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Absenteeism of nursing team from a public tertiary hospital: etiology and associated factors

Absenteísmo da equipe de enfermagem de um hospital público e terciário: etiologia e fatores associados

Ausentismo del personal de enfermería de un hospital público y terciario: etiología y factores asociados

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ABSTRACT

Objective: to identify the absenteeism rate of the nursing team, its etiology and associated factors. **Method:** descriptive, analytical and retrospective study, developed in a Brazilian public tertiary hospital, between January and March 2021. For data collection, the institution's Human Resources Department database was used, referring to the year 2019. In the statistical analysis, inductive tests were used, with a significance level of 5% (p≤0.05). Research protocol approved by the Research Ethics Committee. **Results:** data from 95 professionals were analyzed. The average percentage of absenteeism was 10.56%, being more prevalent among nursing technicians/assistants (7.56%) compared to nurses (3.00%), and significantly higher among professionals working during the day (p=0.004). **Conclusion:** the absenteeism rate was high and higher than stipulated by current legislation, being mainly motivated by sick leave, prevalent among nursing technicians/assistants and associated with daytime work.

Descriptors: Hospitals; Personnel Management; Surveillance of the Workers Health; Nursing, Team; Absenteeism.

RESUMO

Objetivo: identificar a taxa de absenteísmo da equipe de enfermagem, sua etiologia e os fatores associados. **Método:** estudo descritivo, analítico e retrospectivo, desenvolvido em um hospital público e terciário brasileiro, entre janeiro e março de 2021. Para a coleta de dados, foi utilizado o banco de dados do Departamento de Recursos Humanos da Instituição, referente ao ano de 2019. Na análise estatística utilizou-se testes indutivos, com nível de significância de 5% (p≤0,05). Protocolo de pesquisa aprovado pelo Comitê de Ética em Pesquisa. **Resultados:** foram analisados dados de 95 profissionais. O percentual médio de absenteísmo foi de 10,56%, sendo mais prevalente entre os técnicos/auxiliares de enfermagem (7,56%) em comparação aos enfermeiros (3,00%), e significativamente maior entre os profissionais atuantes no período diurno (p=0,004). **Conclusão**: a taxa de absenteísmo foi alta e superior ao estipulado pela legislação vigente, sendo motivada principalmente por licenças médicas, prevalente entre técnicos/auxiliares de enfermagem e associada a atuação no período diurno.

Descritores: Hospitais; Gestão de Recursos Humanos; Vigilância em Saúde do Trabalhador; Equipe de Enfermagem; Absenteísmo.

RESUMEN

Objetivo: identificar la tasa de ausentismo del equipo de enfermería, su etiología y factores asociados. **Método:** estudio descriptivo, analítico y retrospectivo, desarrollado en un hospital público y terciario brasileño, entre enero y marzo de 2021. Para la recolección de datos, se utilizó la base de datos del Departamento de Recursos Humanos de la institución, referente al año 2019. En el análisis estadístico, se utilizaron pruebas inductivas obtenidos con un nivel de significancia del 5% (p≤0.05). El Comité de Ética en Investigación aprobó el Protocolo de investigación. **Resultados:** se analizaron datos de 95 profesionales. El porcentaje medio de ausentismo fue de 10,56%, siendo más prevalente entre los técnicos/auxiliares de enfermería (7,56%) frente a los enfermeros (3,00%) y significativamente más elevado entre los profesionales que trabajan de día (p=0,004). **Conclusión:** la tasa de ausentismo fue alta y superior a lo estipulado por la legislación vigente, siendo motivada principalmente por la baja por enfermedad, frecuente entre los técnicos/auxiliares de enfermería y asociada al trabajo en el periodo diurno.

Descriptores: Hospitales; Administración de Personal; Vigilancia de la Salud del Trabajador; Grupo de Enfermería; Absentismo.

INTRODUCTION

Nursing has been improving over the centuries and creating professional and administrative intricacies to structure itself and present an increasingly corporate organization. In it, nurses take work organization and human resources in nursing as their object in order to create and implement adequate conditions for patient care and performance for workers[1]. In this direction, managers came to understand that one of the main pillars for improving and optimizing human resources in nursing is to analyze and study absences, or absenteeism.

