

Original

Sickness absence among health workers in belo horizonte, brazil

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Abstract: Objectives: To describe the prevalence of sickness absence and to analyze factors associated with the outcome according to gender in a sample of health-care workers at the Belo Horizonte Health Department. **Method:** This study was based on a Belo Horizonte Health Department survey carried out between September 2008 and January 2009. From a randomly selected sample of 2,205 workers, 1,808 agreed to participate. Workers were classified into Health Staff or Health Care. Other explanatory variables were social and demographic data, work characteristics, and personal health. The Poisson regression was applied to analyze factors associated with sickness absence by the prevalence ratio (PR). **Results:** The overall prevalence of sickness absence was 31.5% (23.8% for men and 34.6% for women). In the final model, we found higher rates of sickness absence in both male and female workers involved in tasks with high psychosocial demands (PR=1.86 men; PR=1.38 women) and in those that reported using medication for treating chronic diseases (PR=1.96 men; PR=1.50 women). Women having a permanent job contract had a higher prevalence of sickness absence than those having a temporary job contract (PR=1.71). **Conclusion:** Our findings suggest a paradox in how healthcare is organized: good results in terms of its global objective of providing healthcare for citizens contrast with lack of effective measures for protecting healthcare workers.

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Introduction

Sickness absence is an indicator of health and well-being for employees¹. Compared with other generic indicators of health, sickness absence indicates more severe health conditions, particularly when it is medically certified, and predicts rates of disability pensions and mortality². The cost of sickness absence and disability benefits is a major challenge in many workplaces and for society as a whole³.

Women compared to men seem indeed more frequently absent at work. Following the Multi-Facet Gender and Health Model by Bekker⁴, the relationship of sickness absence and being male or female (sex) is influenced by biological sex differences (i.e., having a female or male body), gender (i.e., internalized, socio-cultural meanings of femininity and masculinity), and various sets of possible mediating factors between gender and the outcome variable.

Sickness absence is also relevant for public services because the number of leaves of work and days not worked are significant. The cost of early retirement and leaves of work in federal public services in Brazil during 2005 was 300 million Brazilian *reais* (130 million dollars)⁵. This is especially relevant in the case of healthcare workers because it affects not only their health but also the quality of healthcare services. Brazil implemented its Unified Healthcare System (*Sistema Único de Saúde* or SUS) in 1988 based on the principle that healthcare is a right for all citizens and a duty of the State. The SUS aims to provide comprehensive preventive and medical care by applying decentralized management and delivery of healthcare⁶. Results have been positive, yielding increased access and use of services, reduced infant mortality, and

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less frequent hospital admittances^{7,8}. In the four years following its simple implementation in Belo Horizonte, hospital admittances of conditions amenable to treatment in primary care facilities decreased to 18%⁹. One possible undesirable side effect of this success story may be the health and wellbeing of healthcare workers.

Researchers involved with the issue of health have made great efforts to understand the recent changes in the health sector—changes that affect the way of working and influence the susceptibility of health workers to getting sick, and that expose them to the effects of new demands for which they do not have the necessary means^{6,7}. The measures aimed at transforming the health situation of health workers have not been successful and face obstacles to achieve the proposed goals. The corporate segment, including Belo Horizonte Health Department, is still ignorant about the occupational status and health characteristics, thereby justifying the interest of the research.

The aim of this study, therefore, was to describe the prevalence of sickness absence and to analyze factors associated with the outcome according to gender in a sample of healthcare workers at the Belo Horizonte Health Department.

Methods

This study was based on a Belo Horizonte Health Department survey carried out between September 2008 and January 2009. At that time, the Belo Horizonte Health Department employed 13,602 people. A self-administered questionnaire included a broad range of occupational exposures and outcomes. Published papers describe the details of the method^{10,11}. Of a randomly selected sample comprising 2,205 workers, 1,808 agreed to participate (response rate=81.9%). The age ranged from 16 to 73 years, with a mean of 42 and standard deviation of 11.1 years. After excluding missing data, the final sample consisted of 1,263 workers. No social and demographic differences were found when comparing excluded and study subjects.

