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NIGHT WORK AND HYPERTENSION AMONG PROFESSIONALS NURSING OF BELO HORIZONTE CITY

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ABSTRACT
This was a cross-sectional study developed using a probabilistic sample of 297 nursing professionals in the municipal healthcare system of Belo Horizonte, Minas Gerais State, Brazil, between September 2008 and January 2009. The aim was to analyze the association between exposure to night work and hypertension among nursing professionals. Exposure to night work was measured based on responses to the question: Do you work in the night shift? (never, rarely, sometimes, always). For the analysis, the categories were grouped as no (never) and yes (rarely, sometimes, always). Hypertension was identified through self-reporting of medical diagnosis of the disease or use of antihypertensive medication. Prevalence ratios (PR) for hypertension and their respective 95% confidence intervals (95% CI) were adjusted using Poisson's multivariate regression technique. The participants were classified according to exposure to night work as no (75.8%) and yes (24.2%). Hypertension was diagnosed in 21.2%. Exposure to night work was associated independently with hypertension after multivariate adjustment of the data (Prevalence Ratio = 1.76; 95% CI = 1.01-3.11; p = 0.048). Therefore, our results should be taken into consideration in formulating public policies that involve health promotion among nursing professionals.

Keywords: Night work. Working conditions. Hypertension. Nursing team. Nursing.

INTRODUCTION

Nursing work includes nighttime working periods during which, despite fatigue, the professionals involved deal with impasses that are exacerbated through team compositions that differ in relation to the daytime teams[1]. Studies addressing the psychosocial environment in healthcare services have identified that night work is an occupational stress factor[2].

Diminished quality of the services provided, due to reduced alertness, short-term memory problems, poorer reaction times and work-time sleepiness has been described[3]. Night workers are subject to shorter life expectancy than that of individuals working during daytime hours[4].

Nurses exposed to night work more frequently present a lifestyle that can be considered to be unhealthy, characterized by sedentarism, abuse of substances such as alcohol and tobacco and harmful dietary habits[4].

Regarding morbidity, the most prevalent types among night workers are sleep disorders, gastrointestinal problems, mental disorders and cardiovascular diseases[4]. Because of the mismatch with the circadian cycle of blood pressure, nurses are exposed to increased risk of hypertension over the long term[5-8]. Nonetheless, despite the biological plausibility, the results regarding the relationship between night work and hypertension are inconsistent, including those from studies using samples of nursing professionals[5-9].

Worldwide, hypertension is one of the most important public health problems: it affects almost 40% of adults over the age of 25 years[10]. In addition to the significant overall prevalence of hypertension, it has been estimated that it is responsible for 45% of deaths due to acute myocardial infarction and 51% of those due to stroke[10]. In Brazil, it has been calculated that hypertension affects around 20% of the adult population[11]. High blood pressure is frequent among health professionals. In a study developed with data of emergency care unit of a hospital at Paraná State, Brazil, hypertension was one of the main causes of attendance[12].

Bringing to light and giving visibility to the relationship between night work and nurses' health is fundamental for promoting healthy environments in the respective healthcare services[1]. Within the Brazilian institutional context, such studies are consonant with the

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national policy for promoting workers' health of the Brazilian National Health System[13].

The aim of the present study was to analyze the relationship between night work and hypertension among nursing professionals in the municipal healthcare system of Belo Horizonte, Minas Gerais State, Brazil.

METHODOLOGY

This was a cross-sectional study conducted between 2008 and 2009, among nursing workers performing their professional activities within the municipal healthcare system in Belo Horizonte, Minas Gerais State, Brazil.

At the time when the data were gathered, all nursing professionals who were working within direct patient care (medium and higher levels) were considered to be eligible, independent of their employment linkage. Taking this criterion into account, the overall population comprised 3,590 professionals. The subjects who were drawn to participate who could not be found at the workplace due to vacations, transfer, retirement or death were replaced, while respecting the geographical location and the level of complexity of the care provided.