Absenteeism is the term used to characterize the lack of attendance at work or other social obligations[2]. The etiological factors are multifaceted, and include professional satisfaction/dissatisfaction, double working hours, wage

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deficit, married employees with children of non-school age, type of function performed, unhealthy conditions, ergonomic problems, emotional tension, physical and mental fatigue, and the work environment[3-5].

The prevalent absences and therefore the most influential in the absenteeism rate are those related to sick leave[6-8]. For the Federal Council of Nursing (*Conselho Federal de Enfermagem - COFEN*), unplanned absences include missing work, sick leave, accidents, among others contemplated in Resolution No. 543/2017[9]. In short, absenteeism is a complex problem, and is therefore difficult to control, causing harm to both patients and workers[10].

In this sense, studies were designed in an attempt to understand the vision of the care team on the subject. One such study indicated that the group not only has the perception that absences directly interfere with patient care, but also has an overall view of all the impacts caused by the reduction in staff[11]. Another study showed the effect of assertive staff management, concluding that the adequacy of the number of personnel had a positive impact on management and care indicators[12].

Similar results were observed in other investigations, including those carried out in Limpopo Province in South Africa, in Lima in Peru, in the Southern Region of Brazil and in Monterrey in Mexico. All indicate the same triggering factors and the same profile in the absence rates of nursing teams from different units, showing the relevance of this topic for nursing worldwide[13-17].

In fact, quality in health is defined as "the efficient use of physical and human resources, with a minimum of risk to the client and a high degree of user satisfaction". This concept has particular characteristics because it has the human dimension as a fundamental aspect for achieving the established goals, since the lack of material resources generates precarious working conditions, but the existence of the best material resources does not guarantee quality if there are no adequate human resources[2,18,19]. Thus, people management behaviors and care improvements reduce harm to the patient[17,20-22]. Furthermore, the number of personnel is directly related to hospital costs.

There is also a demand from the team, mainly from the clinical nurses, who demonstrate the difficulties related to the deficit in the quantitative and qualitative of personnel in practice[23]. In summary, the arguments on the part of the managers with the administration referring to the adequacy of the professional staff must be substantiated, and the benefits in the medium and long term must be emphasized[24].

It is essential for nursing managers to adopt and monitor the absenteeism rate indicator in order to enable continuous improvements in the management process of the people under their coordination, review processes and working conditions, as well as contribute to obtaining arguments in favor of reformulating public policies for hiring nursing professionals, especially with regard to the replacement of those on leave for health treatment.

Considering the problem of absenteeism in health institutions, as well as its implications in the work process and promotion of an unfavorable environment for nursing care, we sought to answer the following questions: what is the percentage, its etiology and the factors associated between nursing professionals? From this situational diagnosis, it is expected to reflect and propose interventions that minimize this problem. In this direction, the objective was to identify the absenteeism rate of the nursing team, its etiology and the associated factors.

METHOD

This is a descriptive, analytical, retrospective study with a quantitative design conducted according to the STROBE[25] guidelines, developed in a Brazilian hospital specialized in the treatment of patients with craniofacial anomalies and related syndromes. It is a public, tertiary institution, maintained with state and federal resources nationwide consisting of 91 beds. It is recognized by national and international bodies for the excellent service it provides to the population in different areas, including healthcare, teaching and research.

The Nursing Service is inserted in the Hospital Department, and consists of the following Sections: Ambulatory, Surgical Center and Material and Sterilization Center, Intensive Care Unit, Semi-intensive Care Unit and Inpatient Unit.

The present population included all professionals of the nursing team, meaning nurses, technicians and nursing assistants, totaling 95 participants, 21 nurses, 72 technicians and 2 nursing assistants. Thus, inclusion or exclusion criteria were not established.

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Hiring takes place exclusively through a public tender. Professionals work under the Consolidation of Labor Laws (*Consolidação das Leis do Trabalho - CLT*) regime, with a weekly workload of 36 hours in shifts of six hours during the day, 12 hours at night, and consequently a weekly break. In addition to the weekly days off based on internal legislation, six paid days off are granted annually.

