Factors related to absenteeism due to sickness in nursing workers

Fatores relacionados ao absenteísmo por doença entre trabalhadores de Enfermagem

Eliete Boaventura Bargas[1]
Maria Inês Monteiro[1]

Keywords
Nursing staff; Occupational health nursing; Nursing administration research; Working conditions; Absenteeism

Descritores
Recursos humanos de enfermagem; Enfermagem do trabalho; Pesquisa em administração de enfermagem; Condições de trabalho; Absenteísmo

Submitted
July 28, 2014

Accepted
August 11, 2014

Abstract

Objective: To evaluate the association of absenteeism due to sickness with sociodemographic characteristics and relate it to the work of nursing professionals.
Method: Descriptive exploratory study that analyzed medical certificates of up to 15 days off work presented by 994 nurses at a university hospital. The data source was the frequency system of the institution.
Results: Most workers were female, married and technical nurses. The average age was 41.9 years and a third worked in adult inpatient services. Of the 994 professionals, 645 had at least one sick day.
Conclusion: Absenteeism due to illness is complex and multifactorial. The factors associated with it were: age group, education, function, shift, time in the institution and workplace.

Resumo

Objetivo: Avaliar a associação do absenteísmo por doença com o perfil sociodemográfico e relacioná-lo ao trabalho dos profissionais de Enfermagem.
Métodos: Estudo descritivo exploratório, que analisou atestados médicos de até 15 dias de afastamento do trabalho apresentados por 994 profissionais de enfermagem de um hospital universitário. A fonte de dados foi o sistema de frequência da instituição.
Resultados: A maioria dos trabalhadores era do sexo feminino, casada e técnica de Enfermagem. A idade média foi de 41,9 anos e um terço atuava no serviço de internação de adultos. Dos 994 profissionais, 645 apresentaram pelo menos um dia de atestado médico.
Conclusão: O absenteísmo por doença teve fatores complexos e multifatoriais. Os fatores associados a ele foram: grupo etário, escolaridade, função, turno de trabalho, tempo na instituição e local de trabalho.

Corresponding author
Eliete Boaventura Bargas
Vital Brasil street, 251, Campinas, SP, Brazil. Zip Code: 13083-888
elietebbz@gmail.com

DOI
http://dx.doi.org/10.1590/1982-0194201400087

[1]Universidade Estadual de Campinas, Campinas, SP, Brazil.
Conflicts of interest: there are no conflicts of interest to declare.

Introduction

The absence at work is, at present, an important problem in different countries and entails high costs for the institutions.[1]

Absenteeism due to illness is the period of lack of labor attributable to an inability of the individual[2] and can be categorized into voluntary (for private reasons), legal (supported by law, as is the case of maternity leave, disgust and vacation), compulsory (impediment due to disciplinary action) and by disease. Absences due to work accidents are recorded differently.[3] The work environment of nursing professionals is unhealthy, both in material and psychological aspects and, being subject to poor work conditions, the maintenance of their health is impaired.[3]

Different studies have shown that absenteeism varies according to sex, age, occupation, level of responsibility and work, among others.[4-7] However, studies point to the need for comparative information between hospital departments and correlate absenteeism due to illness to the environment, the nature of work and individual characteristics.[6,7]

A systematic literature review covering the period from 1986 to 2006 found that individual factors (previous record of missed work) and work related factors (job satisfaction, organizational commitment and job involvement) reduced absenteeism, with emphasis on the absence of a theory that supports the discussion of absenteeism.[8]

A longitudinal Canadian study identified six factors that interfered with the reduction in absenteeism: inflexible work schedule, understaffing, stress at home and at work, poor work conditions, low wages, communication with superiors and colleagues and lack of incentives not to abuse of sick leaves and health problems.[9]

Recognizing the problems resulting from absenteeism due to illness as important in labor dynamics, since this interferes with work conditions and undermines the nursing care environment, this study was proposed to evaluate the association of absenteeism due to illness with sociodemographic characteristics and relate it to the work of nursing professionals.

Methods

Descriptive exploratory study with a quantitative approach, developed in a public university hospital of high complexity, with approximately 400 beds, in the state of São Paulo, in southeastern Brazil. The database of the Human Resources department with information on age, sex, marital status, education, function, workplace, shifts, employment relationship and working time was used – these details make up the frequency system used by the institution.

The total sample consisted of 994 nursing professionals approved by public tender, working in the Department of Nursing. The group that showed absenteeism due to illness was composed of 645 nursing professionals. Absenteeism was analyzed considering the absences from work due to illness lasting ≤ 15 days, supported by medical certificates for the period from January 1 to December 31, 2011.

