retirement, since no public calls were made along this period to hire new workers.

The HRD data evidenced that most employees were within age range 31 to 59 years old (93.07%), mean 45 (standard deviation–SD=±8.51) and had worked 11 to 34 years (78.56%) at the hospital, mean 32.18 (SD=±6.65). Health care workers represented most of the active employees in 2013, being 445 nursing assistants (31.56%), 121 nurses (8.51%) and 300 physicians (21.27%) to a total of 866 (61.41%). Most workers were female (70.25%). There was not considerable difference in employment relationship, with slightly higher prevalence of the provisional employees (53.06%). The distribution of visits to SOMD per occupational group was as follows: nursing assistants (55.81%), general services (11.44%), nurses (10.22%) and physicians (6.15%).

CALCULATION OF SICKNESS ABSENTEEISM INDICATORS FOR THE OVERALL EMPLOYEE POPULATION IN 2011–2013

The SOMD data revealed that 3,323 sick leaves were granted from January 2011 to December 2013 to a total of 71,460 days off work. Table 1 describes the sickness absenteeism indicators calculated for the overall employee population. The largest proportion of employees granted sick leave were allocated to the emergency room, corresponding to 41.16% of the total number of sick leaves in 2013, as shown in Table 2.

Table 3 describes the frequency of sick leaves among the nursing and medical staff per hospital department. In addition, in this case the emergency department accounted for the largest number of leaves, 9,282 out of 21,494 (43.17%). Table 4 shows that the employees from all the analyzed occupational groups in the emergency department accounted for the largest number of days off work. Sick leaves were shorter for nurses and physicians compared to nursing assistants. Given the substantial variation among hospital departments, we chose to limit morbidity analysis to workers allocated to the emergency department.

MORBIDITY DISTRIBUTION (CID CODES) AMONG THE NURSING AND MEDICAL STAFF IN THE ADULT EMERGENCY DEPARTMENT, 2011–2012

The main CID codes related to sick leaves granted to the adult emergency department nursing and medical staff corresponded to musculoskeletal diseases and mental and behavioral disorders (Table 5) representing 18,343 days off work (Table 6).
DISCUSSION

In regard to the sociodemographic profile of the overall employee population, the reason for their older average age and longer length in the job in 2013 might be that the analyzed sample had permanent jobs based on competitive civil service titles. Most employees were female (70.25%). Among nursing professionals, women predominated as a function of historical reasons. A similar profile was reported also in other studies.

Nursing assistants stood out among the employees who requested SOMD attention most often. This finding agrees with reports in the literature, according to which these workers and nurses frequently require sick leave. The tasks inherent to their job and exposure to several workplace hazards might influence the rates of illness and sick leave over time.

We found reduction of the frequency indices and significant elevation of the index of severity along the analyzed period. The latter increased from an average of 13.41 days off work in 2011 to 44.52 in 2013. Taken together, these findings indicate that the analyzed employees required less, but much longer leaves. A possible reason might be a higher prevalence of chronic diseases, which demand longer recovery times, with consequent individual and collective negative impacts.

Cunha et al. and Oenning et al. described similar findings, namely, a trend to reduction of frequency indicators and concomitant increase of the number of days off work. These authors attribute this situation to an increasing need of longer time for recovery and rehabilitation following work-related diseases, as well as to the aging of this group of workers, which might contribute to lengthen the average duration of sick leaves.

The results described in Tables 2 and 3 indicate that both the number and duration of sick-leave spells were higher among workers allocated to the adult emergency department.
department. The data described in Table 4 provide additional confirmation, since the prevalence of sickness absenteeism was also higher among the nursing and medical staff of this department.

As is known, the organization of work in emergency departments is considerably different compared to all others as a function of the urgent, variable and unpredictable nature of the provided services. The complexity of care delivery in emergency departments pose strong physical, mental and psychosocial demands to workers, which allied to their exposure to intrinsic workplace hazards contribute to cause illness and consequent long absences\(^{27,28}\).

In the study by Silva and Marziale\(^{29}\) along one year with a hospital nursing staff, the nursing assistants allocated to the emergency department required the largest number and longest sick leaves. Similarly, also Estorce and Kurcgant\(^{30}\) found that the largest proportion of and

**Table 4.** Days off work in the period from 2011 to 2013 per occupational group and hospital department, São Paulo, 2015 (n=52,736).

<table>
<thead>
<tr>
<th>Occupational group</th>
<th>Adult emergency department</th>
<th>Warehouse</th>
<th>NICU</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing assistants</td>
<td>11,460 21.73</td>
<td>5,374 10.19</td>
<td>3,554 6.74</td>
<td>21,738 41.22</td>
</tr>
<tr>
<td>Nurses</td>
<td>3,935 7.46</td>
<td>337 0.64</td>
<td>253 0.48</td>
<td>715 1.36</td>
</tr>
<tr>
<td>Physicians</td>
<td>2,948 5.59</td>
<td>439 0.83</td>
<td>412 0.78%</td>
<td>1,571 2.98</td>
</tr>
</tbody>
</table>

**Table 5.** Frequency of ICD codes reported for the emergency department nursing and medical staff in the period from 2011 to 2013, São Paulo, 2015 (n=814).