Data collection was carried out between January and March 2021, using the institution's Human Resources Department database. In addition to information related to absenteeism, other data related to the socio-demographic characterization of professionals were collected, including age and education. Also, information on occupational data was listed, such as: function, workplace, work shift, number of employment relationships and time working in the institution. All absenteeism records for the period from January 1 to December 31, 2019 were considered.

The etiological factors of absenteeism were considered, being constituted by: days of absence related to justified or unjustified absences, sick leave, maternity/paternity leave, work accident leave, death of a first-degree relative (*licença-nojo*), marriage (*licença-gala*), allowances, leave for participation in training and development programs, by court summons, for blood donation, linked to electoral justice and for participation in public order activities, such as judging committees of public entry contests, among others.

These types of absences behaved like random variables because they occur on any day of the year. For the purpose of evaluating these indicators, the quantity of these absences was identified by professional category and the absenteeism rate of professionals was then calculated. Unforeseen absences were considered as dependent variables, meaning all absences for unexpected or scheduled reasons, while sociodemographic and occupational characteristics constituted the independent variables.

The data were organized in a spreadsheet in order to register the absences in days; therefore, when the records were in hours, they were divided by six hours, corresponding to a working day. The equation shown below in Figure 1 was used to calculate absenteeism[26].

$$A_k\% = \left(\frac{\sum_i a_{k,i}}{D - \sum_i a_{k,i}}\right).100$$

In which:

A_k% = percentage of absenteeism according to professional category k (nursing technicians and assistants).

$\sum_i a_{k,i}$ = sum of days, averages of unforeseen absences, according to types of absences, by category of professionals.

D = days of the year, 365 days.

FIGURE 1: Equation used to calculate absenteeism. Bauru, SP, Brazil, 2021

The Microsoft Excel® version 2015 program was used to organize the data. The spreadsheet was organized in order to record the absences in days. For comparison purposes, an absenteeism rate of 6.7%9 was adopted as the expected parameter[9].

The Spearman's correlation was used in the statistical analysis to verify the association between absenteeism and the variables of: age and length of service, while the Kruskal-Wallis Analysis of Variance was used for professional category and industry, and the Mann-Whitney Test for the employment relationship and the work shift. A statistical significance level of 5% ($p \leq 0.05$) was considered for all. The research protocol was approved by the Research Ethics Committee of the institution involved and all required ethical standards were observed.

RESULTS

This study consisted of data from 95 nursing professionals, 21 nurses, 72 technicians and two nursing assistants, whose average age was 48.7 (+9.9) years. Among them, nursing technicians prevailed (n=72; 75.8%), working in the Inpatient Unit (n=36; 37.9%) for more than ten years (n=61; 64.2%), with a single employment relationship (n=68; 71.6%) and working during the daytime (n=72; 75.8%). When investigating the association between sociodemographic variables

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and nursing team absenteeism, it was shown that absenteeism was significantly higher among professionals working during the daytime (p=0.004) (Table 1).

TABLE 1: Distribution of participants according to variables: professional category, industry, length of experience, other employment and work shift. Bauru, SP, Brazil, 2019.

Variables		n (%)	p-value
Professional category[&]	Nurse	21 (22.1)	
	Technician	72 (75.8)	0.348
	Assistant	2 (2.1)	
Work sector[&]	Outpatient clinic	5 (5.2)	
	Inpatient unit	36 (37.9)	
	Semi/ICU	17 (17.9)	
	Surgery Center	24 (25.3)	0.316
	Sterilization center	12 (12.6)	
	Nursing management	1 (1.1)	
Working time[#]	Up to 10 years	34 (35.8)	
	11 years to 20 years	27 (28.4)	0.076
	More than 20 years	34 (35.8)	
Other employment[£]	Yes	27 (28.4)	0.506
	No	68 (71.6)	
Work shift[£]	Day	72 (75.8)	0.004*
	Night	23 (24.2)	

* Significant statistical difference (p≤0.05); # Spearman's correlation; & Kruskal-Wallis Analysis of Variance; £ Mann-Whitney Test.

