



Environment, workload, and nurse burnout in public hospitals in Chile

Ambiente, carga laboral y burnout en enfermeras de hospitales públicos de Chile

Ambiente, carga de trabalho e burnout em enfermeiras de hospitais públicos no Chile

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ABSTRACT

Objective: To analyze, from an organizational perspective, the problem of nurse burnout in highly complex public hospitals in Chile. **Method:** Multicenter, observational, cross-sectional study. According to established inclusion criteria, the universe of hospitals and nurses was the object of work. Data collection was carried out through a nurse survey. Work environment was measured with the instrument Practice Environment Scale of the Nursing Work Index, staffing through the nurses' report on patient load, and burnout with the Maslach Burnout Inventory emotional exhaustion subscale. **Results:** Thirty-four hospitals (92%) and 1,395 nurses (75.3%) participated in the study. The prevalence of burnout was 34.7%, being higher in Santiago than in other regions of the country ($p = 0.001$). The logistic regression analyses showed a significant association between work environment and burnout (OR 0.57, 95% CI 0.41–0.79, $p = 0.001$). No association was established between staffing, skill mix and burnout. **Conclusion:** A high percentage of nurses in Chile has burnout, which is significantly associated with the quality of the environment. The implementation of organizational strategies to improve work environments could reduce burnout and improve the quality of care.

DESCRIPTORS

Burnout, Psychological; Stress; Working Environment; Workload; Nursing.

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INTRODUCTION

Although research on burnout dates back to the 70s, with its connection with care-providing professions⁽¹⁻²⁾ being recognized since then, to date, there are no studies, from a national perspective, evaluating how this syndrome affects nurses who work in the public network of hospitals in Chile. Chilean public hospitals have historically faced inadequate management and a shortage of resources⁽³⁾, which negatively influence aspects of the nurses' work environment that predispose them to burnout. Among these aspects are the insufficiency of personnel to face the work demands, the excessive assignment of patients per nurse, and the lack of time to carry out the nursing-specific tasks⁽⁴⁾.

Furthermore, Chile is characterized by being a highly centralized country. About 40% of the population are concentrated in Santiago and its surroundings, and the distribution of resources throughout the country is unequal. About 40% of highly complex hospitals and approximately 50% of specialist physicians are concentrated in the capital⁽⁵⁾. It is likely that these territorial differences determine differences in the burnout among nurses working in Santiago or in the rest of the country (hereinafter, Santiago and Regions will be the places referred to).

It is important to beware of the burnout problem as this syndrome impacts not only on nurses, but also on patients and on the overall performance of health institutions⁽²⁾. Although the manifestations of burnout are varied, Maslach describes its main features as a physical and psychological exhaustion that generates a cold and depersonalized attitude in relation to others and a feeling of inadequacy in the tasks to be performed⁽⁶⁾. Emotional exhaustion is the foundational dimension of burnout syndrome^(4,7). Professionals with burnout feel overwhelmed, unable to cope with work and demotivated, all of which ends up affecting their performance^(1,8).

Numerous studies support the relation among burnout, safety, and quality of care⁽⁹⁾. It is also recognized that nurses with burnout overlook necessary care in patient assistance⁽²⁾. Patient satisfaction is another indicator that accounts for the negative effects of burnout on the quality of care; the greater the emotional exhaustion, the lower the patient satisfaction⁽¹⁰⁾. This can be explained by the difficulty that a nurse with burnout has to establish effective communication and provide quality care. For health institutions, having professionals with high levels of burnout implies costs associated with greater absenteeism, greater staff turnover, and a decrease in the quality of professional performance⁽⁸⁾. In addition to this, there are the high costs incurred when patient outcomes are not as expected and complications occur.