The following question (allowing a yes/no answer) was asked to determine prevalence of sickness absence: In the past year, have you had sickness absence (SA) certified by a medical doctor?

Workers were classified into two groups: Health Staff (HS) and Health Care (HC) workers¹². The HS group consisted of administrative personnel in accounting, catering, cleaning, and other support jobs for health services, whereas the HC group comprised medical doctors, nurses, and nurse assistants.

Other explanatory variables were (a) social and demographic data (age and having children); (b) work characteristics (work setting, job contract, job physical demands, psychosocial demands, job control, social support); and

(c) personal health (use of medication for chronic diseases).

The variable “job physical demands” was the sum of scores in responses to questions about postures causing discomfort or pain; standing or sitting for longer periods; walking; lifting, carrying, or pushing excessive weight; moving patients; number of breaks during the workday. There were four possible answers for each question: 1=never; 2=rarely; 3=sometimes; and 4=always. A physical demand score was the sum of answers from which the median value was calculated: values equal to or below the cutoff point were considered as a low physical demand, and those above the cutoff point were defined as a high physical demand. The Portuguese version of the Job Content Questionnaire (JCQ)¹³ was applied to measure psychosocial risk factors: psychosocial demands, job control, and social support.

The initial results analysis was a description of the data using absolute and percentage measurements of explanatory variables *vis-a-vis* the response variable. Gender stratified analysis was applied because previous studies have shown that women generally have higher sickness absence rates than men; furthermore, determinants of sickness absence may differ between the sexes¹⁴.

The Poisson regression was applied to analyze the factors associated with sickness absence. The degree of association was established for each factor by using prevalence ratios (PR), since the odds ratio overestimates the strength of associations when a high prevalence of the event of interest is seen (sickness absence in this case)¹⁵. The statistical significance was defined as a 95% confidence interval. All associated factors at $p < 0.20$ in the univariate analysis were included in the multivariate model. The final multivariate model took into account all the associated variables at $p < 0.05$ after sequential deletion of variables. The STATA software, version 10.0. (Stata Corp., College Station, United States) was used for the statistical analysis.

The Ethics Committee of the Federal University of Minas Gerais approved this study (number: 542/07); it complies with the ethical principles of the Helsinki Declaration. Informed consent was obtained from all study participants.

Results

The overall prevalence of sickness absence was 31.5% (23.8% for men and 34.6% for women). The distribution of workers in each occupational group was the following: 276 (21.85%) in HS and 987 (78.15%) in HC.

As shown in Table 1, age was significantly associated with increased rates of sickness absence in women but not in men. Also, an association with having children was significant among women, but not among men. There was a higher prevalence of sickness absence among HC work-

Table 1. Distribution of sickness absence prevalence (%) for health reasons by sex according to sociodemographic, work, and health variables among municipal health workers in Belo Horizonte, Minas Gerais, Brazil, 2009.

	Sickness absence		<i>p</i> value
	Men (n=362) n (Prev.)	Women (n=901) n (Prev.)	
Sociodemographic			
Age (years)			
Until 30	22 (20.0)	46 (24.2)*	0.401
31-40	26 (26.6)	79 (37.6)	0.056
41-50	23 (24.7)	121 (36.7)	0.032
More than 51	15 (24.6)	66 (38.6)	0.042
Children			
No	37 (25)	94 (29)*	0.366
Yes	49 (23)	218 (37.8)	<0.001
Work characteristic			
Occupational group			
Health Staff	26 (17.7)*	56 (27.7)*	0.029
Health Care	60 (27.9)	256 (36.6)	0.019
Job contract			
Temporary	30 (20)	48 (20.9)*	0.001
Permanent	56 (26.4)	264 (39.3)	0.837
Physical demands of the work			
Low	47 (20.1)*	132 (29.1)*	0.01
High	39 (30.5)	180 (40.2)	0.046
Psychosocial demand			
Low	33 (16.8)*	133 (28.7)*	0.001
High	53 (32.1)	179 (41)	0.047
Job control			
High	41 (25.6)	118 (33.2)	0.083
Low	45 (22.3)	194 (35.5)	0.001
Social support			
Low	56 (27.1)	200 (38.6)*	0.018
High	30 (19.4)	112 (29.2)	0.003
Health			
Use of medication for chronic diseases			
No	42 (17.6)*	127 (27)*	0.006
Yes	44 (35.5)	185 (43)	0.133

