



ORIGINALES

Health problems among nursing professionals and related factors

Problemas de saúde entre profissionais de enfermagem e fatores relacionados

Problemas de salud entre profesionales de enfermería y factores relacionados

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ABSTRACT:

Objective: To know the health problems that affect nursing professionals in the emergency unit of a public hospital and the related factors.

Method: Cross-sectional study with 86 nursing professionals from a hospital emergency unit in the countryside of the State of São Paulo, Brazil. Data collected through questionnaires were analyzed using descriptive and inferential statistics.

Results: 61.2% of the professionals reported at least one injury or illness with a medical diagnosis, and 59.6% of the professionals had two or more health problems, with a mean number of injuries or illnesses of 2.8 (CI_{95%} 2.1-3.5). The groups 'injury by accident' and 'musculoskeletal diseases' were predominant, however, injuries in the back, gastritis or duodenal irritation and hypertension were the illnesses with the highest number of reports. Nursing assistants or technicians presented, on average, more injuries or illnesses than nurses, as well as professionals with more than one employment those who felt tired and/or discouraged after work and who had suffered occupational violence. Statistically significant differences were observed between the groups with or without injury or illness in relation to medians of current age ($p=0.0075$) and age at the start of labor activity ($p=0.0188$) of workers. There was a statistically significant relationship between presenting an injury or illness and use of medication ($p=0.0304$).

Conclusion: It is important that the institutions provide working and organizational conditions for workers, in order to enable them to maintain their health, potential and skills for as long as possible.

Keywords: Disease; nursing; nursing, team; emergency service, hospital; emergency medical services

RESUMO:

Objetivo: Conhecer os problemas de saúde que acometem profissionais de enfermagem em uma unidade de emergência hospitalar pública e fatores relacionados.

Método: Estudo transversal com 86 profissionais de enfermagem de uma unidade de emergência hospitalar do interior do Estado de São Paulo, Brasil. Os dados coletados a partir de questionários foram analisados utilizando a estatística descritiva e inferencial.

Resultados: 61,2% dos profissionais reportaram ao menos uma lesão ou doença com diagnóstico médico, e 59,6% dos profissionais possuíam dois ou mais problemas de saúde, sendo 2,8 a média de lesões ou doenças (IC_{95%} 2,1–3,5). Os grupos 'lesões por acidente' e 'doenças do sistema musculoesquelético' foram predominantes, no entanto, as lesões nas costas, gastrite ou irritação duodenal e hipertensão arterial foram as doenças com maior número de relatos. Os auxiliares ou técnicos de enfermagem apresentaram, em média, maior número de lesões ou doenças que os enfermeiros, assim como os profissionais com outro emprego, cansados e/ou desanimados após o trabalho e que sofreram violência ocupacional. Diferenças estatisticamente significantes foram observadas entre os grupos com ou sem lesão ou doença em relação às medianas da idade do trabalhador ($p=0,0075$) e idade de início em uma atividade laboral ($p=0,0188$). Foi identificada relação com significância estatística entre ter lesão ou doença e uso de medicamento ($p=0,0304$).

Conclusão: É importante que a instituição propicie ao trabalhador condições de trabalho e organizacionais que possibilitem a manutenção da sua saúde, potencial e habilidades pelo maior tempo possível.

Palavras chave: Doenças; enfermagem; equipe de enfermagem; serviço hospitalar de emergência; pronto-socorro

RESUMEN:

Objetivo: Conocer los problemas de salud que afectan a profesionales de enfermería en una unidad de emergencia hospitalaria pública y factores relacionados.

Método: Estudio transversal con 86 profesionales de enfermería de una unidad de emergencia hospitalaria del interior del Estado de São Paulo, Brasil. Los datos recogidos a partir de cuestionarios fueron analizados utilizando la estadística descriptiva e inferencial.