Absenteeism was mainly motivated by sick leave followed by the granting of allowances, both among nurses and among nursing technicians/assistants (44.85% and 36.69%; 39.91% and 33.03% respectively) (Table 2).

TABLE 2: Average annual percentage referring to unforeseen absences in days, comparison between categories: nurses, technicians and assistants. Bauru, SP, Brazil, 2019.

Variables	Nurses (%)	Technicians/assistants (%)
Medical Leave	445 (44.85)	981 (39.91)
Granting of allowances	364 (36.69)	812 (33.03)
INSS license	5 (0.50)	643 (26.15)
Maternity leave	176 (17.74)	-
Paternity leave	-	20(0.81)
Other types of absence	2 (0.22)	2 (0.10)
Total	992 (100)	2458 (100)

It was also evident that absenteeism was higher among nursing technicians/assistants (7.56%) compared to nurses (3.00%), while the average absenteeism percentage of the nursing team was 10.56%, therefore being higher than that stipulated by the COFEN.

DISCUSSION

The aim of this study was to identify the etiology and factors associated with absenteeism among nursing professionals working in a public and tertiary hospital. The socio-demographic aspects of the participants included having a mean age of 48.7 years, working for more than ten years in the institution and having a single employment relationship reflect the profile of the public servant admitted through competitive examinations, in which the work relationships are guided by stability.

Although age was not statistically associated with absenteeism in this study, it should be considered, since 49.48% of participants were aged 50 years or over. The prevalence of absenteeism in Brazilian public hospitals among professionals over 40 years of age is high, being associated with time in the job, physical and emotional exhaustion, high workload, among others[4,23,27-29].

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In the international scenario, being older was a determining factor for the occurrence of unscheduled absences in a hospital in South Africa, with a high percentage of absences among professionals aged between 40 and 49 (58.3%)[13]. A similar result was observed in a study carried out in Chile, where the highest absenteeism rates were among professionals aged between 35 and 44 years old[30].

In contrast, absenteeism in the nursing staff of a public hospital in southern Brazil prevailed in the age group between 21 and 30 years (67.2%), while an international multicenter study showed that absenteeism was significantly higher among younger nurses, being linked to lack of professional experience, among other factors[15,31].

Aging is accompanied by physiological changes which culminate in a gradual decline in organic functions, which, as far as people are concerned, affect the way they react to internal and external stressors. This scenario is favorable to the development of chronic diseases, which, added to the workload, can lead to illness[21,32]. Aware of this, *COFEN*, through Resolution 543/2017, established a 10% increase in staff in hospitals which have 20% or more professionals aged over 50 years, aiming at more assertive staff dimensioning[9].

Furthermore, being older was directly correlated to the increase in professionals with limitations, in addition to a greater number of sick leaves, as identified in a study conducted in a public outpatient unit in northeastern Brazil, where 81% of professionals had limitations to lift weight, 12.5% could not provide direct care to patients, and 6.5% could not have contact with chemical products[4]. In summary, this variable should also be considered in dimensioning of the nursing team[9].

Next, females prevailed regarding the gender of the participants in this study. In fact, nursing as a profession is mostly composed of women, and they perform numerous functions in addition to work, including caring for their children, their spouse, and often support for parents and other family members, sometimes older adults or dependents[33]. In this sense, the Collective Agreement in force at the institution where the present study was carried out provides for absences to accompany children, spouse and older adult parents to consultations and medical procedures. Although the benefits of these concessions are indisputable, they represent a challenge for managers.

It is also observed that although these benefits are available to professionals of both genders, they are culturally associated with the figure of women. Therefore, regardless of whether absenteeism was not associated with gender, this variable should be considered in this scenario. In turn, it is necessary to plan and promote coverage of these absences in the same proportion, considering that quantitative inadequacy of the nursing team by increasing the workload of the other team members is identified as an important etiological factor of absenteeism[31].

In short, absenteeism behaves like a vicious cycle, meaning that overload causes more absences and so on, compromising care aspects, such as quality and safety[21]. An international investigation which used qualitative and quantitative methodology identified that an excessive workload significantly influenced absenteeism of the nursing team[34].