The sample size was determined to be 268 subjects based on the following parameters: 30% prevalence of hypertension[14-16], statistical power of 80%, confidence level of 95% and prevalence ratio of 2.00. In the end, 297 participants were included in the study, of whom 146 (49.2%) were nurses and 151 (50.8%) were nursing auxiliaries or nursing technicians.

To select the workers who were to be studied, the list of employees available at the human resources department of the Municipal Health Department of Belo Horizonte (SMSA-BH), Minas Gerais State, was firstly consulted to identify the distribution of nursing professionals according to geographical location (the municipal healthcare system of Belo Horizonte was structured into nine health districts) and the level of complexity of the care provided (primary, secondary or tertiary). Following this, proportional stratified sampling was performed, taking into consideration the abovementioned two strata. Lastly, a draw for the workers to be recruited was conducted based on a list of random numbers that was generated using the Epi Info software (version 3.5.1).

The data-gathering was performed between September 2008 and January2009, with the aid of a self-administered questionnaire that had previously been tested through a pilot study. This questionnaire contained questions relating to demographic characteristics, socioeconomic characteristic, general information about the work, characteristics of the working environment, psychosocial factors relating to the work, domestic activities, living habits, quality of life, health-related factors and acts of violence and victimization.

The exposure variable (night work) was measured based on the following question: Do you work in the night shift? The response options were: never, rarely, sometimes or always. For the data analyses, exposure or non-exposure to night work was considered independently of frequency. Thus, the categories of this variable were grouped into no (never) and yes (rarely, sometimes and always). This choice of grouping provided an increase in the statistical power, given that in the original variable, the frequency with which individuals' exposure was categorized as rarely or sometimes was low.

The following covariables were included in the study: sex (male or female); age (20-29 years, 30-39 years, 40-49 years or 50 years and over); skin color (white, black/mixed or East Asian/indigenous); marital status (single, married/stable partnership or divorced/widowed), family income (up to two minimum wages, 2 to 4 minimum wages or four minimum wages and over; at that time, the minimum monthly wage was R$ 415.00); smoking (using the question: If smokers are considered to be people who have previously smoked at least 100 cigarettes or five packets, how would you classify yourself? with the responses: nonsmoker, former smoker or current smoker); dependence on alcohol (based on the "Cut Down, Annoyed by criticism, Guilty and Eye-opener (CAGE) questionnaire, with the responses yes or no)[17]; physical activity (using the question: How often do you do physical activities? with the responses: never, once or twice a week or three or more times a week); medical diagnosis of obesity (no, yes); number

of hours worked per week (up to 40 hours or 40 hours and over); length of time doing current job, in months (< 12, 12 to 23, 24 to 47 or 48 and over); demands of the work relative to control over it (low demands, active, passive or high demands); and social support at work (low or high).

To characterize the demands/control and social support at work, the Job Content Questionnaire (JCQ) proposed by Karasek was used, as validated in its Portuguese-language version for the Brazilian population[18]which has been widely used in studies on associations with hypertension[19]. Thus, the demands of the work were estimated through the sum of scores from questions relating to the pace of the work, time available for carrying out tasks, conflicting tasks and excessive volumes of work[18]. The workers' control over their own work was assessed using the sum of scores from questions relating to use of their skills (learning new things, creativity, development of special skills and possibility of carrying out different tasks) and their authority for making decisions (freedom to decide how to carry out tasks and possibility for making decisions)[18]. The questions had the following response options: "I strongly agree", "I agree", "I disagree" and "I strongly disagree". Each question was thus scored from 1 to 4 (1 indicated few demands or little control and 4 indicated high demands or great control). The scores for demands and control were divided into two halves based on their medians and these fractions were then combined to generate four quadrants: (a) low requirements = low demands and high control; (b) active = high demands and high control; (c) passive = low demands and low control; and (d) high requirements = high demands and low control. High requirements, which formed a proxy for stress in the present study, have been shown to be associated with negative repercussions on health[18].

With regard to social support at work, the JCQ contains questions relating to support from work colleagues and management, with the following response options: "I strongly agree", "I agree", "I disagree" and "I strongly disagree", and each of these received a score from 1 to 4 (1 indicated little support and 4, great support). The social support score was divided into two halves based on the median[18].