Resultados: 61,2% de los profesionales reportaron al menos una lesión o enfermedad con diagnóstico médico, y 59,6% de los profesionales tenían dos o más problemas de salud, siendo 2,8 la media de lesiones o enfermedades (IC_{95%} 2,1–3,5). Los grupos 'lesiones por accidente' y 'enfermedades del sistema músculo-esquelético' fueron predominantes, sin embargo, las lesiones en la espalda, gastritis o irritación duodenal e hipertensión arterial fueron las enfermedades con mayor número de relatos. Los auxiliares o técnicos de enfermería presentaron, de media, mayor número de lesiones o enfermedades que los enfermeros, así como los profesionales con otro empleo, cansados y/o desanimados después del trabajo y que sufrieron violencia laboral. Diferencias estadísticamente significantes fueron observadas entre los grupos con o sin lesión o enfermedades en relación a las medianas de la edad del trabajador ($p=0,0075$) y edad de inicio en una actividad laboral ($p=0,0188$). Fue identificada relación con significancia estadística entre tener lesión o enfermedad y uso de medicamento ($p=0,0304$).

Conclusión: Es importante que la institución propicie al trabajador condiciones de trabajo y organizacionales que posibiliten el mantenimiento de su salud, potencial y habilidades por el mayor tiempo posible.

Palabras clave: Enfermedad; enfermería; grupo de enfermería; servicio de urgencia en hospital; servicios médicos de urgencia

INTRODUCTION

Nursing professionals generally compose the main bulk of the health workforce, being essential to health centers, clinics, hospitals, and others companies⁽¹⁻²⁾. Despite this relevant participation in the composition of the health staff, the health status of these professionals needs to be carefully examined⁽¹⁾. This context assumes increasing importance in the face of the global nursing shortage and aging of this workforce⁽¹⁾.

The literature highlights that nursing professionals face several stressors, many of which are considered inherent to the profession such as long working hours, the need to work amidst pain, loss and suffering, and to care of patients in health conditions that are opposite to life, and the need to support family members⁽³⁾. Care for individuals under extreme stress and the assistance to critical situations are part of the routine in

emergency units, evaluated as a configuration of work with high occupational stress⁽⁴⁾. These stressors, allied to the way the activities are carried out in the daily work routine, individual aspects and the intra- or extra-institutional support resources available express the vulnerability of nursing professionals to the development of certain health problems.

The presence of some health problems can lead to short flaws of attention that increase the risk of medication errors and may imply life-threatening features and other aspects related to patient safety⁽³⁾. Nursing professionals deal with difficult situations for which they often need to make accurate decisions that affect people's lives⁽³⁾. Undoubtedly, the ability of nursing professionals to respond adequately and timely to the demands arising from daily health care is also related to the health conditions of these professionals.

In this context, the relationship between health problems and presenteeism (decreased productivity by health problems) is noteworthy⁽⁵⁾. Presenteeism is related to patient safety, and to a greater frequency of falls of patients and medication errors, that generate costs estimated at approximately two billion dollars per year, in the United States⁽⁵⁾. In addition, the literature identifies absenteeism (absence at work) as a global problem⁽⁶⁻⁷⁾ and recognizes that absenteeism due to illness as a factor that promotes work overload, affecting the functioning of the workplace, the staff and users, compromising the quality and safety of nursing care and the efficiency of services^(6,8-9).

At a time when it is necessary to explore all possibilities to improve health care quality and reduce costs⁽⁵⁾, the health of nursing professionals should receive adequate consideration. The health of this workforce deserves more attention to positively influence patient care and cost control⁽⁵⁾.

Considering that nursing professionals participate in the process of caring for patients, families and the community, contributing to the existence of the health care network in the country, and that health problems in this category can have relevant consequences, the objective of this study was to know the health problems and the related factors that affect nursing professionals in the emergency unit of a public hospital.

METHOD

A cross-sectional study was conducted with 86 nursing professionals working in the emergency unit of a public hospital located in countryside of the State of São Paulo, Brazil. The nursing professionals who composed the sample were nurses, nursing technicians or nursing assistants, working for at least three months in the emergency unit, in any work shift. Professionals who did not meet these criteria and who were on leave were not included in the study.

The data were collected in the second half of 2016 from a set of instruments. A Questionnaire on Socio-demographic Data, Lifestyle, Health and Work Aspects⁽¹⁰⁾, used in a previous study in the health area⁽¹¹⁻¹²⁾, was used here to gather data on the position at work, sex, work shift, age, time of work in the unit and in the institution, age at the start of working activities, smoking habit, use of medications, fatigue and/or discouragement after work, bond with more than one job, work overtime, good sleep

quality after work and stress level of workers. This level was assessed from a scale with extremes from zero (I'm fully stressed) to ten (I'm not stressed).