In the last two decades, local research has been carried out in Chile to explore the phenomenon of burnout and the nurses working conditions favoring it⁽¹¹⁾. Evidence generated validates the classical conception that burnout is not a problem whose origin lies in people, but rather that its origin is of an organizational nature^(8,12). Although there are personal factors, such as age, time of experience, sex,

personality type, that could be associated with burnout, evidence is not conclusive⁽¹³⁾. Moreover, since they are not modifiable, the interest in these factors has limited utility and has often led to addressing the problem of burnout with strategies focused on people rather than on organizations^(8,14). Strategies focused on professionals tend to avoid chronic organizational stressors such as poor work environment, understaffing with the consequent increase in workload, or lack of resources to work under adequate conditions⁽¹⁴⁻¹⁶⁾.

Although local evidence produced in Chile is valuable, a global view raising enough evidence to influence health policies that could solve the problem is required. To date, there is no study with national data on burnout in Chilean nurses or on its associated factors. Hospital work environments, staffing and the composition of nursing teams are areas of knowledge that are scarcely addressed. With regard to nursing staffing, the shortage of nurses has been an issue for a long time. In absolute numbers, this appraisal is real. Recent figures indicate that Chile has 2.7 nurses per 1000 inhabitants, while the average in the countries of the Organization for Economic Co-operation and Development is 8.8⁽¹⁷⁾. However, in recent years the increase in registered nurses in the country⁽¹⁷⁾ has been followed by a decrease in employability, which means a deficit of positions in the public health system, a topic that has been described by other authors⁽¹⁸⁾. This deficit of positions, most likely, is producing a systemic problem of under-staffing. The lack of nurses is usually followed by a mismatch in the composition of nursing teams; this composition, known as skill mix, is related to the percentage of nurses in the total nursing staff. In other words, it is the proportion of professional nurses in the sum of both professional and non-professional nurses. In scenarios of resource restriction, hiring of less qualified, and consequently of lower cost, nursing personnel is usually favored, which leads to a decrease in the skill mix⁽¹⁹⁾.

The present study aims to analyze, from an organizational perspective, the problem of burnout in nurses in highly complex public hospitals in Chile and to evaluate the association between burnout and the work environment, staffing and skill mix. A secondary purpose is to evaluate differences in burnout within hospitals in Santiago and Regions and to explore possible causes. The study hypotheses suggest a high prevalence of burnout among Chilean nurses and the existence of an association between burnout and the ratio of patients to each nurse, the skill mix, and the quality of work environments. As a secondary hypothesis, a higher prevalence of burnout is suggested in nurses from hospitals in Santiago than those in the Regions.

This study is part of the RN4CAST-CHILE project (Linda H. Aiken, Principal Investigator), whose protocol is reported in another publication⁽²⁰⁾. The project RN4CAST has been carried out in numerous countries, including the United States, European Union countries, and Australia, with Chile being the first Latin American country to join. The research protocol RN4CAST was designed to study nursing organizational variables that have an impact on clinical results and on patient experience and to facilitate, through these results, the creation of health policies that

improve nurses' working conditions and the quality of care. To date, this study is the largest that has been carried out in Chile regarding nurses' human resource in hospitals.

METHOD

STUDY DESIGN

This is a multicenter, observational, cross-sectional study.

POPULATION

The study population was highly complex public hospitals throughout Chile and the nurses from the medical, surgical, or medico-surgical units of these hospitals. These two populations are differentiated since, in the case of organizational variables, the unit of analysis is hospitals, while nurses are the units of analysis for the dependent variable of burnout.

SELECTION CRITERIA

A universe of hospitals was defined based on the following inclusion criteria: being highly complex general public hospitals, serving the adult population, having more than 100 beds, and with an operating system for reporting hospital discharges with 3M™ International Refined – Diagnosis Related Groups (this last criterion is relevant in the general project framework). Exclusively pediatric or specialty hospitals were excluded. With these criteria, a universe of 37 hospitals was established. In each hospital, a census of nurses from medical, surgical, or medical-surgical units was carried out and all those who met the criteria of providing direct care to patients were invited to participate. Nurses from these units in administrative positions were excluded. With these inclusion criteria, a universe of 1,853 nurses was established.