The variables were divided into two categories: related to sociodemographic (gender, age, marital status and education) and job characteristics (function, capacity, employment relationship and time in the institution).

The data were entered into a Microsoft Excel spreadsheet and analyzed using the Statistical Analysis System 9.2 and R-Project version 2.15.0. Descriptive analyses were performed to check the consistency of data and comparisons were made involving the sociodemographic and work related variables in the total sample and in the group with absenteeism (Mann-Whitney and Kruskal-Wallis tests). The chi-square test was used to study between categorical variables. For all analyses, the significance level was < 5%.

The study met national and international standards of ethics in research involving human subjects.

Results

The majority of the sample was female, married, with a mean age of 41.9 ± 10.1 years, ranging between 20 and 69 years. Regarding their edu-

cation, most professionals had completed high school (593 professionals), followed by higher education (372 professionals) and elementary school (29 professionals). As for their job, 6% were nursing assistants, 67% technical nurses and 27% were baccalaureate nurses. Just over a third of the employees were in Adult Inpatient Unit; 17% were in Operating Rooms and Material Centrals; 13% in Intensive Care Units; 9% in clinics; 9% in Pediatric Nursing, 8% in Support and Diagnosis Unit; 7% in the Emergency Unit and 2% worked directly in the Department of Nursing. In relation to the time on the job, the average was 11.4 ± 8.7 years.

Education and absenteeism due to illness were statistically significant in both the group with absenteeism and the entire group (p = 0.02 and 0.0007). The age group was statistically significant in the overall study group (p = 0.001), but not significant among those who had at least one absence (p = 0.14). There was no statistical relationship between sex and absenteeism (p = 0.56) (Table 1).

Job and absenteeism were statistically significant in the entire study sample and those with medical certificates (p = 0.02 and 0.0000). As for the workplace, the analyses were statistically significant in the study sample (p = 0.02) and not statistically significant among those who had at least one absence (p = 0.9). Also, work time was statistically significant in the overall study sample (p = 0.0000) and not statistically significant for professionals who had at least one absence (p = 0.10) (Table 2).

Table 1. Days absent, up to 15 days, of the nursing staff according to sociodemographic variables

Variables	Total days per absence	Only employees who presented certificates					Study sample				
		n	Average	SD	Median	p-value	n	Average	SD	Median	p-value
Gender											
Female	6,476	550	11.8	11.2	8	0.39	850	7.6	10.6	8.5	0.56
Male	1,018	95	10.7	10.0	8		144	7.1	9.5	8	
Age group (Years)											
20-29	533	58	9.2	9.8	7	0.14	120	4.4	8.2	0	0.0001
30-39	2,190	201	10.9	10.0	7		305	7.2	9.6	3	
40-49	2,421	200	12.1	12.3	7.5		305	7.9	11.5	3	
50-59	2,089	163	12.8	10.9	10		228	9.2	10.9	5	
60-69	261	23	11.3	10.5	11		36	7.2	10.0	2.5	
Marital status											
Married	3,676	310	11.9	10.6	8	0.43	470	7.8	10.3	3	0.12
Divorced/Widowed	1,050	83	12.6	10.4	10		118	8.9	10.5	4.5	
Single	2,768	252	11.0	11.6	7		406	6.8	10.6	2	
Education											
Elementary	405	25	16.2	10.8	15	0.02	29	14.0	11.5	13	0.00007
High School	4,798	397	12.1	11.0	8		593	8.1	10.7	3	
College	2,291	223	10.3	10.8	7		372	6.2	9.7	2	

SD - Standard deviation

Table 2. Days absent, up to 15 days, of the nursing staff according to work related variables