The Work Ability Index (WAI), a Finnish questionnaire validated for use in Brazil⁽¹³⁻¹⁴⁾, was used to assess the current illnesses with medical diagnosis self-reported by the professionals. In the present study, the Cronbach's Alpha for this instrument was 0.7, indicating good internal consistency⁽¹⁵⁾.

A questionnaire submitted to expert evaluation was used to assess information about the experiences of nursing professionals as victims of verbal abuse, sexual harassment and/or physical violence in the work environment in the 12 months prior to the study⁽¹⁶⁾.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS)® version 20.0. Descriptive statistics were applied to numerical variables (mean, standard deviation, median, minimum and maximum) and to categorical variables (proportion). Statistical tests were used to evaluate the association between variables (chi-square test - χ^2) or to compare groups (Mann-Whitney test), using the significance level of p-value <0.05. The Mann-Whitney test was used in case of lack of evidence of normal distribution of the numerical variables.

This study was approved by the Research Ethics Committee and respected the ethical criteria established by Resolution 466/2012.

RESULTS

The sample consisted of 86 nursing professionals (23 nurses and 63 nursing technicians or assistants), of which 68 (79.1%) were female. Most of the professionals worked the night shift (31-38.8%), followed by the afternoon (24-30.0%), morning (23-28.7%) and commercial (2-2.5%) shift. Six participants did not provide information about the work shift.

Fifty-two professionals (61.2%) reported have had an injury or illness diagnosed by a physician, of whom 14 (26.9%) were nurses and 38 (73.1%) were nursing technicians or assistants. Professionals with injuries or illnesses reported a higher proportion of smoking (15.4% *versus* 9.1%), medication use (44.2% *versus* 21.2%), having more than one job (36.0% *versus* 27.3%) and working overtime (23.1% *versus* 18.2%), and to a lesser extent sleeping well after work (73.1% *versus* 87.9%), when compared to the group of professionals who had no injury or illness. Statistical significance was observed in the chi-square test between the variable 'presenting or not an injury or illness with medical diagnosis' and 'use of medication' (p=0.0304). Thirty-three professionals (38.8%) stated that they did not have any injury or illness with a medical diagnosis, and one professional did not provide information on this item (n=85).

Professionals with injuries or illnesses diagnosed by a doctor were older, had been working in the unit and in the institution for a longer time, had higher levels of stress and lower age at the beginning of labor activities than the workers without injuries or illnesses. A statistically significant difference was identified between groups (with or without injury/illness) in relation to the medians of current age and age at the start of labor activity (Table 1).

Table 1 - Age, stress, time of work in the unit and in the institution, and age at the start of labor activity among nursing professionals with or without injury or illness. State of São Paulo, Brazil, 2016. (n=85).

Variable	Injury/ illness	n	Mean	SD	Med [‡]	Min [§]	Max [*]	p-value ^{**}
Age (years)								0.0075
	No (1) [‡]	32	34.3	6.9	33.5	25.0	53.0	
	Yes (2) [‡]	50	39.4	8.9	38.0	22.0	68.0	
Stress								0.7799
	No (2) [‡]	31	6.8	2.1	7.0	3.0	10.0	
	Yes (2) [‡]	50	6.4	2.7	7.0	0.0	10.0	
Time of work in the unit (years)								0.0638
	No	33	4.4	5.3	2.0	0.4	21.5	
	Yes	52	6.7	6.7	4.0	0.3	26.3	
Time of work in the institution (years)								0.0780
	No	33	5.2	6.3	3.0	0.4	26.5	
	Yes (2) [‡]	50	7.9	7.8	5.0	0.3	27.3	
Age at the start of labor activity (years)								0.0188
	No (1) [‡]	32	18.7	3.7	18.0	11.0	25.0	
	Yes	52	16.7	5.4	18.0	6.0	38.0	

[‡]No information (*missing*). ^{||}With medical diagnosis. ^{||}Standard deviation. [‡]Median. [§]Minimum. ^{*}Maximum. ^{**}p-value obtained in the Mann-Whitney test.

