

AUTONOMY AND CONTROL OF THE WORK ENVIRONMENT BY NURSING PROFESSIONALS REDUCE EMOTIONAL EXHAUSTION INDEXES

*AUTONOMIA E CONTROLE DO AMBIENTE DE TRABALHO POR PROFISSIONAIS DE ENFERMAGEM REDUZEM
ÍNDICES DE EXAUSTÃO EMOCIONAL*

*LA AUTONOMÍA Y CONTROL DEL AMBIENTE LABORAL POR PROFESIONALES DE ENFERMERÍA REDUCEN
LOS ÍNDICES DE AGOTAMIENTO EMOCIONAL*

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ABSTRACT

This study aimed at evaluating the professional practice environment and the burnout levels among nursing professionals, and to estimate the predictive effect of the practice environment on burnout. This is a cross-sectional study carried out with 215 nursing professionals from a teaching hospital in the countryside of the State of São Paulo. For the data collection, the personal and professional characterization form and the Nursing Work Index - Revised and the Maslach Burnout Inventory have been considered. Correlation analyzes were performed with the Spearman's Correlation Coefficient, and multiple linear regression models. Significant correlations have been found between the variables of the practice environment and burnout. The autonomy and control over the environment subscales were considered as predictors of the emotional exhaustion, depersonalization and reduction of personal achievement. In environments where the professional reports greater autonomy and greater control over this environment, the levels of burnout were lower. It was concluded that the autonomy and the control over the environment of professional practice were considered predictors of burnout among nurses, assistants and nursing technicians.

Keywords: Health Facility Environment; Burnout, Professional; Nursing, Team.

RESUMO

Este estudo teve por objetivo avaliar o ambiente da prática profissional e os níveis de burnout entre os profissionais de enfermagem, e estimar o efeito preditor do ambiente da prática sobre o burnout. Trata-se de estudo transversal com 215 profissionais de enfermagem de um hospital de ensino no interior do estado de São Paulo. Para a coleta de dados, foram consideradas a ficha de caracterização pessoal e profissional e os instrumentos Nursing Work Index - Revised e Inventário de Burnout de Maslach. Foram realizadas análises de correlação com o cálculo do coeficiente de correlação de Spearman e modelos de regressão linear múltipla. Obtiveram-se correlações significantes entre as variáveis do ambiente da prática profissional e burnout. As subescalas autonomia e controle sobre o ambiente foram consideradas preditoras da exaustão emocional, da despersonalização e da diminuição da realização pessoal. Nos ambientes em que o profissional refere mais autonomia e melhor controle sobre esse ambiente, os níveis de burnout foram mais baixos. Conclui-se que a autonomia e o controle sobre o ambiente da prática profissional foram considerados fatores preditores do burnout entre enfermeiros, auxiliares e técnicos de enfermagem.

Palavras-chave: Ambiente de Instituições de Saúde; Esgotamento Profissional; Equipe de Enfermagem.

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RESUMEN

El objetivo de este estudio fue evaluar el ambiente laboral y los niveles de agotamiento emocional entre los profesionales de enfermería y estimar el efecto predictor de dicho ambiente sobre el burnout. Se trata de un estudio transversal con 215 profesionales de enfermería de un hospital escuela del interior del estado de San Pablo. Para la recogida de datos se consideraron el registro de las características personales y profesionales y los instrumentos Nursing Work Index - Revised y el Inventario de Burnout de Maslach. Se realizaron análisis de correlación con el cálculo del coeficiente de correlación de Spearman, y modelos de regresión lineal múltiple. Se obtuvieron correlaciones significantes entre las variables del ambiente laboral y el burnout. Las subescalas autonomía y control sobre el ambiente laboral se consideraron predictoras del agotamiento emocional, de la despersonalización y de la disminución de la realización personal. En los ambientes en los cuales los profesionales se sienten con más autonomía y control, los niveles de burnout fueron más bajos. Se llega a la conclusión que la autonomía y el control sobre el ambiente laboral son considerados factores predictores de burnout entre los enfermeros, auxiliares y técnicos de enfermería.

Palabras clave: Ambiente de Instituciones de Salud; Agotamiento Profesional; Grupo de Enfermería.