Variables	Total days absent	Only employees who presented certificates					Study sample				
		n	Average	SD	Median	p-value	n	Average	SD	Median	p-value
Job											
Nurse	1,728	162	10.7	11.0	7	0.02	273	6.3	10.0	2	0.0000
Technical nurse	4,980	435	11.4	10.5	8		664	7.5	10.1	3	
Nursing assistant	786	48	16.4	13.8	14		57	13.8	14.0	11	
Workplace											
Nursing Department	80	6	13.3	13.1	10	0.90	20	4.0	9.2	0	0.0002
Surgery/Materials Center	1,548	124	12.5	11.8	7.5		165	9.4	11.6	5	
Support and Diagnosis	647	49	13.2	13.0	10		82	7.9	12.0	2	
Service											
Outpatient Unit	837	70	12.0	10.6	10.5		92	9.1	10.5	5	
Adult Inpatient Unit	2,654	229	11.6	11.0	8		345	7.7	10.5	2	
Pediatric Nursing Unit	542	52	10.4	8.0	9		90	6.0	78.0	2	
Emergency Unit	424	40	10.6	11.9	5.5		72	5.9	10.3	1.5	
Intensive Care Unit	762	75	10.2	9.8	7		128	5.9	9.0	2	
Shifts											
Morning	1,764	152	11.6	10.3	8	0.56	251	7.0	9.8	2	0.04
Evening	1,050	102	10.3	11.7	6		180	5.8	10.1	1.5	
Night	3,299	279	11.8	10.9	9		402	8.2	10.6	4	
Administrative	1,381	112	12.3	11.5	9.5		161	8.6	11.1	4	
Relationship											
CLT	6,735	585	11.5	11.02	8	0.45	915	7.4	10.4	3	0.07
CLT retired	759	60	12.6	10.81	11		79	9.6	10.9	5	
Time in the institution (Years)											
0-4	1,466	151	9.7	9,9	7	0.1	288	5.1	8.6	1	0.0000
5-9	1,893	163	11.6	10,6	7		211	9.0	1.05	5	
10-14	1,317	100	13.2	11,4	10		160	8.2	11.0	3	
15-19	402	37	10.9	8,1	10		55	7.3	8.4	4	
20-24	1,507	134	11.2	10,6	7		197	7.6	10.2	4	
25-29	909	60	15.1	15,0	10		83	10.9	14.4	5	

CLL - Consolidation of Labor Laws

Discussion

One limitation of this study is that, being retrospective, it was not possible to identify whether the cause of absenteeism was because of work or motivation related illness. Another aspect is that the data from the institution's information system did not include the International Classification of Disease (ICD) for worker absenteeism for 2011.

In this study, the average number of absent days was observed to be lower in the 20-29 age group and higher in the 50-59 age group.

Research conducted in Canada found that older female workers, nursing assistants and those with lower wage per hour are more likely to exhibit absenteeism.[10]

In the present study, nursing assistants had higher average of absences compared to nursing technicians, and these, more than baccalaureate nurses, but the relationship with age was non-linear.

A similar finding was reported in a study conducted in the state of Rio de Janeiro, in which the authors report that nurses tended to take a leadership role in the team, which requires greater diligence; had lower risk of contamination and disease and also took on administrative tasks.[11] The higher prevalence of unplanned absences in the high school level of education category was also observed in another study.[12]

There was a relationship between absenteeism and work shift (p = 0,04) in the present study. Research conducted in Spain corroborates these findings.[13] Absenteeism of the nursing staff was analyzed by implementing a shift rotation system in 2011, with an increased workday (8h to 20h, 20h to 8h, 10h to 22h, 22h to 10h and from 15h to 8h) and, consequently, an increase in rest days. There was a reduction of 40.8% in

overall absenteeism, but there was an increase in absenteeism due to illness, probably due to the longer shifts.[13]

As for the workplace, similar results were found and the largest registered absence from work due to illness was at the Material Center, in which 91.6% of the workers had at least one absence, followed by the Surgical Center.[7]

Although not the subject of this study, it is important to highlight some research in other countries, which related absenteeism and the ratio of nursing professionals to patients, with no similar data in national surveys.

A study conducted at a university hospital in France found that patient satisfaction was related to absenteeism due to illness of the nursing staff.[14] Research conducted in the UK found that hospitals with greater numbers of patients per nurses had 26% higher mortality rates than observed in those with a lower patient to nurse ratio.[15] In a study conducted in Brazil, a high patient to nurse ratio was associated with increased incidents of patients falling from beds, central venous catheter infections, absenteeism, staff turnover and low patient satisfaction.[16] In Germany, it was identified that low nurse-patient ratio was associated with higher risks for the patient and also other stress indicators, such as absenteeism.[17] A study in the Netherlands reported as predictors of absenteeism, health complaints and consultations with the general practitioner.[18]

The findings of this study support the consideration of absenteeism with complex and multifactorial determinants that need to be analyzed from the perspective of the working process, the institutional culture, the health and welfare of workers. It is important that the coordination of nursing services involves the workers in carrying out the planning and decision-making, so that there is commitment from the staff and workers feel that they are a fundamental part of the work process.

This study contributed to the advancement of knowledge in nursing regarding the characteristics absenteeism due to illness, signaling the importance of investing in actions aimed at promoting health and quality of life at work.