Among the professionals who reported at least one injury or illness with medical diagnosis, the mean number of these injuries or illnesses was 2.8 (SD 2.6, 95% CI 2.1-3.5), ranging from one to 11. Although there were no statistically significant differences, the means of the number of injuries or illnesses with medical diagnosis were considerably higher among nursing assistants or technicians, professionals who had more than one job and who reported feeling tired or discouraged after work, compared to the corresponding group (Table 2). It is important to notice that 59.6% (31/52) reported having more than one injury or illness.

Nursing professionals who had been victims of occupational violence - verbal abuse, sexual harassment and/or physical violence - in the 12 months prior to the study had a higher mean and median number of injuries or illnesses than those who had not, and this difference was statistically significant. Statistical significance was not maintained when specific analyses were carried out for physical violence (physical violence, verbal abuse, sexual harassment). However, the victims had a higher mean and median number of injuries or illnesses with medical diagnosis (Table 2).

Table 2 - Number of injuries or illnesses with medical diagnosis according to position at work, sex, having more than one job, feeling tired or discouraged after work and having suffered occupational violence. State of São Paulo, Brazil, 2016. (n=52).

Variable	Number of injuries or illnesses with medical diagnosis						p-value [*]
	n	Mean	SD	Med	Min [‡]	Max [§]	
Position							0.0596
Nurse	14	2.0	2.0	1.0	1.0	8.0	
Nursing assistant/technician	38	3.1	2.7	2.0	1.0	11.0	
Sex							0.5286
Female	42	2.8	2.8	2.0	1.0	11.0	
Male	10	2.6	1.6	2.5	1.0	6.0	
Further employment (no inf.: 2) ‡							0.4951
No	32	2.6	2.5	2.0	1.0	11.0	
Yes	18	3.2	2.8	2.0	1.0	11.0	

Tiredness and/or discouragement after work (no inf.: 8)							0.1367
No	18	1.9	1.0	2.0	1.0	4.0	
Yes	26	3.4	2.9	2.0	1.0	11.0	
Victim of violence at work (no inf.: 3)							0.0384
No	15	1.7	0.9	1.0	1.0	3.0	
Yes	34	3.4	3.0	2.0	1.0	11.0	
Victim of physical violence at work (no inf.: 6)							0.2371
No	34	2.4	2.4	2.0	1.0	11.0	
Yes	12	3.9	3.4	3.0	1.0	11.0	
Victim of verbal abuse at work (no inf.: 1)							0.0765
No	18	1.8	1.2	1.0	1.0	5.0	
Yes	33	3.3	3.0	2.0	1.0	11.0	
Victim of sexual harassment at work (no inf.: 2)							-
No	47	2.5	2.1	2.0	1.0	11.0	
Yes	3	7.3	5.5	10.0	1.0	11.0	

‡No information (*missing*). †Standard deviation. ‡Median. †Minimum. §Maximum *p-value obtained in the Mann-Whitney test.

The analysis by group of injury or illnesses, considering the number of reports, indicated that injuries caused by accident and musculoskeletal diseases were the predominant ones. The groups of injuries or illnesses self-reported by nursing professionals are presented in table 3, along with characteristics related to age, time of work in the unit and professional position.

Table 3 - Groups of injuries or illnesses with medical diagnosis self-reported by nursing professionals, current age, time of work in the unit and function of each group. State of São Paulo, Brazil, 2016. (n=85).