INTRODUCTION

The context of the nursing work environment and its implications on the outcomes for the patient, professionals and institution has been extensively studied. The lack of personnel, the professional exhaustion, fatigue, and inadequate education of the nursing professionals are similar conditions in several countries of the world, in different health systems, and it compromises the patient safety and the quality of care.¹⁻³

In the United States, in the 1980s, the first studies on the environment of professional practice of the nursing team emerged. The initial proposal of these studies, conducted by the American Academy of Nursing, was to understand how some hospitals were able to retain their professionals and maintain their high satisfaction with work. The results of these first researches identified that certain characteristics such as autonomy, control over the work environment and collaboration between nurses and physicians reduce the burnout rates and increase the nurses' satisfaction with their work. These results have been replicated and today the designation Magnet® Hospitals certifies the health facility as good places for nurses to work.^{4,5}

Burnout is a syndrome characterized by the emotional exhaustion, depersonalization, and decreased personal achievement in response to chronic stress sources, and has been identified as a common phenomenon among nurses around the world.^{6,7} Many studies have shown that the relationship between a favorable work environment and low levels of burnout in the nursing team generate positive impacts such as better quality of the care offered, high professional satisfaction with their work, low turnover and little intention to leave the job and the profession.^{2,6,8}

The relationship between the characteristics of the work environment and burnout are themes widely studied in countries of Europe, Australia, Canada and the United States.^{6,8} However, in Brazil, such research is scarce: we have little information on health institutions' environment and its impact on the quality and safety of the care that is offered. Thus, the research questions of this study were: how is the care practice environment of nursing professionals? How does the profession-

al practice environment influence the burnout levels of these professionals? Based on these questions, this study aimed at evaluating the work environment and the burnout levels of the nursing team and to estimate the predictive effect of the practice environment on burnout.

METHOD

Cross-sectional study carried out in adult hospitalization units of a public and teaching hospital, with 420 tertiary care beds, located in the countryside of the state of São Paulo. The nursing team consists of nurses, technicians and nursing assistants, in addition to supervisors and service directors. As inclusion criteria were considered the nurses, assistants and nursing technicians who provided direct care to the patients and who had experience time in the unit equal to or over three months. Professionals with exclusively managerial activities and support services were excluded. The sample was obtained for convenience and a sample loss of 2.3% (n=5) was obtained, totalizing 215 participants. The study was approved by the Research Ethics Committee (Process No. 293,408/2013).

The personal and professional characterization form, the Brazilian version of the Nursing Work Index-Revised (NWI-R) and the Maslach Burnout Inventory (MBI) were used for data collection.⁹⁻¹¹ The characterization form addressed personal data of the participants, such as gender, age and marital status, and professional data such as: workload, contract type, working time in the unit and in the institution, number of professionals and patients under the responsibility of nurses and complementary training.

The NWI-R has the purpose of evaluating the professional practice environment of the nursing team. It is an instrument composed of 15 items and four subscales: autonomy (five items), Nursing team and physicians relationship (three items), control over the environment (seven items) and organizational support (ten items). It should be highlighted that the items that make up the organizational support subscale are derived from the first three scales. In this study, the NWI-R versions for nurses⁹ and another one for nursing assistants and technicians have been used.¹⁰

The scale of response is of the Likert type with four points, ranging from one point (totally agree) to four points (totally disagree). The scores of each subscale are obtained through the mean of the scores of the subjects' answers, in which scores above 2.5 indicate unfavorable environments and scores below 2.5 indicate favorable environments. Thus, the lower the score, the greater the existence of attributes that favor the professional nursing practice.⁹ In this study, the reliability of the subscales ranged from 0.69 to 0.81.

The Maslach Burnout Inventory aims at measuring the burnout level of the professionals. It consists of 22 items divided into three subscales: emotional exhaustion (nine items), depersonalization (five items) and reduced personal accomplishment (eight items). The measurement scale is of the Likert type, and it ranges from one to five points. The higher the score on the emotional exhaustion and depersonalization subscales, the greater the feeling of emotional exhaustion and depersonalization. In the subscale decrease of personal achievement, due to the fact of having an inverse score, the high score evidences a greater sense of personal fulfillment. In order to evaluate the burnout level of the professionals, the tertiles of each subscale were calculated and the classification was obtained in low, moderate and high levels. The reliability indexes were satisfactory for the current study (0.72 to 0.92).¹¹

The data collection was performed by one of the researchers. The professionals were approached in their work place and those who fulfilled the inclusion criteria of the study and who accepted to participate were oriented to respond the instruments in a private space. After answering the instruments, they were delivered in envelopes to the researcher. All the participants have signed the free and informed consent form.