* $p < 0.005$ into group of sexes+ p value comparing sexes

ers compared to HS workers ($p < 0.005$) in both genders. The rate of sickness absence was higher among women than among men in HC ($p = 0.019$) and HS (0.029) workers. No association was observed between sickness absence and job control.

Table 2 presents the results of the univariate analysis. The age group was associated with sickness absence among women but not among men. Having children and permanent job contract was associated with sickness absence only in. All work-related variables were associated

with sickness absence in both sexes except for job control. Use of medication for chronic diseases was also associated with sickness absence irrespective of gender.

Table 3 presents the results of the final model. Higher rates of sickness absence were found in both male and female workers involved in tasks with high psychosocial demands (PR=1.86 men; PR=1.38 women) and in those that reported using medication for treating chronic diseases (PR=1.96 men; PR=1.50 women). The final model shows a gender difference only in the variable job con-

Table 2. Association of sickness absence for health reasons by sex for sociodemographic, work, and health variables among municipal health workers in Belo Horizonte, Minas Gerais, Brazil, 2009

	Sickness absence	
	Men cPR (95% CI)	Women cPR (95% CI)
Sociodemographic		
Age (years)		
Until 30	1	1
31-40	1.33 (0.81-2.18)	1.55 (1.14-2.11)
41-50	1.24 (0.74-2.07)	1.51 (1.13-2.02)
More than 51	1.23 (0.69-2.19)	1.59 (1.16-2.18)
Children		
No	1	1
Yes	0.92 (0.63-1.36)	1.30 (1.07-1.59)
Work characteristic		
Occupational group		
Health Staff	1	1
Health Care	1.58 (1.05-2.38)	1.32 (1.04-1.68)
Job contract		
Temporary	1	1
Permanent	1.32 (0.89-1.95)	1.89 (1.44-2.47)
Physical demands		
Low	1	1
High	1.52 (1.05-2.19)	1.38 (1.15-1.66)
Psychosocial demand		
Low	1	1
High	1.92 (1.31-2.81)	1.43 (1.19-1.72)
Job control		
High	1	1
Low	0.87 (0.60-1.26)	1.07 (0.89-1.29)
Social support		
Low	1	1
High	0.72 (0.48-1.06)	0.76 (0.63-0.92)
Health		
Medication chronic diseases		
No	1	1
Yes	2.01 (1.40-2.89)	1.60 (1.33-1.92)

cPR: crude prevalence ratios, CI: confidence interval

tract. Women having a permanent job contract had a higher prevalence of sickness absence and those having a temporary job contract (PR=1.71; Table 3).

Discussion

The annual prevalence of medically certified sickness absence in the present study was 31.51% (398), which is lower than that among all workers employed by the city authorities in 2009 (44.60%)¹⁶. These employees include teachers, among whom sickness absence is high com-

pared to other professions. A lower prevalence was found in public healthcare services in São Paulo (15.9%)¹⁷ and in Rio de Janeiro hospitals (16.6%)¹⁸. The prevalence of sickness absence among healthcare workers in Finland was 23.40%, published in 2011¹⁹. Moreover, from the general population in Norway, 26.9% (994 individuals) of men and 43.2% (1327 individuals) of women were classified as taking physician-certified sickness leave during 2010²⁰.