The outcome variable (hypertension) was determined based on the responses to two questions in this questionnaire: a) Do you have a medical diagnosis of hypertension? and b) Right now, are you making use of any medication prescribed by a doctor for hypertension? For both questions, the response options were yes or no. Workers were considered to be hypertensive if they responded "yes" to at least one of the two questions. Participants who responded negatively to both of these questions were classified as presenting normal blood pressure.

The sample was characterized by calculating the absolute and relative frequencies of the demographic variables (sex, age, skin color and marital status), socioeconomic variable (family income), lifestyle variables (smoking, dependence on alcohol and physical activity), anthropometric variable (diagnosis of obesity) and working conditions (demands/control, number of hours worked per week, length of time doing current job and social support), according to the categories of the exposure variable (night work). Statistical differences were evaluated using Pearson's chi-square test.

Bivariable analysis was conducted in order to evaluate the crude associations of exposure to night work and each covariable of interest with hypertension. The strengths of the associations were measured using prevalence ratios (PR) and their respective 95% confidence intervals (95% CI).

The independent association between exposure to night work and hypertension was evaluated by means of multiple Poisson regression models with robust variance, adjusted for potential confounding factors. Thus, each PR and its respective 95% CI were calculated by taking the reference category to be non-exposure to night work. In model 1, the adjustment variables were taken to be sex, age, skin color, marital status and family income. In model 2, the variables of model 1 were taken into consideration with the addition of smoking, dependence on alcohol, physical activity practices and the diagnosis of obesity. Lastly, in model 3, the variables of model 2 were taken into consideration with the addition of demands/control relating to the work, number of hours worked per week, length of time doing the current job and social support at work. In all the

analyses, the statistical significance level was set at 5% ($p < 0.05$)and the analyses were conducted using the Stata statistical software (version 12.0).

This study was approved by the Ethics Committee for Research on Human Beings of the Federal University of Minas Gerais (Report No. 542/07). All the participants signed a free and informed consent statement.

RESULTS AND DISCUSSION

The participants were classified according to their exposure to night work as "no" (75.8%) and "yes" (24.2%: rarely = 4.6%; sometimes = 6.1%; and always = 13.5%). Hypertension was diagnosed in 21.2%.

The demographic, socioeconomic, lifestyle and anthropometric characteristics of the nursing professionals are presented in **Table 1**, as well as the associations of these variables with hypertension. It was found that the majority of them were female (89.9%), were aged between 30 and 49 years (60.6%), had black/mixed skin color (61.6%), were married or in a stable partnership (52.5%) and earned up to four minimum wages (66.0%).

Table 1. Association of demographic, socioeconomic lifestyle and anthropometric characteristics with high blood pressure among nursing in the municipal healthcare system of Belo Horizonte, Minas Gerais State, Brazil, 2008-2009.