The data were analyzed by SAS for Windows® (Statistical Analysis System), version 9.2. In order to describe the profile of the sample, descriptive statistics were used. The correlations between the NWI-R and MBI subscales were calculated using Spearman's correlation coefficient and, for the analysis of these correlations, the following criteria were considered: 1.0 (perfect correlation); above 0.50 (strong correlation); 0.30 to 0.50 (moderate correlation); 0.10 to 0.30 (weak correlation) and 0.00 (absence of correlation).¹²

In order to evaluate the predictive effect of the professional practice environment on burnout, multiple linear regression models were constructed. In these models, the MBI subscales were considered as dependent variables, the NWI-R subscales as independent variables, and the Stepwise's variable selection criterion was applied.¹² To estimate the model, the organizational support subscale items were not considered, since, as previously mentioned, the items that compose this subscale are derived from the other NWI-R subscales. The results report the estimates obtained from the regression coefficients and the respective confidence intervals, p-value and the coefficient of explanation R^2 for each of the adjusted models. For these analyzes, the level of significance was considered equal to 5%.

RESULTS

215 nursing professionals have participated in the study, of which 156 (75.6%) were nursing assistants and technicians and 59 (27.4%) were nurses. The majority were female (n=178, 82.8%), married (n=109, 50.7%) and had no other employment relationship (n=163, 75.9%). The average age of the participants was 37.1 years old (SD±9.9), average working time in the unit of 6.6 years (Min=3 months, Max=28.6 years, SD±7.1) and in the institution 8.5 years (Min=3 months, Max=29.3 years, SD±8.2).

The average weekly workload for the nursing team was 44.4 hours (Min=20, Max=80, SD±13.3). The nurses reported that they are responsible, on average, for 16.5 (SD±4.0) patients and have an average of 5.6 (SD±2.9) assistants and nursing technicians under their supervision at each shift. The nursing assistants and technicians are responsible, on average, for 6.6 patients (SD±3.3).

Regarding the training of the nursing staff, 32.1% (n=51) of the nursing assistants and technicians reported that they were attending or completing their nursing degree. Among the nurses, the majority (n=33, 55.9%) reported having some type of complementary training, such as specialization, improvement or master's degree.

Regarding the perception of the practice environment and the burnout level among the professionals, the findings are presented in Tables 1 and 2.

Then, the correlations between the NWI-R and MBI subscales were evaluated (Table 3). The three proposed multiple linear regression models are presented in Table 4.

Table 1 - Average and standard deviation of the subscales of the Nursing Work Index- Revised among nursing professionals. Campinas, SP, Brazil, 2013

<i>Nursing Work Index – Revised</i>	Average	Standard deviation
Autonomy	1.98	0.59
Organizational support	2.19	0.52
Relationship between the nursing team and physicians	2.21	0.67
Control over the environment	2.35	0.62

Source: research data.

DISCUSSION

The strategic planning of the World Health Organization published in 2016 – “Global strategic directions for strengthening nursing and midwifery 2016-2020” – describes the global strategies for strengthening nursing and one of the thematic areas discusses the interventions needed to ensure the workforce of nurses and midwives. This document provides subsidies for the development of the skills and abilities of the professionals as ways of building strategies that make the work environment more favorable to the professional practice.¹³

Table 2 - Average, standard deviation and classification of the burnout levels, according to the tertiles for each subscale of the Maslach Burnout Inventory. Campinas, SP, Brazil, 2013

Maslach Burnout Inventory	Low	Moderate	High	Average (SD)
Emotional Exhaustion	< 18	18 – 25	> 25	21.9 (7.3)
Depersonalization	< 7	7 – 10	> 10	9.2 (3.5)
Reduced Personal Accomplishment	> 33	29 – 33	< 29	31 (4.4)

SD = standard deviation.
Source: research data.