Group of injury or illness	n	Age Mean (SD) [§]	n	Time at the medical unit Mean (SD) [§]	n	Nurse; nursing technician or assistant (%)	nr [†] (%) [*]
Injury from accident							23 (16.0)
No	63 (2) [‡]	36.2 (8.2)	65	5.3 (6.4)	65	95.7; 69.4	
Yes	19 (1) [‡]	41.6 (8.5)	20	7.3 (5.7)	20	4.3; 30.6	
Musculoskeletal disease							22 (15.3)
No	70 (3) [‡]	36.6 (8.3)	73	5.3 (5.8)	73	87.0; 85.5	
Yes	12	42.2 (8.3)	12	8.9 (8.2)	12	13.0; 14.5	
Respiratory disease							16 (11.1)
No	72 (2) [‡]	37.4 (8.6)	74	5.7 (6.1)	74	82.6; 88.7	
Yes	10 (1) [‡]	37.9 (8.5)	11	6.4 (7.5)	11	17.4; 11.3	
Digestive disease							15 (10.4)
No	68 (3) [‡]	37.7 (8.4)	71	5.9 (6.4)	71	87.0; 82.3	
Yes	14	36.4 (9.0)	14	5.2 (5.9)	14	13.0; 17.7	
Cardiovascular disease							13 (9.0)
No	72 (3) [‡]	36.4 (7.3)	75	5.6 (6.1)	75	87.0; 88.7	
Yes	10	45.2 (12.5)	10	7.4 (7.2)	10	13.0; 11.3	
Endocrine and metabolic disease							13 (9.0)
No	70 (3) [‡]	37.2 (8.6)	73	5.3 (5.9)	73	87.0; 85.5	
Yes	12	38.5 (8.0)	12	8.5 (8.0)	12	13.0; 14.5	
Skin disease							11 (7.6)
No	72 (2) [‡]	37.5 (8.5)	74	6.0 (6.6)	74	87.0; 87.1	
Yes	10 (1) [‡]	36.6 (9.0)	11	4.0 (2.8)	11	13.0; 12.9	
Genitourinary disease							10 (6.9)
No	74 (3) [‡]	37.7 (8.5)	77	6.0 (6.5)	77	100.0; 87.1	
Yes	8	34.6 (8.0)	8	3.8 (3.3)	8	0.0; 12.9	
							9 (6.3)

Mental disorder							
No	73 (3) [‡]	37.2 (8.6)	76	5.7 (6.0)	76	91.3; 88.7	
Yes	9	39.4 (8.1)	9	6.4 (8.3)	9	8.7; 11.3	
Neurological and sensory diseases							7 (4.9)
No	77 (3) [‡]	37.5 (8.6)	80	5.6 (6.0)	80	95.7; 93.5	
Yes	5	36.2 (6.4)	5	9.2 (9.5)	5	4.3; 6.5	
Blood diseases							4 (2.8)
No	78 (3) [‡]	37.7 (8.5)	81	5.8 (6.4)	81	100.0; 93.5	
Yes	4	32.8 (7.9)	4	4.8 (3.6)	4	0.0; 6.5	
Tumor							1 (0.7)
No	81 (3) [‡]	37.3 (8.5)	84	5.5 (5.9)	84	95.7; 100.0	
Yes	1	-	1	-	1	4.3; 0.0	

[‡]No information (*missing*). [§]Mean (Standard deviation), in years. [†]Number of reports; the professional could provide more than one type of information. According to the number of reports.

Specific analysis per injury or illness showed that injuries in the back (13-9.0% of reports | 15.3% of workers), gastritis or duodenal irritation (10-6.9% | 11.8%) and hypertension (10-6.9% | 11.8%) were the health problems with greater number of reports. Then, the following were also mentioned: allergy and/or eczema (9-6.3% | 10.6%), injury in the arms and/or hands (7-4.9% | 8.2%), mild emotional disorders (7-4.9% | 8.2%), back pain that irradiates to the legs (6-4.2% | 7.1%), lower back disease with frequent pain (5-3.5% | 5.9%), musculoskeletal disease that affect limbs and frequent pain (5-3.5% | 5.9%), infection of the urinary tract (5-3.5% | 5.9%), chronic sinusitis (5-3.5% | 5.9%), neurological illness (5-3.5% | 5.9%), recurrent infections of the respiratory system (5-3.5% | 5.9%), obesity (5-3.5% | 5.9%) and anemia (4-2.8% | 4.7%). Less frequently, with three reports each (3-2.1% | 3.5%), were the following items mentioned: injuries to the leg and/or foot, disease in the upper back or neck region with frequent pain, other musculoskeletal disorder, genitourinary disease, asthma, diabetes and other endocrine and metabolic diseases. Severe emotional disorder, other skin diseases, gallbladder stones or disease, other digestive diseases, kidney disease, coronary disease and/or *angina pectoris*, other respiratory diseases, and goiter or other disease related to the thyroid had two (1.4% | 2.4%) reports each. There was one (0.7% | 1.2%) report of colitis or irritation of the colon, another cardiovascular disease, chronic bronchitis, hearing problem or impairment, visual disease or injury and a benign tumor.