An explanation for these discrepancies may be that different parameters for defining outcomes are used (number

Table 3. Final model association of sickness absence for health reasons by sex among municipal health workers in Belo Horizonte, Minas Gerais, Brazil, 2009

	Sickness absence	
	Men aPR (95% CI)	Women aPR (95% CI)
Job contract		
Permanent	-	1
Temporary		1.71 (1.31-2.24)
Psychosocial demand		
Low	1	1
High	1.86 (1.28-2.72)	1.38 (1.16-1.66)
Medication chronic diseases		
No	1	1
Yes	1.96 (1.37-2.79)	1.50 (1.25-1.80)

aPR: crude prevalence ratios; aPR: adjusted prevalence ratios; CI: confidence interval

and type of sickness absence); sample, inclusion criteria, and analysis tools may differ. Factors that underlie the decision to work or to miss work because of sickness may also be found. A decision to communicate sickness takes place in a given cultural and social context, which may not easily be translated into observable variables. It is clear that the perception of managerial support is associated with sickness absence²¹⁾.

We found a higher prevalence of sickness absence among women (34.6%) than among men (23.8%), a constant finding that may be explained by several interacting factors, in particular gender issues. Women more often face the double task of working and taking care of the family¹⁴⁾, which may at some point restrict their availability for work due to health issues. Although there are more women in the labor market, they tend to work in lower paid jobs, under more limiting conditions, with fewer opportunities for reaching higher levels in companies, and tend to be less represented in positions of authority¹⁴⁾. Biological differences between the sexes also include the specificities of human reproduction²¹⁾.

Other studies have shown a connection between employment conditions and sickness absence among women. We found that there was a higher prevalence of sickness absence among women having a permanent job contract than those having a temporary job contract. Workers in temporary jobs generally feel more insecure because work stability is not assured. Furthermore, they are not fully covered by social insurance. Virtanen et al.²²⁾ have shown that women in temporary jobs report feeling more unsure than men, probably because of restrictions in labor market mobility, which they feel more acutely. This context may explain why women having temporary jobs, in spite of worse working conditions and lower scores in

self-assessments of health, report less sickness absence than those having a permanent job contract²³⁾. If this is the case, it is cause for concern because it may be assumed that workers in temporary work—especially women—continue to work even when ill; this also explains a statistically significant association with permanent job contract among women.

Our model is an analysis of the effect of job and working conditions on sickness absence. The rate of workers stating that they worked under high physical demand was high; this variable, however, was not significant in the final model. A high proportion of workers went to work in spite of illness when they were exposed to physical demands at work²⁴⁾. As mentioned above, this is cause for concern because productivity is significantly lower due to disease-related loss of capabilities in this group.

Several authors have addressed occupational issues related to sickness absence in terms of contributing factors and outcomes, and have concluded that this is a multifaceted problem influenced by demographics; physical health; mental health; and work, personal and organizational factors²⁵⁾. An association with the use of medication for chronic diseases is plausible; it could be a manifestation of restrictions (the presence of symptoms, malaise, work leave to seek medical care, etc.) that morbidities have on production capability, irrespective of gender²⁵⁾.

The analysis showed that psychosocial demands were associated with sickness absence in both sexes. This variable pertains to working conditions, which may result in healthcare workers becoming sick^{19,26)}. An association between psychological demands and sickness absence was expected. Unfavorable psychosocial working conditions—in particular emotionally demanding work—were associated with low performance and, to a lesser extent,

with sickness absence. A possible explanation might be that employees in such jobs have fewer opportunities to adapt their labor activities to their health status. These findings^{25,27)} underline the importance of psychosocial factors for worker productivity, concurring with published studies.

The present study had limitations to be taken into account when interpreting the results. The cross-sectional study design does not support causal inferences or conclusions about these associations. Different definitions often prove to be a challenge when comparing or contrasting research findings, particularly when attempting to understand apparently inconsistent findings among factors associated with high rates of sickness absence. Sickness absence can also be related with other variables such as constitution or physical strength.

Nevertheless, our findings raise concern because they reflect a representative sample of workers from all jobs, geographies, and levels of complexity in public healthcare services in the city of Belo Horizonte, Brazil. The sampling strategy yielded a broad map of the status of healthcare in the population of this city, generating useful information for management and for organizing work in the healthcare services we studied.