Variables	Population	High blood pressure			
	n (%)	n (%)	PR	95% CI	p-value*
Sex					
Male	30 (10.1)	6 (20.0)	1.00	-	-
Female	267 (89.9)	59 (22.1)	1.08	0.52-2.34	0.795
Age (years)					
20-29	31 (10.4)	1 (3.2)	1.00	-	-
30-39	74 (24.9)	4 (5.4)	1.68	0.19-14.4	0.639
40-49	106 (35.7)	26 (24.5)	7.60	1.07-53.97	0.043
50 or more	86 (29.0)	35 (40.7)	12.61	1.80-88.51	0.011
Skin color					
White	99 (33.3)	16 (16.2)	1.00	-	-
Black/Mixed	183 (61.6)	46 (25.1)	1.55	0.93-2.60	0.092
East Asian/Indigenous	15 (5.1)	3 (20.0)	1.24	0.41-3.75	0.706
Marital status					
Single	87 (29.3)	18 (20.7)	1.00	-	-
Married/stable partnership	156 (52.5)	34 (21.8)	1.05	0.63-1.75	0.841
Divorced/widowed	54 (18.2)	13 (24.1)	1.16	0.62-2.18	0.637
Family income					
Up to 2 minimal wages	47 (15.8)	10 (21.3)	1.00	-	-
2 to 4 minimal wages	149 (50.2)	41 (27.5)	1.29	0.70-2.38	0.408
4 minimal wages or more	101 (34.0)	14 (13.9)	0.65	0.31-1.36	0.253
Smoking					
Nonsmoker	203 (68.4)	36 (17.7)	1.00	-	-
Former smoker	59 (19.9)	20 (33.9)	1.91	1.20-3.04	0.006
Current smoker	35 (11.8)	9 (25.7)	1.45	0.77-2.74	0.253
Dependence on alcohol					
No	281 (94.6)	64 (22.8)	1.00	-	-
Yes	16 (5.4)	1 (6.3)	0.27	0.04-1.86	0.185
Physical activity (times/week)					
Never	147 (49.5)	32 (21.8)	1.00	-	-
1 to 2	83 (28.0)	19 (22.9)	1.05	0.64-1.73	0.844
3 or more	67 (22.5)	14 (20.9)	0.96	0.55-1.68	0.886
Medical diagnostic of obesity					
No	247 (83.2)	49 (19.8)	1.00	-	-
Yes	50 (16.8)	16 (32.0)	1.61	1.01-2.60	0.049

Note: RP, prevalence Ratio; 95% CI, 95% Confidence Interval; * p-value of Poisson Regression.

Furthermore, the following frequencies of lifestyle habits and anthropometric outcomes were present among them: 11.8% were smokers; 5.4% were dependent on alcohol, 49.5% were sedentary and 16.8% were obese. Age (40 to 49 years, and 50 or more years), smoking (former smoker) and obesity were associated with hypertension at the bivariate level ($p < 0.05$).

The characteristics of the nursing professionals' work are presented in **Table 2**, as well as the associations of these variables with hypertension. It can be seen that the majority of the subjects were classified as being exposed to stress at work that was of moderate to high intensity according to the demands/control scale (56.6%: passive = 33.3% and high demands= 23.3%). Just over half of the subjects were nursing auxiliaries or nursing technicians (50.8%), had working hours of up to 40 hours per weeks (59.9%), had been doing the current job for more than 48 months (58.9%) and had high social support at work (50.8%). The professional category (nursing aide) and length of time doing the current job (48 or more months) were correlated with hypertension at the bivariate level ($p < 0.05$).

Table 2. Association of night work and other labor characteristics with high blood pressure among nursing professional in the municipal healthcare system of Belo Horizonte, Minas Gerais State, Brazil, 2008-2009.

Variables	Population	High blood pressure			
	n (%)	n (%)	PR	95% CI	p-value*
Night work					
No	225 (75.8)	48 (21.3)	1.00	-	-
Yes	72 (24.2)	17 (23.6)	1.11	0.68-1.80	0.683
Demand-control at work					
Low strain	57 (19.2)	8 (14.0)	1.00	-	-
Active	72 (24.2)	11 (15.3)	1.09	0.47-2.53	0.844
Passive	99 (33.3)	28 (28.3)	2.02	0.98-4.12	0.055
High strain	69 (23.3)	18 (26.1)	1.86	0.87-3.96	0.108
Professional category					
Nurse	146 (49.2)	25 (16.6)	1.00	-	-
Nursing aide	151 (50.8)	40 (27.4)	1.65	1.06-2.58	0.027
Hours worked per week					
Up to 40	178 (59.9)	44 (24.7)	1.00	-	-
40 or more	119 (40.1)	21 (17.7)	0.71	0.45-1.14	0.156
Time doing current job (months)					
< 12	59 (19.8)	5 (8.5)	1.00	-	-
12 a 23	28 (9.4)	3 (10.7)	1.26	0.32-4.93	0.736
24 a 47	35 (11.8)	7 (20.0)	2.36	0.81-6.88	0.116
≥ 48	175 (58.9)	50 (28.6)	3.37	1.41-8.06	0.006
Social support at work					
Low	146 (49.2)	38 (26.0)	1.00	-	-
High	151 (50.8)	27 (17.9)	0.69	0.44-1.07	0.093

Note: RP, Prevalence Ratio; 95% CI, 95% Confidence Interval; * p-value of Poisson Regression.