Table 3 - Spearman's correlation coefficient between the Nursing Work Index Revised and the Maslach Burnout Inventory. Campinas, SP, Brazil, 2013

NWI – Revised	Emotional Exhaustion	Depersonalization	Reduced personal accomplishment
Autonomy	0.53*	0.38*	-0.29*
Relationship between the nursing team and physicians	0.38*	0.32*	-0.29*
Control over the environment	0.57*	0.37*	-0.29*
Organizational support	0.57*	0.42*	-0.30*

*p < 0.0001.
Source: research data.

Table 4 - Predictive effects of the work environment on burnout. Campinas, SP, Brazil, 2013

Variables	Regression Coefficient	Confidence Interval 95%	p-value	R ² *
Model 1				
Emotional Exhaustion				
Autonomy	3.35	1.50-5.20	0.0004	0.37
Control over the environment	4.57	2.82-6.32	< 0.0001	
Model 2				
Reduced Personal Accomplishment				
Control over the environment	-2.27	-3.16- -1.35	< 0.0001	0.10
Model 3				
Depersonalization				
Autonomy	1.43	0.43-2.43	0.0053	0.18
Control over the environment	1.27	0.33-2.22	0.0086	

* R² Coefficient of explanation.
Independent variables: autonomy, control over the environment and relationship between nursing team – physicians.
Source: research data.

Nursing corresponds to the professional class of the health area that is in direct contact with the patient 24 hours a day and it has important impacts on the care outcomes. Ensuring a favorable practice environment is a way to improve safety and the quality of care.^{5,13}

In the evaluation of the practice environment, the nursing team professionals evaluated as positive the professional practice environment, with emphasis on the autonomy question. Thus, the study reveals that the nursing team considers to be free to make decisions about the patient care and has responsibility for their work, which has been identified as an important component in job satisfaction.¹⁴

In the evaluation of the burnout level, nurses, technicians and nursing assistants presented a moderate level of burnout for all the MBI subscales. Nursing has been considered a pro-

fession of risk for the development of burnout due to the daily contact with stressors in the workplace, such as pain, suffering and death of patients, lack of support from managers, conflicts among members of the multiprofessional team, lack of opportunities for professional growth and continuous learning.^{15,16}

As in other studies,^{6,8} the results reinforce that in working environments in which the nursing professionals perceive or evaluate that they do not have autonomy, a good relationship with physicians, and exert little control over the environment, are susceptible to high levels of depersonalization, decreased professional achievement and emotional exhaustion – a component that has been identified as the most important of the syndrome.¹⁶

Through the regression models tested in this study, it was possible to observe that the low autonomy and lack

of control over the work environment can increase the chance of professionals to experience emotional exhaustion and frustration with work from three to four times, at a lower level they may experience feelings of depersonalization. The research also reveals that the lack of freedom to make decisions in the work environment; lack of time and opportunity to discuss problems related to patient care; insufficient support services to provide patient care; and the lack of support from supervisors/managers to the nursing team reflect on the commitment of the nursing team's autonomy and control over their practice in the work environment.

Other studies carried out with the objective of investigating the impact of the characteristics of the professional practice environment on burnout have demonstrated that the attributes of the work environment are strong predictors of emotional exhaustion. The results also reinforce the importance of health institutions to develop effective methods to reduce the burnout levels of the nursing staff, in order to improve the quality and safety of the patient care, reduce the intention to leave the job and the profession, the turnover and the professional dissatisfaction, factors that have resulted in the scarcity of nursing workforce around the world.^{6,15,17,18}

Thus, promoting a favorable work environment for nursing has been considered an effective strategy to improve the outcomes for patients, professionals and institutions. Studies such as this may assist nursing managers in the planning of actions among these professionals, aiming to mobilize resources and proposals for improvements that favor a more positive perception of the professional practice environment and result in a reduction in the level of burnout among professionals.

As a limitation of the study, it should be mentioned that the regression models tested took into consideration only some variables considered important in the evaluation of the nursing professional practice environment, and this factor may interfere in the validity of the study for other health institution settings. Other models and other institutions may be included in future studies.

CONCLUSIONS

The nursing team assessed as positive the professional practice environment, with emphasis on the autonomy subscale, and presented a moderate level of burnout. The professionals who reported having autonomy and control over the environment had low levels of burnout. The variables autonomy and control over the environment have a predictive effect on the burnout syndrome, especially on the emotional exhaustion.

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