However, although granting allowances is beneficial for the worker, it generates unpredictability in scheduling monthly shifts and directly increases the absenteeism rate[2], which in this study represented 34.08% of unforeseen absences. Although there are advantages in civil service, including stability, the granting of allowances admittedly also leads to difficulties in replacing professionals[23].

In this sense, absences for health treatment behaved as the main reason for absenteeism, with a percentage of 41.33%. In fact, leaves for healthcare emerge as the main etiological factor for absences among nursing professionals, motivated by musculoskeletal and psychiatric diseases, reflecting the greatest physical and emotional wear and tear of this profession[5,7,15,23,27 ,34]. Thus, monitoring absenteeism, particularly associated with illness, can support interventions aimed at workers' health, as it is configured as a situational diagnosis in this area.

Another finding was that absenteeism was significantly higher among nursing professionals working during the daytime period. In fact, the largest number of nursing staff works during the day. A similar result was observed in another investigation[27].

Younger professionals with no morbid antecedents are recommended to work at night in the hospital, in the expectation of minimizing absenteeism in this work shift as much as possible. Added to this, the difficulty of covering these professionals considering the limitations of other colleagues regarding restrictions and previous pathologies which prevent night work may explain these findings. A larger number of nursing professionals routinely work during the daytime[11].

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On the other hand, another study carried out in a public hospital in the western region of Santa Catarina showed a higher incidence of absenteeism among professionals working at night, whose percentage was 39.4% of total absences[35]. Another investigation carried out in an emergency hospital in southern Brazil obtained similar results[33].

The nursing service is organized in shifts to ensure uninterrupted 24-hour care. In this sense, a systematic review showed that the main aspects to be considered aiming at a lower incidence of absenteeism refer to considerations in the duration of shifts, turnover, regularity and predictability, breaks, in addition to nights and days of rest[36].

Absenteeism in this study was higher among nursing technicians/assistants compared to nurses. However, the relationship was the opposite in a previous study carried out in the same service, in which it was 12% among nurses and 9% among technicians/assistants, mainly motivated by two maternity leaves[2]. It is known that absenteeism behaves like a moving indicator, with frequent fluctuations, which shows the importance of frequent monitoring[37].

Numerous studies corroborate higher absenteeism rates among nursing professionals at technical levels[20,33,37,38]. Admittedly, the largest contingent of the nursing team corresponds to mid-level professionals who are responsible for providing direct care to patients and their families, characterized by repetitive actions that require physical strength and involve high emotional exhaustion[15,34]. These workers comprise 77% of the nursing team in Brazil[39].

The total percentage of nursing staff absenteeism was 10.56%, which is higher than that stipulated by *COFEN*. The aging of workers, granting benefits and stability to professionals working in public institutions can explain this finding[2,40]. It is also noteworthy that absenteeism directly interferes with the Technical Safety index and consequently with dimensioning nursing staff[2,24]. In summary, the percentages referring to absenteeism being higher than those stipulated by COFEN reflect the need for monitoring in each institutional reality, in addition to configuring this variable as an important management indicator.

Study limitations

Finally, it is considered pertinent to point out some limitations of this study, such as the fact that it is monocentric, which makes it impossible to generalize the results. Furthermore, the lack of investigation of other variables which may be configured as etiological factors for absenteeism, such as the work environment and professional satisfaction/dissatisfaction, must be considered. Thus, multicentric investigations which include other variables not covered in this research should be the object of future/new investigations, aiming to expand knowledge on this topic.

CONCLUSION

The absenteeism rate was high and higher than stipulated by current legislation, mainly motivated by sick leave for health treatment, being prevalent among nursing technicians/assistants and associated with daytime work.

The benefits of this investigation to clinical practice are evident and significant, since monitoring and identifying the absenteeism percentage in the nursing team, as well as its etiological factors and associated variables, is an important management indicator, in particular because it supports sizing of assertive personnel, whose implications greatly support the quality and safety of the nursing work process, which not only benefit professionals, but mainly patients and their families.

In short, consideration and scientific evidence, as well as mastery of methodologies to quantify the nursing team are fundamental in discussing the need for adequate numbers of professionals with managers.

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