No significant differences were observed in relation to demographic, socioeconomic, lifestyle and anthropometric characteristics according to the participants' work shift. On the other hand, all occupational characteristics differed significantly between the nursing professionals' work shifts, such that the night shift had higher proportions of nursing aide (63.9%) and of individuals who had been in their current jobs for less than 12 months (31.9%). Moreover, the working conditions for the nursing professionals on the night shift were observed to be worse, given that they had long working periods (76.4% with ≥ 40 hours/week) and were more exposed to high demands (31.9%) and low social support (65.3%) (Data not shown).

Table 3 presents the multivariate analysis on the independent association between exposure to night work and hypertension. Adjustment of this association firstly using demographic and socioeconomic variables increased its strength, but did not alter its statistical significance (PR = 1.43; 95% CI = 0.88-2.31) (**Model 1**), in relation to what had been observed in the bivariate analysis (PR = 1.11; 95%CI = 0.68-1.80)

(**Table2**). Additional adjustment according to lifestyle and anthropometric variables did not produce any substantial modifications in relation to Model 1 (PR = 1.50; 95% CI = 0.93-2.42) (**Model 2**). However, by adding the variables of the participants' occupational characteristics to the multivariate adjustment, it was seen that the strength of the association between night work and hypertension increased and also became significant (PR = 1.76; 95% CI = 1.01-3.11) (**Model 3**).

Table 3. Independent association between night work and high blood pressure among nursing professionals in the municipal healthcare system of Belo Horizonte, Minas Gerais State, Brazil, 2008-2009.

	PR	95% CI	p-valor
Model 1*			
Night work			
No	1.00	-	-
Yes	1.43	0.88 – 2.31	0.146
Model 2†			
Night work			
No	1.00	-	-
Yes	1.50	0.93 – 2.42	0.098
Model 3‡			
Night work			
No	1.00	-	-
Yes	1.76	1.01 – 3.11	0.048

*Model 1: adjusted for sex, age, skin color, marital status, and family income; † Model 2: Model 1 additionally adjusted for smoking dependence on alcohol, physical activity and medical diagnostic of obesity; ‡ Model 3: Model 2 additionally adjusted for demand-control at work, hours worked per week, time doing current job, and social support at work.

In the present study, the association between night work and hypertension among nursing professionals working within the municipal healthcare system of Belo Horizonte, Minas Gerais State, was investigated. The analytical model put forward indicated that exposure to night work was associated with hypertension, after adjustment for potential confounding factors. The proportion of individuals presenting hypertension was 76% greater in the group that reported carrying out tasks within the night shift at some time, in relation to the group that reported working exclusively within the daytime shift. This finding was independent of individual factors (age, sex, skin color, family income, smoking, alcohol abuse, sedentarism and obesity) and occupational environment factors (stress at work and number of working hours), which are already known to be determinants of this disease.

These results should be interpreted cautiously because of at least two limitations of this study. Firstly, the data on the diagnosis of hypertension was not obtained by means of measuring blood pressure, but through self-reporting. Nonetheless, this method of measuring blood pressure has already been validated in other studies, including in a cohort of American nurses[20]. Secondly, if the cross-sectional nature of this study is taken into consideration, the relationships presented express association models even if this characteristic is intrinsic to the study design. Thus, the certainty regarding possible temporal and causal relationships between the variables addressed is diminished.

Despite these limitations, the results presented are consistent. In a cross-sectional study conducted among 1,992 nurses in 18 public hospitals in Brazil, a positive relationship between night work and self-reported hypertension was shown (OR = 1.80; 95% CI = 1.36-2.45)[5]. A similar result was observed in the Nurses' Health Study II, a cohort that was developed among 23,360 nursing professionals in the United States. It was observed that the nurses who had worked at night for more than 12 months over the two years preceding the investigation presented a risk of developing hypertension than was 81% higher than among those who had not been exposed to night work at any time (RR = 1.81; 95% CI = 1.14-2.87)[6]. In both of these studies, the strengths of the

associations were very close to what was described in the present study, i.e. approximately 80%.