Both in the case of hospitals and nurses, the design contemplated those working with the defined universe. Therefore, sampling techniques were not used.

DATA COLLECTION

To obtain hospital data, such as belonging to the public health system, size, and location, the Department of Health Statistics and Information of the Ministry of Health of Chile databases were used. To measure burnout, to obtain organizational data from hospitals (work environment, staffing and skill mix), and to obtain other data that are specific for nurses, a questionnaire was used that was distributed to the universe of nurses in their workplaces. The questionnaires were answered anonymously, after signing an informed consent. Data collection took place between May 2017 and October 2018.

DATA ANALYSIS AND TREATMENT

The main variables of interest in the study were the following:

Burnout. Burnout was measured through the Maslach Burnout Inventory (MBI)⁽²¹⁾ emotional exhaustion subscale, which has been validated in Spanish⁽²²⁾. The emotional

exhaustion subscale consists of 9 questions that are answered through a Likert scale from 0 to 6, where 0 represents “*never*” and 6 represents “*every day*”. The total possible score is 54 points. Individuals with burnout were defined as all those nurses whose score is equal to or greater than 27 points. The *emotional exhaustion* subscale presented a Cronbach's α of 0.91.

Work environment. It was measured through the Practice Environment Scale of the Nursing work Index (PES-NWI)⁽²³⁾ instrument, which is the most widely used to measure the work environment and which is validated in Spanish⁽²⁴⁾. The instrument consists of 32 questions related to 5 subscales that measure the following dimensions of the work environment: nurse participation in hospital affairs (8 items, Cronbach's α = 0.81), commitment to quality of care (9 items, Cronbach's α = 0.75), nursing coordinators' management and leadership capacity (4 items, Cronbach's α = 0.80), staffing and sufficiency of resources (4 items, Cronbach's α = 0.71), and communication among nurses and doctors (7 items, Cronbach's α = 0.88).

Each PES-NWI question is answered with a Likert scale from 1 to 4, where 1 means “completely disagree”, 2 “slightly disagree”, 3 “slightly agree” and 4 “totally agree”. From the questions corresponding to each subscale, a mean was calculate for each nurse. Among all nurses belonging to the same hospital, a mean was obtained at the hospital level for each subscale. From the means of the five subscales, the one for the resources and staffing subscale was left aside and a final mean per hospital was obtained with the other four. Staffing and resources subscale was not included to avoid multicollinearity problems by separately introducing the variable staffing in the regression analyses. This form of analysis of the work environment scale has been described in previous research⁽²⁵⁾. The means of work environment per hospital were organized in descending order. This order was used to distribute hospitals into quartiles. Hospitals in the lower quartile were considered to have a “poor environment” (25% with the lowest score), those in the two central quartiles were considered to have an “average environment” (50% with intermediate scores), and those in the upper quartile were considered to have a “good environment” (the 25% with the highest score).

Staffing. Each nurse was asked how many patients she was in charge of on her last shift in her unit. From the nurses in the same hospital, the average number of patients per nurse in that hospital was obtained.

Skill mix. Each nurse provided information on the number of nurses, nursing technicians, and assistants on their last shift. Skill mix was calculated as the percentage of nurses in the total nursing staff.

Hospitals general characteristics. A dichotomous categorical variable 0/1 was used to identify hospitals in Santiago and Regions. Regarding size, the continuous variable with the number of beds was used.

Nurses general characteristics. Through the questionnaire, the nurses were asked their sex, age, years of professional experience, and if they had graduate certificates or degrees.