There is no direct relationship between sickness absence and sickness; in many situations, workers who become ill do not necessarily miss work. The process of becoming ill and missing work, and of recovering and returning to work, may indicate a lack of balance between an individual and his or her environment. Furthermore, organizational factors may motivate workers not to miss work (or there may be pressure for workers to work); these factors interface with the opportunity and need for sickness absence²⁸⁾.

Healthcare is a dynamic environment with unique issues when dealing with long sickness absences. Sickness absence affects both workers and the delivery of healthcare. There are challenges, on the other hand, such as labor constraints and the additional cost of replacing absent employees. Worker morale and productivity may be lost, which combined with the above mentioned factors, may reduce the quality of healthcare²⁹⁾. Good results in terms of its global objective of providing healthcare for citizens contrast with lack of effective measures for protecting workers.

Broadly speaking, the healthcare services have become eroded due to lack of investments, structural adjustments, and cuts in funding. Healthcare workers' migration away from this work can be explained by the intensity of their work and their exposure to the risks of their working environment. Within the institutional sphere, human resource policies do not always regard this group as workers. Healthcare workers are often regarded as an instrument for providing services, rather than as individual workers whose health and lives might be influenced by

their work activities. The hypothesis guiding the analyses in progress makes the assumption that, going beyond the external difficulties of healthcare work (the volume of procedures, the means available, and the risks that are measurable and known), these workers have to deal with uncertainties coming from their relationship with users, which is the typical level at which healthcare work is conducted.

Understanding how poor health influences sickness absence in the context of work has relevant practical implications. Work-related factors are amenable to change, even though solutions for personal health issues may not always be easy.

Recent measures have made us optimistic: the *Saúde Mais* program in Belo Horizonte together with other health-promoting actions for public servants has contributed to decreased sickness absence³⁰⁾.

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References

- 1) Marmot M, Feeney A, Shipley M, North F, Syme SL. Sickness absence as a measure of health status and functioning: from the UK Whitehall II study. *J Epidemiol Community Health* 1995; 49(2): 124-130.
- 2) Vahtera J, Pentti J, Kivimäki M. Sickness absence as a predictor of mortality among male and female employees. *J Epidemiol Community Health* 2004; 58(4): 321-326.
- 3) Odeen M, Magnussen LH, Maeland S, Larun L, Eriksen HR, Tveito TH. Systematic review of active workplace interventions to reduce sickness absence. *Occup Med* 2013; 63(1): 7-16.
- 4) Bekker MHJ. Investigating gender within health research is more than sex disaggregation of data: A multi-facet gender and health model. *Psychol Health Med* 2003; 8: 237-249.
- 5) Cunha JB, Blank VLG, Boing AF. Time trends of sick leave in Brazilian civil servants (1995-2005). *Rev Bras Epidemiol* 2009; 12(2): 226-236.
- 6) Macinko J, Dourado I, Aquino R, et al. Major expansion of primary care in Brazil linked to decline in unnecessary hospitalization. *Health Aff* 2010; 29(12): 2149-2160.
- 7) Victora CG, Barreto ML, Leal MC, et al. Health conditions and health-policy innovations in Brazil: the way forward. *Lancet* 2011; 377(9782): 2042-2053.
- 8) Aquino R, Oliveira NF, Barreto ML. Impact of the family