DISCUSSION

In the present study, the majority of professionals reported at least one injury or disease with medical diagnosis and among these, more than half reported having two or more health problems. In a study conducted in Australia, the authors analyzed long-term conditions among nurses and midwives and identified a significant number of professionals who had at least one condition, and many reported multiple conditions⁽¹⁾, similarly to this study. Moreover, in a Brazilian study that analyzed absenteeism-disease in nursing professionals, emergency units was among the environments that presented the highest frequency of medical certificates⁽⁸⁾.

Musculoskeletal problems, including back pain, among nursing professionals are a recurrent issue in studies^(1,4,8). The present study confirmed the predominance of injuries due to accidents and musculoskeletal disease in nursing professionals of an emergency unit, revealing that injuries in the back are the most frequent conditions. There are results indicating that emergency nursing teams face greater physical demands and pressure related to timing than general hospital nurses⁽¹⁷⁾, which may contribute to these values. These results are a reason for concern because

musculoskeletal disease in nursing team in hospitals is amongst the main causes of disability among these professionals⁽¹⁸⁾.

However, it is important to highlight the considerable frequency observed of the groups of diseases of the respiratory, digestive, cardiovascular, endocrine and/or metabolic system, followed by other conditions that were identified in a smaller number in the present study. Duodenal gastritis or irritation and arterial hypertension comprised the second and third most frequent conditions, respectively. These results may reflect a set of factors, including occupational stress, which in the present study proved to be more frequent among professionals with injuries or disease in the analysis of the means.

Nurses are vulnerable to these consequences by considering the continuous exposure to work stressors, especially in the case of nurses in the emergency setting who are exposed to stressful, agitated, difficult-to-predict, and ever-changing situations that contribute to high occupational stress in this area and that makes this specialty different from the others^(4,17). Stress in the nursing profession has been increasingly considered a risk factor for adverse health outcomes⁽⁷⁾. Results related to stress and health have the work and environmental characteristics under which nurses develop their work activities as important predictors⁽¹⁷⁾.

The data of the present study indicated that professionals with injuries or diseases presented higher means as to the time of work in the unit and in the hospital institution.

A study evaluating occupational health problems among emergency nurses in Turkey identified that nurses with one to three years of experience in the units had experienced (with statistical significance) more problems related to herniated discs⁽⁴⁾. The authors concluded that the nurses of emergency units experienced health problems that were related to the occupational and risk factors that these professionals faced⁽⁴⁾.

This perspective may also contribute to the results of the present study indicating a higher proportion of overtime work among professionals with health problems and a higher mean number of injuries or illnesses among professionals with more than one job and who started labor activities earlier.

Longer exposure to certain occupational aspects and/or the cumulative exposure, since the conditions when the professional started in the first job and the age in which this occurred, in terms of physical and mental structure may be related to the development of health problems over time. In this sense, the literature mentions that the prevention of resource depletion is important and "can be prevented by means of avoiding continuous exposure to demands and allowing for sufficient time for both physical and emotional recovery after confrontation with stressful events"^(17:1326). The effect of these aspects is more deep-reaching when the professional accumulates two or more jobs.

When analyzing the number of injuries or illnesses, it was identified in the current study that nursing technicians or assistants had a higher mean number of health problems than nurses, although the difference was not statistically significant. This category was also the one that most presented medical justification for absence at work in a study that evaluated the absenteeism-disease among nursing professionals⁽⁸⁾. Furthermore, professionals who felt tired and/or discouraged after

work had, on average, a greater number of injuries or illnesses, indicating possible implications of health problems in external dimensions to the work environment and in the disposition of these professionals.

Prevalence of occupational violence towards nursing professionals in emergency settings is also frequently reported in the literature^(4, 19-20), as well as the impact of these events on the health of the workers who were victims⁽²¹⁾. The current study strengthens the relationship between violence in the workplace and worker health aspects by identifying that the victims had a higher mean number of health problems than non-victims.