For the descriptive analyses, the nature of each variable was considered. For continuous variables, means, ranges, and standard deviations were analyzed. Percentages were calculated for categorical variables. To compare the hospitals and the nurses' characteristics, within the groups from Santiago and Regions, the Student's *t* test, Fisher's exact test, and Chi-square were the statistical tests used, in conformity with the nature of the variables. For the inferential analysis, the categorical measurement of burnout was used as the dependent variable, in which 0 represented nurses without burnout (score <27) and 1 represented those with burnout (score ≥27). Multivariate logistics models were applied, using the variables of interest (work environment, staffing and skill mix) as predictors and adjusting for characteristics of the hospitals and nurses. As previously mentioned, to avoid multicollinearity with the variable staffing, the subscale for staffing and resources was removed from the work environment scale. Likewise, to avoid multicollinearity in the adjustment for the nurses' characteristics, the variable nurses' age was chosen, in the models, instead of years of professional experience. The unadjusted and adjusted models took nurses clustering into account within each hospital. The analyses were carried out with the STATA 15.1 software.

ETHICAL ASPECTS

The project was approved by the research ethics committee of the *Universidad de los Andes* (registration no. CEC201613) and by those of the Regional Health Services and hospitals that requested it. As already mentioned, data collection among the nurses was carried out anonymously, after signing the informed consent in double copies, one for the participant and another for filing by the research team. To ensure data confidentiality, the survey was self-administered

and returned to the research team in a sealed envelope. The survey and subsequent tabulation of data did not contain any information that could identify the participants.

RESULTS

Of the 37 hospitals that made up the universe, 34 (92%) participated in the study. The three hospitals that did not participate were invited, but one did not respond and the other two granted approval after data collection was completed. Of the 34 hospitals that joined the study, ten are in Santiago and the remaining in the Regions. Of the universe of nurses, a participation of 75.3% ($n = 1,395$) was reached. Table 1 describes the characteristics of the hospitals and nurses.

Hospitals in Santiago have, on average, a significantly higher number of beds than in the Regions. Regarding the work environment, no significant differences are observed between Santiago and the Regions in terms of the score or the categorization of hospitals in those with poor, average, and good environments. The average staffing nationwide was of 19 patients per nurse, with the patient load being significantly lower in Santiago ($p < 0.05$). Regarding skill mix per hospital, the general number was about 30%, and no significant differences were found between hospitals in Santiago and Regions. Of the nurses, 37.5% worked in Santiago and the vast majority were women. The mean age was almost 32 years, and it was similar among professionals in Santiago and Regions. Professionals from the Regions had a longer mean time of professional practice and a longer time spent in the institution, compared to those from Santiago. The percentage of professionals with a graduate certificate (specialization) or a master's degree was significantly higher among nurses in Santiago.

The prevalence of burnout in the country reached about 35%, being significantly higher in Santiago than in the Regions (Table 2).

Table 1 – Hospitals and nurses characteristics, according to geographic location – Chile, 2018.

General characteristics of hospitals	Total <i>n</i> = 34	Santiago <i>n</i> = 10	Regions <i>n</i> = 24	<i>p</i> value
Size according to number of beds, \bar{x} (DS)	409 (162)	507 (144)	368 (154)	0.021*
Work environment score, \bar{x} (SD)	2.69 (0.18)	2.62 (0.20)	2.72 (0.16)	0.147
Poor work environment, <i>n</i> (%)	9 (26.5)	4 (40.0)	5 (20.8)	
Average work environment, <i>n</i> (%)	16 (47.0)	4 (40.0)	12 (50.0)	0.621
Good work environment, <i>n</i> (%)	9 (26.5)	2 (20.0)	7 (29.2)	
Patients per nurse, \bar{x} (SD)	19.0 (6.3)	15.4 (4.5)	20.5 (6.4)	0.028*
Skill mix, %	29.5	30.6	29.0	0.340
Nurses characteristics	<i>n</i> = 1.395	<i>n</i> = 523	<i>n</i> = 872	
Age, \bar{x} (SD)	31.9 (7.4)	31.4 (6.6)	32.2 (7.9)	0.065
Female, <i>n</i> (%)	1.204 (86.7)	448 (86.0)	756 (87.2)	0.520
Years of work as a nurse, \bar{x} (SD)	6.2 (6.9)	5.7 (5.8)	6.5 (7.4)	0.040*
Graduate certificate or master's degree, <i>n</i> (%)	371 (26.9)	163 (31.8)	208 (24.1)	0.002*

* $p < 0.05$

Table 2 – Prevalence of burnout, according to hospital geographic location – Chile, 2018.