<table>
<thead>
<tr>
<th>Occupational group</th>
<th>Musculoskeletal diseases ICD M</th>
<th>Mental and behavioral diseases ICD F</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing assistants</td>
<td>120 14.74</td>
<td>87 10.69</td>
<td>358 43.98</td>
</tr>
<tr>
<td>Nurses</td>
<td>44 5.40</td>
<td>16 1.97</td>
<td>76 9.34</td>
</tr>
<tr>
<td>Physicians</td>
<td>28 3.44</td>
<td>7 0.86</td>
<td>78 9.58%</td>
</tr>
</tbody>
</table>

**Table 6.** Days off work among the emergency department nursing and medical staff in the period from 2011 to 2014 per ICD code, São Paulo, 2015 (n=18,343).

<table>
<thead>
<tr>
<th>Occupational group</th>
<th>Musculoskeletal diseases ICD M</th>
<th>Mental and behavioral diseases ICD F</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing assistants</td>
<td>3,347 18.25</td>
<td>3,516 19.71</td>
<td>4,597 25.06</td>
</tr>
<tr>
<td>Nurses</td>
<td>1,842 10.04</td>
<td>993 5.41</td>
<td>1,100 6.00</td>
</tr>
<tr>
<td>Physicians</td>
<td>942 514</td>
<td>128 0.70</td>
<td>1,878 10.24</td>
</tr>
</tbody>
</table>
longest sick leaves corresponded to emergency department employees.

Tables 5 and 6 evidence that musculoskeletal diseases and mental and behavioral disorders accounted for the largest proportion and duration of sick leaves. Such high frequency of musculoskeletal diseases might be due to physical exhaustion associated with the tasks of hospital nursing staff. In addition, many such workers have more than one job and work night shifts, which is known to have negative impact on health.31

In turn, the frequency of mental and behavioral disorders is related to the hierarchical work process model adopted in hospitals, according to which tasks are divided and repetitive, whereas most workers are not consulted in regard to the division of labor. This situation hinders their intellectual development and enlarges the distance between planned and effective actions32.

This phenomenon is a legacy of the strong influence of Taylorism and Fordism, with the corresponding reflection on the organization of hospitals as embodied in excessively vertical structures in which responsibility is scattered and professional relationships become merely formal. Employees are allocated to definite areas, which contributes to cause alienation and illness33.

Hospitals further follow the contemporary model of management, in which affective behaviors of workers are considered, but only as a means to meet capitalist demands. To survive market competitiveness, present-day organizations are increasingly requiring subjective involvement from workers, within a context of innovation and resource provision that is reproduced in the health care marketplace. As a result, organizations strive to control their employees’ attitudes and behaviors, with consequent impairment of their autonomy, quality of life and job satisfaction34.

Facing this scenario, a possible solution might be to soften the rigidly vertical work organization pattern and grant more autonomy to workers, in addition to duly recognizing the work they effectively do to bridge gaps in institutional protocols.

According to Guérin et al., ergonomic workplace analysis (EWA) focuses on the particular characteristics of workers from both the personal and social perspectives and therefore on how these aspects are expressed in the formal management of organizations. As a result, from its very inception EWA helps to identify cognitive aspects of work, explains the conditions under which mental illness occurs and can be used to formulate solutions34.

The present study has some limitations. First, for consisting in a cross-sectional analysis of retrospective data, only aspects previous to the time of data collection could be considered. We could have also included other hospital departments, diagnostic categories and occupational groups.

Nevertheless, the results of the present study might be useful to the hospital SOMD in the design of prevention and health promotion strategies targeting the nursing and medical staffs, with particular emphasis on changes in the organization of work and hazards in the hospital departments associated with the highest frequency of sickness absenteeism.

State authorities should intervene in the state of health of this population of workers, because in addition to harms to them and their families, illness and long sick leaves impair the quality of the care provided. Within this context, investing in actions centered on workers’ health and safety promotion, with consideration of their effective work environment, is crucial to avoid illness and early retirement.

CONCLUSION

The results of the present study enabled a characterization of sickness absenteeism among employees of a public hospital in São Paulo in the period from 2011 through 2013. Most workers were female, with a relatively high average age and many years in the job. Most employees who sought the SOMD were nursing assistants, followed by nurses and physicians. The calculated sickness absenteeism indices were found to be appropriate and pointed to a profile characterized by chronic conditions (long leave duration), the highest rates corresponding to workers in the emergency department.

The main conditions associated with the frequency and duration of leaves were musculoskeletal diseases and mental and behavioral disorders. This profile agrees with reports in the literature and is due to a rigid organization of work in which subjective aspects, operation mechanisms...
and work-related constraints are seldom considered in the division of tasks.

The results of the present study point to a challenging scenario. The analyzed sickness absenteeism indicators proved to be crucial to achieve an accurate understanding of illness among the analyzed population of workers and to design preventive strategies for workplace safety. Analyzing sickness absenteeism is essential for debates on the state of health of workers and to formulate policies for health promotion, prevention and rehabilitation.

Therefore we believe that the present study is useful in terms of its contribution to debates and to the promotion of strategies focused on the health and safety of hospital workers, especially those involved in care provision, through a more humane and dignified environment and control and elimination of hazards to thus transform work into a source of health, instead of distress and illness.

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REFERENCES