These results represent indicators of weaknesses related to the 'world of work', which may help in the establishment of actions concerned to prevent or reduce the illness related to absenteeism⁽⁸⁾ and presenteeism, and may contribute to new strategies facing the challenges inherent in the work process⁽⁸⁾.

Emergency units need to undergo regular screening in terms of work characteristics to identify factors that determine stress and health outcomes for which preventive actions can be directed⁽¹⁷⁾. However, extensive and ongoing additional research with nursing and health professionals is necessary for the development of broader policy proposals and interventions. In these surveys, it is important to consider the diversity of health conditions so that the health problems and their associated factors can be identified in a general and not restricted way.

With regard to the limitations, this study presented data on health problems self-reported by nursing professionals circumscribed to a single hospital in a city in the countryside of the State of São Paulo. Therefore, the sample may have very particular characteristics that do not apply to other institutions and regions of the country, although the data often agreed with what is available in the scientific literature that portrays national and international realities. In addition, the existence of groups for comparison with a small number of professionals requires caution in the interpretation of the data and further studies to strengthen the evidence. The fact that this is a cross-sectional study is an obstacle to establishing cause and effect relationships; however, it was possible to identify factors that are related to the object of study that in this case were health problems.

CONCLUSION

The study reveals the importance and necessity of implementing actions in the workplace to reduce the number of injuries or diseases among nursing professionals, considering that the identification of them, among these professionals, such as musculoskeletal illnesses, is not recent. The fact that most professionals reported two or more injuries or diseases in the current study supports the need for intervention, which is strengthened when we identified that professionals with injuries or disease generally had a higher mean time working in the unit and in the institution, and that victims of occupational violence had a higher number of injuries and diseases on average. In addition, it is necessary to consider and act, whenever possible, on the reasons why the professionals take on two or more jobs, as it may perhaps reflect on health problems. It is important that the institutions provide working conditions that allow the health maintenance, potential and skills of these professionals for as long as possible, so as to promote both their quality of life in the short and long term and the quality of care provided.

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REFERENCES

1. Smyth W, Lindsay D, Holmes C, Gardner A, Rahman KM. Self-reported long-term conditions of nurses and midwives across a northern Australian health service: a survey. *Int J Nurs Stud.* 2016;62:22-35.
2. Monteiro I, Chillida Mde S, Moreno LC. Work ability among nursing personnel in public hospitals and health centers in Campinas -- Brazil. *Work.* 2012;41 Suppl 1:316-9. Available from: <http://content.iospress.com/download/work/wor0176?id=work%2Fwor0176>.
3. Botha E, Gwin T, Purpora C. The effectiveness of mindfulness based programs in reducing stress experienced by nurses in adult hospital settings: a systematic review of quantitative evidence protocol. *JB I Database System Rev Implement Rep.* 2015;13(10):21-9.
4. Kilic SP, Aytac SO, Korkmaz M, Ozer S. Occupational health problems of nurses working at emergency departments. *International Journal of Caring Sciences.* 2016;9(3):1008-19. Available from: http://www.internationaljournalofcaringsciences.org/docs/30_palar_original_9_3%20%281%29.pdf.
5. Letvak AS, Ruhm CJ, Gupta SN. Nurses' presenteeism and its effects on self-reported quality of care and costs. *Am J Nurs.* 2012;112(2):30-8.
6. Campos EC, Juliani CMCM, Palhares VC. O absenteísmo da equipe de enfermagem em unidade de pronto socorro de um hospital universitário. *Rev. Eletr. Enf.* 2009;11(2):295-302. Available from: https://www.fen.ufg.br/fen_revista/v11/n2/pdf/v11n2a09.pdf.
7. Lamont S, Brunero S, Perry L, Duffield C, Sibbritt D, Gallagher R et al. 'Mental health day' sickness absence amongst nurses and midwives: workplace, workforce, psychosocial and health characteristics. *J Adv Nurs.* 2017;73(5):1172-81. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/jan.13212/epdf>.
8. Marques DO, Pereira MS, Souza ACS, Vila VSC, Almeida CCOF, Oliveira EC. Absenteeism – illness of the nursing staff of a university hospital. *Rev. Bras. Enferm.* 2015;68(5):876-82. Available from: http://www.scielo.br/pdf/reben/v68n5/en_0034-7167-reben-68-05-0876.pdf.
9. Formenton A, Mininel VA, Laus AM. Sickness absenteeism of nursing team in a health insurance company. *Rev enferm UERJ.* 2014;22(1):42-9. Available from: <http://www.e-publicacoes.uerj.br/index.php/enfermagemuerj/article/view/11416/9002>.
10. Monteiro I. Socio-demographic, life style and work and health aspects – QSETS: two decades = Questionário de dados sociodemográficos, estilo de vida e aspectos de saúde e trabalho – QSETS: duas décadas In: Monteiro I, Iguti AM. Trabalho, saúde e sustentabilidade: diálogo interdisciplinar internacional Sul – Norte = Work, health and sustainability: an interdisciplinary international dialogue South – North. Campinas: BFCMUnicamp, 2017, p. 91-94. Available from: <http://www.bibliotecadigital.unicamp.br/document/?code=80420&opt=1>.