Burnout	Total <i>n</i> = 1,395	Santiago <i>n</i> = 523	Regions <i>n</i> = 872	<i>p</i> value
Burnout score, \bar{x} (DS)	22.7 (11.8)	24.3 (12.0)	21.7 (11.6)	0.0001*
Nurses with burnout [†] , <i>n</i> (%)	476 (34.7)	206 (40.0)	270 (31.5)	0.001*

* $p < 0.05$ † Nurses with a score ≥ 27 on the MBI emotional exhaustion scale
Note: (*n* = 1,395).

Table 3 – Percentage of nurses who present the symptoms indicated by the MBI Emotional Burnout scale once a week or more frequently. Comparison by hospital geographic location – Chile, 2018.

Emotional Burnout Scale	Total <i>n</i> = 1,395	Santiago <i>n</i> = 523	Regions <i>n</i> = 872	<i>p</i> value
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	
I feel emotionally exhausted because of work	651 (46.7)	269 (51.4)	382 (43.8)	0.382
I feel exhausted at the end of the day	1.00 (72.0)	387 (74.0)	618 (70.9)	0.208
I feel fatigued when I wake up and have to face a new day at work	668 (47.9)	265 (50.7)	403 (46.2)	0.107
Working with people all day is a real effort for me	258 (18.5)	115 (22.0)	143 (16.4)	0.009*
I'm stressed because of work	329 (23.6)	144 (27.5)	185 (21.2)	0.007*
I feel frustrated in my work	203 (14.6)	92 (17.6)	111 (12.7)	0.013*
I think I work too hard	624 (44.7)	263 (50.3)	361 (41.4)	0.001*
Working directly with people causes me a lot of stress	225 (16.1)	98 (18.7)	127 (14.6)	0.040*
I feel like I can't take it anymore	138 (9.9)	61 (11.7)	77 (8.8)	0.086

* $p < 0.05$
Note: (*n* = 1395).

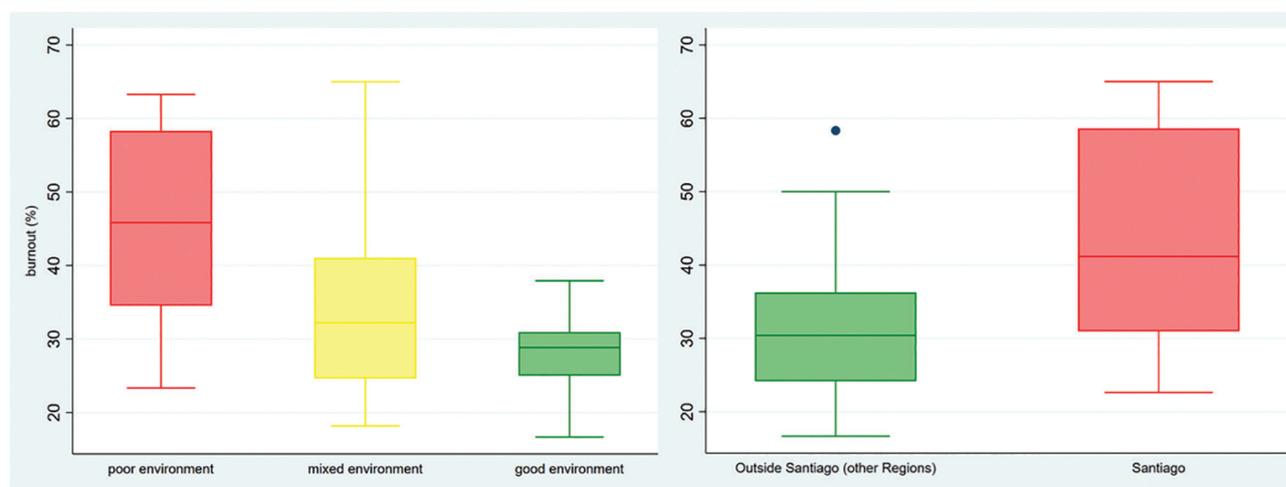
**Figure 1** – Percentage of burnout per hospital, according to quality of the work environment and to geographic location (*n* = 34) – Chile, 2018.