Conclusion

Absenteeism due to illness has complex and multifactorial features, so that it is essential to approach these to improve the quality of nursing care, satisfaction with work and reducing institutional costs. Factors associated with absenteeism due to illness were: age, education, job, shift, time in the institution and workplace conditions.

Acknowledgments

Statistician Henrique Ceretta, the General Directorate of Human Resources (GDHR), GDHR's IT and Nursing departments, HC/Unicamp for their contribution to the development of this study.

Collaborations

Bargas EB contributed with the project design, analysis and interpretation of data and drafting the article. Monteiro MI contributed with the project design, analysis and interpretation of data, critical review of the content and approval of the version to be published.

References

1. Roelen CA, Bültmann U, Groothoff J, Rhenen WV, Magerøy N, Moen BE, et al. Physical and mental fatigue as predictors of sickness absence among Norwegian nurses. Res Nurs Health. 2013; 36(5):453-65.
2. Organización Internacional del Trabajo (OIT). Enciclopedia de salud, seguridad e higiene en el trabajo. Madrid (Espanã): Centro de Publicaciones del Ministerio de Trabajo y Seguridad Social; 1991. p. 5-11.
3. Elias MA, Navarro VL. [The relation between work, health and living conditions: negativity and positivity in nursing work at a teaching hospital]. Rev Latino-Am Enferm. 2006; 14(4):517-25. Portuguese.
4. Laisné F, Lecomte C, Corbière M. Biopsychosocial determinants of work outcomes of workers with occupationalinjuries receiving compensation: a prospective study. Work. 2013; 44(2):117-32.
5. Chibnall JT, Tait RC. Long-term adjustment to work-related low back pain: associations with socio-demographics, claim processes, and post settlement adjustment. Pain Med. 2009; 10(8):1378-88.
6. Silva DM, Marziale MH. [Conditions of work versus absenteeism/illness in the nursing job]. Ciência, Cuidado e Saúde. 2006; 5:Supl:166-72. Portuguese.
7. Belita A, Mbindyo P, English M. Absenteeism amongst health workers – developing a typology to support empiric work in low-income countries and characterizing reported associations. Hum Resour Health. 2013; 11(1):34.

8. Davey MM, Cummings G, Newburn-Cook CV, Lo EA. Predictors of nurse absenteeism in hospitals: a systematic review. J Nurs Manag. 2009; 17(3):312-30.

9. Gaudine A, Saks AM, Dawe D, Beaton M. Effects of absenteeism feedback and goal-setting interventions on nurses' fairness perceptions, discomfort feelings and absenteeism. J Nurs Manag. 2013; 21(3):591-602.

10. Gorman E, Yu S, Alamgir H. When healthcare workers get sick: exploring sickness absenteeism in British Columbia, Canada. Work. 2010; 11:117-23.

11. Ferreira RC, Griep RH, Fonseca MJ, Rotenberg L. [A multifactorial approach to sickness absenteeism among nursing staff]. Rev Saúde Pública. 2012; 46(2):259-68. Portuguese.

12. Fakih FT, Tanaka LH, Carmagnani MI. [Nursing staff absences in the emergency room of a university hospital]. Acta Paul Enferm. 2012; 25(3):378-85. Portuguese.

13. Blanca Gutiérrez JJ, del Rosal González A, González Ábalos Mde L, Aceituno Herrera A, Martín Afán de Rivera JC, Arjona González A. [Effect of the introduction of "on demand" nursing shifts on hours of absenteeism]. Gac Sanit. 2012; 26(5):480-2. Spanish.

14. Duclay E, Hardouin JB, Sébille V, Anthoine E, Moret L. Exploring the impact of staff absenteeism on patient satisfaction using routine databases in a university hospital. J Nurs Manag. 2014.

15. Rafferty AM, Clarke SP, Coles J, Ball J, James P, McKee M, et al. Outcomes of variation in hospital nurse staffing in England hospitals: cross-sectional analysis of survey data and discharge records. Int J Nurs Stud. 2007; 44(2):175-82.

16. de Magalhães AM, Dall'Agnol CM, Marck PB. Nursing workload and patient safety – a mixed method study with an ecological restorative approach. Rev Latinoam Enferm. 2013; 21(Spec No):146-54.

17. Isfort M. [Influence of personnel staffing on patient care and nursing in German intensive care units. Descriptive study on aspects of patient safety and stress indicators of nursing]. Med Klin Intensivmed Notfmed. 2013; 108(1):71-7. Germain.

18. Schalk R. The influence of organizational commitment and health on sickness absenteeism: a longitudinal study. J Nurs Manag. 2011; 19(5):596-600.