On the other hand, another two studies that were conducted among the same target public[7,8], of which one was Brazilian[8], did not show any significant associations between night work and hypertension. Healthy worker bias was suggested as an explanation for this inconsistency, given that night work is generally performed by individuals who have the benefit of better health conditions[7].

As stated earlier, a relationship between night work and hypertension is biologically plausible[9]. When individuals work at night, their occupational activities and rest periods take place at times that invert the biological time patterns. This has repercussions relating to the circadian cycle of blood pressure, which is usually characterized by diminution of blood pressure levels at night and by an increase at the beginning of the day[9].

However, in the case of night workers, the pattern for the blood pressure level curve changes. At the beginning of the night, instead of falling, blood pressure is maintained at the levels expected for the daytime period[9]. This circadian desynchronization may, over the long term, persistently raise the individual's mean blood pressure, thereby boosting the risk of hypertension[9].

The prevalence of hypertension found in the present study (21.2%) was similar to that shown in a study of cross-sectional design conducted among 606 workers within the nursing team of an emergency hospital in Porto Alegre (Rio Grande do Sul) (23%)[15]. However, the proportion of nurses who reported having a diagnosis of hypertension was lower in the present study than in other studies with a cross-sectional design, in which the sample was similar to that of the nurses of the municipal healthcare system of Belo Horizonte. The first of these was conducted in a university hospital in the city of São Paulo (state of São Paulo), with a group of 279 participants, and hypertension was found in 32%[14]. In the second study, which covered 494 subjects at an emergency hospital in Salvador (Bahia), the frequency of the disease was 36.4%[16].

The observed differences in the prevalence of hypertension can be at least partially attributed to methodological discrepancies with regard to definition, measurement and data-gathering strategies. In the present study, data on the outcome of interest was obtained through self-reporting, based on two objective questions: (1) Do you have a medical diagnosis of hypertension? And (2) Right now, are you making use of any medication prescribed by a doctor for hypertension? Thus, individuals without confirmation of the diagnosis of hypertension from a doctor would not be included. Even though hypertension was confirmed by means of direct measurement of blood pressure through limited readings in the studies cited, and even though this methodological procedure is acceptable in population-based surveys, the possibility that the rates obtained might have been overestimates cannot be ruled out.

Lastly, it is worth highlighting the following positive points regarding the present study: a) the probabilistic nature of its sample ensured that it was representative of the nursing professionals of the municipal healthcare system of Belo Horizonte, Minas Gerais State, Brazil. Previously, both the studies that estimated the prevalence of hypertension and those that addressed the association between this outcome and night work among nursing professionals focused on subjects who carried out their occupational activities only in hospitals. In the present study, the participants were distributed throughout the healthcare levels of the system, thus emphasizing the innovative nature of the present study; b) the adjustment for potential confounding factors through the multivariate analysis technique, as used in the present study, is more appropriate for this type of study design; c) the association found between the independent and dependent variables was indubitably strong (PR = 1.76; 95% CI = 1.01-3.11) and, as stated earlier, very similar to what was shown in other studies that also demonstrated a relationship between night work and hypertension, i.e. close to 80%[5,6].

CONCLUSIONS

It can be concluded that night work is associated with hypertension among nursing

professionals working in the municipal healthcare system of Belo Horizonte, Minas Gerais State, Brazil. This result is worrying given the characteristics of the sample: in a young age group that is mostly composed of women and therefore vulnerable to occurrences of cardiovascular events[10].

In consonance with the national policy for promoting workers' health of the Brazilian National Health System [13], it would be desirable to implement interventions to soften the effects of night work on nursing professionals' health. In this regard, it has been proposed that adequate conditions for workers should be ensured so as to protect their ability to rest during their work breaks.