11. Vegian CFL, Monteiro MI. Living and working conditions of the professionals of the a Mobile Emergency Service. *Rev. Latino-Am. Enfermagem*. 2011;19(4):1018-24. Available from: <http://www.scielo.br/pdf/rlae/v19n4/22.pdf>.
12. Marconato RS, Monteiro MI. Pain, health perception and sleep: impact on the quality of life of firefighters/rescue professionals. *Rev. Latino-Am. Enfermagem*. 2015;23(6):991-9. Available from: <http://www.scielo.br/pdf/rlae/v23n6/0104-1169-rlae-23-06-00991.pdf>.
13. Martinez MC, Latorre MRO, Fischer FM. Validity and reliability of the Brazilian version of the Work Ability Index questionnaire. *Rev Saude Publica*. 2009;43(3):525-32. Available from: http://www.scielo.br/pdf/rsp/v43n3/en_140.pdf.
14. Tuomi K, Ilmarinen J, Jahkola A, Katajarinne L, Tulkki A. Índice de capacidade para o trabalho. Traduzido por Frida Marina Fischer (Coord.). São Carlos: EdUFSCar; 2010. 59p.
15. Oviedo HC, Campo-Arias AC. Aproximación al uso del coeficiente alfa de Cronbach. *Rev Colomb Psiquiatr*. 2005;34(4):572-80. Available from: <http://www.scielo.org.co/pdf/rcp/v34n4/v34n4a09.pdf>.
16. Bordignon M, Monteiro MI. Apparent validity of a questionnaire to assess workplace violence. *Acta paul. enferm*. 2015;28(6):601-8. Available from: http://www.scielo.br/pdf/ape/v28n6/en_1982-0194-ape-28-06-0601.pdf.
17. Adriaenssens J, De Gucht V, Van Der Doef M, Maes S. Exploring the burden of emergency care: predictors of stress-health outcomes in emergency nurses. *J Adv Nurs*. 2011;67(6):1317-28.
18. Bernal D, Campos-Serna J, Tobias A, Vargas-Prada S, Benavides FG, Serra C. Work-related psychosocial risk factors and musculoskeletal disorders in hospital nurses and nursing aides: a systematic review and meta-analysis. *Int J Nurs Stud*. 2015;52(2):635-48.
19. Pich JV, Kable A, Hazelton M. Antecedents and precipitants of patient-related violence in the emergency department: Results from the Australian VENT Study (Violence in Emergency Nursing and Triage). *Australas Emerg Nurs J*. 2017;20(3):107-13. Available from: <http://www.aenj.com.au/article/S1574-6267%2817%2930036-8/pdf>.
20. Shi L, Zhang D, Zhou C, Yang L, Sun T, Hao T et al. A cross-sectional study on the prevalence and associated risk factors for workplace violence against chinese nurses. *BMJ Open*. 2017;7(6): e013105. Available from: <http://bmjopen.bmj.com/content/bmjopen/7/6/e013105.full.pdf>.
21. Bordignon M, Monteiro MI. Violence in the workplace in Nursing: consequences overview. *Rev. Bras. Enferm*. 2016;69(5):996-9. Available from: http://www.scielo.br/pdf/reben/v69n5/en_0034-7167-reben-69-05-0996.pdf.

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