Table 3 shows the percentage of nurses who, to the corresponding question, assigned a frequency of once a week or higher. The results showed a high percentage of nurses who, at least once a week, feel “emotionally exhausted from work”, “exhausted at the end of the day” and “fatigued when they get up”. About half of the nurses believe that they work too hard. The percentage, in all questions, was higher

among the nurses from Santiago compared to those from the Regions, this difference being statistically significant in five of them.

Figure 1 shows the differences in the percentages of burnout per hospital, according to the quality of the work environment and geographic location. The graphic representation clearly shows how the median decreases as the quality of

Table 4 – Association between burnout and work environment, staffing and skill mix – Chile, 2018.

Burnout	OR [†]	CI [‡]	p value
Unadjusted model			
Work environment (ref. Poor environment)			
Average versus poor	0.66	0.43–1.01	0.057
Good versus poor	0.53	0.36–0.77	0.001*
Staffing (patients per nurse)	1.00	0.96–1.04	0.970
Skill mix	1.00	0.56–1.80	0.995
Adjusted model			
Work environment (ref. Poor environment)			
Average versus poor	0.70	0.50–0.98	0.037*
Good versus poor	0.57	0.41–0.79	0.001*
Staffing (patients per nurse)	1.01	0.97–1.06	0.624
Skill mix	0.96	0.54–1.72	0.896

* $p < 0.05$ †OR = Odds Ratio ‡CI = Confidence Interval

The table presents logistic regression calculations, considering clustering of nurses per hospital, adjusted for the hospitals (location and size) and nurses (sex and age) characteristics.

the work environment improves. With regard to geographic location, it is observed that in the Regions' hospitals the median is much lower than in Santiago.

Table 4 shows results of the multivariate analysis. The adjusted model shows that nurses in hospitals with an average or good work environment, compared to those in hospitals with a poor environment, have a 30% or 43% lower burnout odd, respectively ($p < 0.05$). Regarding staffing and skill mix, no significant association was observed between these variables and the occurrence of burnout.

DISCUSSION

The presence of burnout among nursing professionals is a reality to which Chile is no exception. The findings of the present study show a very high prevalence of burnout among Chilean nurses compared to figures from other countries⁽²⁶⁾. Data from a recent meta-analysis report a global prevalence of burnout of 11% among studies from all continents⁽²⁶⁾. The high percentage of nurses who, at least once a week, feel exhausted at the end of the day stands out. Maybe it is an expected result if some characteristics of the work system in Chilean hospitals are taken into account. On the one hand, it is worth mentioning the usual length of shifts, 12 hours, with a lower percentage of nurses working 24 hours. On the other hand, it is known that in public hospitals there are fewer personnel in the afternoon and evening hours, which increases the responsibility and workload for nurses during those hours⁽¹⁸⁾. Among the different areas of public administration, the health sector is where the highest number of days

not worked due to medical leaves is reported⁽²⁷⁾; future research could study the association between these leaves and the problem of burnout. Paradoxically, the percentage of nurses who show fatigue from working with people is very low. Despite the fact that burnout is considered an occupational risk for those who work in providing service and care to people⁽¹⁾, in the perception of Chilean nurses, the fact of working with people does not seem to be a problem. Therefore, rather than looking at the very nature of nursing work, the analysis of those organizational factors that account for the phenomenon of burnout is warranted.