- health program on infant mortality in Brazilian municipalities. *Am J Public Health* 2009; 99(1): 87-93.
- 9) Mendonça CS, Harzheim E, Duncan BB, Nunes LN, Leyh W. Trends in hospitalizations for primary care sensitive conditions following the implementation of Family Health Teams in Belo Horizonte, Brazil. *Health Policy Plan* 2012; 27(4): 348-355.
 - 10) Barbosa REC, Assunção AA, Araujo TM. Musculoskeletal pain among healthcare workers: An exploratory study on gender differences. *Am J Ind Med* 2013; 56(10): 1201-1212.
 - 11) Assunção AA, Araujo TM, Ribeiro RBN, Oliveira SVS. Hepatitis B vaccination and occupation exposure in the health-care sector in Belo Horizonte, Minas Gerais. *Rev Saude Publica* 2012; 46(4): 665-673.
 - 12) World Health Organization. *The World Health Report 2006—Working together for health.*
 - 13) Araújo TM, Karasek R. Validity and reliability of the job content questionnaire in formal and informal jobs in Brazil. *Scand J Work Environ Health* 2008; 34(6): 52-59.
 - 14) Bekker MH, Rutte CG, van Rijswijk K. Sickness absence: A gender-focused review. *Psychol Health Med* 2009; 14(4): 405-418.
 - 15) Barros AJD, Hirakata VN. Alternatives for logistic regression in cross-sectional studies: An empirical comparison of models that directly estimate the prevalence ratio. *BMC Med Res Methodol* 2003; 20: 3-21.
 - 16) Rodrigues CS, Freitas RM, Assunção AA, Bassi IB, Medeiros AM. Absenteeism and sickness as per self-reports by municipal public employees in Belo Horizonte, Brazil. *R Bras Est Popul* 2013; 30: 135-154.
 - 17) Sala A, Carro ARL, Correa NA, Seixas PHA. Sick leave among employees of the São Paulo State Health Department, Brazil, 2004. *Cad Saude Publica* 2009; 25(10): 2168-2178.
 - 18) Ferreira RC, Griep RH, Fonseca M de J, Rotenberg L. A multifactorial approach to sickness absenteeism among nursing staff. *Rev Saude Publica* 2012; 46(2): 259-268.
 - 19) Rantanen I, Tuominen R. Relative magnitude of presenteeism and absenteeism and work-related factors affecting them among health care professionals. *Int Arch Occup Environ Health* 2011; 84(2): 225-230.
 - 20) Sterud T. Work-related gender differences in physician-certified sick leave: a prospective study of the general working population in Norway. *Scand J Work Environ Health* 2014; 40(4): 361-369.
 - 21) Eriksen W, Bruusgaard D, Knardahl S. Work factors as predictors of sickness absence: a three month prospective study of nurses' aides. *Occup Environ Med* 2003; 60(4): 271-278.
 - 22) Virtanen P, Vahtera J, Kivimäki M, Pentti J, Ferrie J. Employment security and health. *J Epidemiol Community Health* 2002; 56(8): 569-574.
 - 23) Gimeno D, Benavides FG, Amick BC III, Benach J, Martinez JM. Psychosocial factors and work related sickness absence among permanent and non-permanent employees. *J Epidemiol Community Health* 2004; 58: 870-876.
 - 24) Meerding WJ, IJzelenberg W, Koopmanschap MA, Severens JL, Burdorf A. Health problems lead to considerable productivity loss at work among workers with high physical load Jobs. *J Clin Epidemiol* 2005; 58(5): 517-523.
 - 25) Duijts SFA, Kant I, Swaen GMH, van den Brandt PA, Zeegers MPA. A meta-analysis of observational studies identifies predictors of sickness absence. *J Clin Epidemiol* 2007; 60(11): 1105-1115.
 - 26) Schrijvers CTM, van de Mheen HD, Stronks K, Mackenbach JP. Socioeconomic inequalities in health in the working population: the contribution of working conditions. *Int J Epidemiol* 1998; 27(6): 1011-1018.
 - 27) Alavinia SM, Molenaar D, Burdorf A. Productivity loss in the workforce: associations with health, work demands, and individual characteristics. *Am J Ind Med* 2009; 52(1): 49-56.
 - 28) Roelen CAM, Koopmans PC, Anema JR, van der Beek AJ. Recurrence of medically certified sickness absence according to diagnosis: a sickness absence register study. *J Occup Rehabil* 2010; 20(1): 113-121.
 - 29) Johnson CJ, Croghan E, Crawford J. The problem and management of sickness absence in the NHS: considerations for nurse managers. *J Nurs Manag* 2003; 11(5): 336-342.
 - 30) Prefeitura Municipal de Belo Horizonte. DECRETO N°15.199, DE 22 DE ABRIL DE 2013. Programa de Atenção Integrada à Saúde e Segurança do Servidor - Saúde Mais.