Such measures have the power to reduce the chances of occurrences of hypertension[5]. Brazilian legislation provides for a break of one hour for a rest or a meal when the working day exceeds six hours. However, because of the complexity of nursing work, among other factors, this break is not always respected. In other cases, although a break may be feasible, nurses do not always have an adequately comfortable place on the premises for their guaranteed rest break. It is thus suggested that in determining the size of the nursing team, especially for the night shift, the management should incorporate the rest break into the time planning with a guarantee of adequacy of the installations and other conditions that are essential for enabling these professionals to rest.

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TRABALHO NOTURNO E HIPERTENSÃO ARTERIAL EM PROFISSIONAIS DE ENFERMAGEM DO MUNICÍPIO DE BELO HORIZONTE

RESUMO

Trata-se de estudo transversal desenvolvido com amostra probabilística de 297 profissionais de enfermagem da rede municipal de saúde de Belo Horizonte, Minas Gerais, Brasil, entre setembro de 2008 e janeiro de 2009. O objetivo foi analisar a associação entre a exposição ao trabalho noturno e hipertensão arterial (HA). A exposição ao trabalho noturno foi mensurada com base na resposta à pergunta: Você trabalha no turno noturno? Nunca, raramente, às vezes e sempre. Para análise, as categorias foram agrupadas em não (nunca) e sim (raramente, às vezes e sempre). A HA foi identificada pelo autorrelato de diagnóstico médico da doença ou uso de medicação anti-hipertensiva. Razões de Prevalência (RP) de HA e seus respectivos Intervalos de Confiança de 95% (IC 95%) foram ajustados pela técnica de regressão multivariada de Poisson. Os participantes foram classificados segundo a exposição ao trabalho noturno em não (75,8%) e sim (24,2%). A HA foi diagnosticada em 21,2%. A exposição ao trabalho noturno se associou independentemente à HA após o ajuste multivariado dos dados (RP = 1,76; IC 95% = 1,01-3,11; p = 0,048). Portanto, nossos resultados devem ser considerados na formulação de políticas públicas que envolvam a promoção da saúde de profissionais de enfermagem.

Palavras-chave: Trabalho noturno. Condições de trabalho. Hipertensão. Equipe de enfermagem. Enfermagem.

TRABAJO NOCTURNO E HIPERTENSIÓN ARTERIAL EM PROFESIONALES DE ENFERMERÍA DEL MUNICIPIO DE BELO HORIZONTE

RESUMEN

Se trata de un estudio transversal desarrollado con muestreo probabilístico de 297 profesionales de enfermería de la red municipal de salud de Belo Horizonte, Minas Gerais, Brasil, entre septiembre de 2008 y enero de 2009. El objetivo fue analizar la asociación entre la exposición al trabajo nocturno y la hipertensión arterial (HA). La exposición al trabajo nocturno fue mensurada con base en la respuesta a la pregunta: ¿Usted trabaja en turno nocturno? Nunca, raramente, a veces, siempre. Para el análisis, las categorías fueron agrupadas en no (nunca) y sí (raramente, a veces y siempre). La HA fue identificada por auto-informe de diagnóstico médico de la enfermedad o uso de medicación para bajar la tensión arterial. Las razones de Prevalencia (RP) de HA y sus respectivos Intervalos de Confianza de 95% (IC 95%) fueron ajustados por la técnica de regresión multivariada de Poisson. Los participantes fueron clasificados según la exposición al trabajo nocturno en no (75,8%) y sí (24,2%). La HA fue diagnosticada en 21,2%. La exposición al trabajo nocturno se asoció independientemente a la HA tras el ajuste multivariado de los datos (RP = 1,76; IC 95% = 1,01-3,11; p = 0,048). Por lo tanto, nuestros resultados deben ser considerados en la elaboración de políticas públicas que involucren la promoción de la salud de profesionales de enfermería.

Palabras clave: Trabajo nocturno. Condiciones de trabajo. Hipertensión. Equipo de enfermería. Enfermería.

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