Hospital data show an average score regarding the quality of the work environment of 2.69, with a range between 2.2 and 3.1 (not shown in tables). The variability of almost one point is important if it is considered that the PES-NWI scale has a score of 1 to 4 and that all the evaluated hospitals are part of the same health system. Regarding the load of patients per nurses, the figures are much higher than those observed in North American and European countries. As a reference, in a study carried out in nine European countries, staffing of less than 9 patients per nurse were reported in seven of those countries⁽²⁸⁾. The country with the worst staffing was Spain, with an average of almost 13 patients per nurse⁽²⁸⁾. Skill mix figures are also unfavorable; in Europe skill mix figures are close to 65%, which implies that one third of the nursing staff is not professional⁽²⁹⁾. In Chile, there is the opposite; only a third of the members of the nursing teams are professionals⁽²⁹⁾. This can be explained by the economic problems that public hospitals face year after year, with a growing debt⁽³⁰⁾. In contexts of scarce resources, the cut of fixed expenses such as personnel is frequent, and these professionals are replaced by non-professional personnel, of lower cost.

The association analyses present some results consistent with those of previous studies and others less expected. In Chile, nurses' burnout is significantly associated with the quality of the work environment, an association that has been widely documented in previous studies⁽²³⁾. Pooled odds ratio (OR) calculated in a recent meta-analysis is 0.74 for the effect of the work environment on burnout⁽²³⁾; in this study, the effect size is even larger, especially when contrasting the occurrence of burnout in hospitals with a good environment to those with a poor environment. Regarding the number of patients per nurses and the skill mix and its association with burnout, the results were not as expected. Despite the fact that nurses in Chile have a very high average patient assignment and that the skill mix is very low, it was not possible to establish an association with the presence of burnout. A meta-analysis on staffing and nursing work indicators reports a significant association between staffing and burnout, but all the evaluated studies coincide in reporting small effects with OR varying between 1.02 and 1.17 (pooled OR = 1.07)⁽³¹⁾.

Ultimately, it is worth discussing the differences found with respect to burnout in hospitals in Santiago and Regions. The prevalence of burnout is significantly higher in Santiago. The comparison of responses to the

questions of the Maslach Burnout Inventory emotional exhaustion subscale reflects a more favorable reality in regions, although the differences are not always statistically significant. Part of this difference can be attributed to the work environment, which behaves as a determining factor in this study. In the Regions, hospitals have a better mean score for the work environment than hospitals in Santiago and the hospital with the best score in the PES-NWI is in the Regions. Undoubtedly, there are other variables to be explored. For instance, nurses from the Regions are older and have more years of professional experience than those in Santiago; in the adjusted logistic regression model presented above, age appeared as a protective factor for burnout ($p = 0.009$). Another variable, not addressed in this study, is the patients' complexity. Hospitals in Santiago may act as referral centers for patients with severe health conditions that require centers with greater resolution capacity.

Among the limitations of the study, it is worth noting its cross-sectional design, which limits the establishment of causal relationships. However, the measurement of the prevalence of burnout in a national population of nurses and the identification of associated factors is of great value, as an initial step, to establish effective improvement interventions. Another limitation is having studied only nurses who work in adult medical, surgical, or medico-surgical units; there are studies that report a higher prevalence of burnout in critical care units⁽²⁶⁾, which implies that burnout identified in this study could be even greater if the clinical areas of study were expanded.

RESUMEN

Objetivo: Analizar, bajo una perspectiva organizacional, el problema de burnout en enfermeras de hospitales públicos de alta complejidad de Chile. **Método:** Estudio multicéntrico, observacional, de corte transversal. Según criterios de inclusión establecidos, se trabajó con el universo de hospitales y enfermeras. Recolección de datos se realizó a través de encuesta a enfermeras. El ambiente laboral se midió con el instrumento Practice Environment Scale of the Nursing Work Index, las dotaciones a través del reporte de las enfermeras sobre carga de pacientes, y el burnout con la subescala de desgaste emocional del Maslach Burnout Inventory. **Resultados:** Participaron 34 hospitales (92%) y 1.395 enfermeras (75,3%). La prevalencia de burnout fue de 34,7%, siendo mayor en Santiago que en regiones ($p = 0,001$). Los análisis de regresión logística mostraron asociación significativa entre ambiente laboral y burnout (OR 0,57, 95% IC 0,41–0,79, $p = 0,001$). No se estableció asociación entre dotaciones, skillmix y burnout. **Conclusión:** Un alto porcentaje de enfermeras en Chile sufre burnout, asociado significativamente a la calidad del ambiente. La implementación de estrategias organizacionales que mejoren los ambientes de trabajo podría reducir el burnout y mejorar la calidad de atención.

DESCRIPTORES

Agotamiento Psicológico; Estrés Laboral; Ambiente de Trabajo; Carga de Trabajo; Enfermería.

RESUMO

Objetivo: Analisar, a partir de uma perspectiva organizacional, o problema de *burnout* em enfermeiras de hospitais públicos de alta complexidade no Chile. **Método:** Estudo multicêntrico, observacional e transversal. De acordo com os critérios de inclusão estabelecidos, trabalhou-se com o universo dos hospitais e enfermeiras. A coleta de dados foi realizada por meio de uma pesquisa com enfermeiras. O ambiente de trabalho foi medido com o instrumento Practice Environment Scale do Nursing Work Index, as equipes por meio do relatório das enfermeiras sobre carga de pacientes e burnout com a subescala de exaustão emocional do Inventário de Burnout de Maslach. **Resultados:** Participaram 34 hospitais (92%) e 1.395 enfermeiras (75,3%). A prevalência de *burnout* foi de 34,7%, sendo maior em Santiago do que nas regiões ($p = 0,001$). As análises de regressão logística apresentaram associação significativa entre ambiente de trabalho e burnout (OR 0,57, IC 95% 0,41–0,79, $p = 0,001$). Nenhuma associação foi estabelecida entre dotação de pessoal, combinação de tarefas (*skill mix*) e *burnout*. **Conclusão:** Uma alta porcentagem de enfermeiras no Chile sofre de burnout, significativamente associado à qualidade do ambiente. A implementação de estratégias organizacionais que melhorem os ambientes de trabalho podem reduzir o burnout e melhorar a qualidade do atendimento.

DESCRITORES

Esgotamento Psicológico; Estresse Ocupacional; Ambiente de Trabalho; Carga de Trabalho; Enfermagem.

CONCLUSION

Burnout has a high prevalence in nurses in highly complex public hospitals in Chile, which corroborates the initial working hypothesis. The very nature of nursing work in caring for people does not appear as a critical factor in this problem. Actually, this study identifies associated organizational factors. Among these, the quality of the work environments stands out; in hospitals with good work environments, nurses have less burnout. This partially corroborates the second hypothesis. Regarding the number of patients per nurse and the skill mix, no significant association with burnout was established. As this finding is different from the results reported in international studies, a line of future research is opened here that allows us to better understand if and how the patients assignment affects nurses' well-being in Chile. Finally, the secondary hypothesis that burnout is more prevalent in nurses from Santiago than from those of Regions was also corroborated.

The identification of organizational factors that account for burnout opens a door to the implementation of strategies that can modify the conditions under which nurses work. Examples of such strategies can be found in the accreditation systems of *Magnet* hospitals. For a health system like the Chilean, which faces significant shortage of resources, it is very advantageous to plan strategies to improve work environments, compared to strategies that seek to improve the staff, which are always of high cost. Contributing to improving nurses' working conditions and well-being should favor the provision of more humane and better quality care, thus optimizing patient outcomes.

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