

Psychosocial risk factors in the nursing category of a private hospital

Fatores de risco psicossociais na categoria de enfermagem de um hospital privado

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ABSTRACT Psychosocial factors at work are major contributors to stress and mental illness among workers, particularly in hospital settings. This study aimed to identify and analyze psychosocial work factors among nursing professionals at a large private hospital in Campinas, São Paulo, Brazil. A descriptive, analytical, cross-sectional design was adopted, using the long version of the Copenhagen Psychosocial Questionnaire III, recently adapted for use in Brazil. Data were collected from 416 nursing professionals, representing 94.5% of the eligible workforce. The highest-risk dimensions identified were quantitative, cognitive, and emotional demands; role conflicts; job insecurity; lack of predictability; poor leadership quality; and work-life conflict. These psychosocial factors were associated with sleep disorders, stress, and depressive symptoms. Statistically significant associations ($p \leq 0.05$) were observed between job and work sector and the levels of quantitative, cognitive, and emotional demands. High demands, job insecurity, and role conflicts had a substantial negative impact on the health of hospital nursing staff. The findings highlight the need for institutional priority actions addressing psychosocial work factors that generate stress and increase occupational vulnerability among nursing professionals.

KEYWORDS Nursing. Surveys and questionnaires. Occupational health. Risk factors. Mental health.

RESUMO Os fatores psicossociais no trabalho se destacam entre os principais produtores de estresse e adoecimento psíquico de trabalhadores, em especial no ambiente hospitalar. Esta pesquisa teve por objetivo identificar e analisar os fatores psicossociais de trabalho da enfermagem em importante instituição hospitalar privada no município de Campinas (SP). Este estudo descritivo e analítico de corte transversal utilizou o instrumento Copenhagen Psychosocial Questionnaire III, na versão longa recém adaptada no Brasil, coletando em campo uma amostra de 416 (94,5%) profissionais da categoria de enfermagem. Entre as dimensões de maior risco se destacaram demandas quantitativas, cognitivas, emocionais, conflitos na função, insegurança no trabalho, falta de previsibilidade, baixa qualidade das lideranças e conflito entre vida profissional e privada. Essas dimensões psicossociais tiveram como desfecho problemas de sono, estresse e sintomas depressivos. Houve associação entre cargo e área e as demandas quantitativas, cognitivas e emocionais, com nível de significância de 0,05. As elevadas demandas quantitativas, cognitivas e emocionais, insegurança no trabalho e os conflitos na função tiveram impacto significativo na saúde da equipe de enfermagem hospitalar. Os resultados apontam ações prioritárias da instituição sobre os Fatores Psicossociais no Trabalho percebidos pela categoria de enfermagem e que desencadeiam estresse e vulnerabilidades laborais específicas.

PALAVRAS-CHAVE Enfermagem. Inquéritos e questionários. Saúde do trabalhador. Fatores de risco. Saúde mental.

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Introduction

Work in the neoliberal context is increasingly precarious, maximizing profit and lowering labor costs, which negatively affects workers' health and lives, as well as job performance and employability^{1,2}. Psychosocial Risk Factors at Work (PRFW) have been identified by international agencies as the main triggers of stress and risk of illness for these individuals³. High demands, lack of autonomy and control over work, lack of support from peers and superiors, poor communication, poor interpersonal relationships, and offensive behaviors are some of the PRFW⁴.

Although widely used by international agencies, the concept of psychosocial risk factors is not consensual in occupational health. Criticism of the term 'risk factor', when applied to the psychosocial processes of work, tends to fragment and simplify complex, historically and socially determined events, treating them analogously to measurable physical or chemical agents such as PRFW⁵. From this perspective, authors emphasize that psychosocial factors should be understood as expressions of forms of organization, management, and power relations at work, requiring a contextualized, historical, and non-reductionist interpretation of their application in the analysis of work-related mental illness^{6,7}.

To identify these factors, several theoretical models have been developed in the organizational context, in addition to instruments such as self-reporting questionnaires based on workers' perceptions, identifying different psychosocial dimensions at work that can trigger stress and illness, manifested by psychosomatic symptoms, mental and behavioral disorders, and musculoskeletal disorders^{8,9}.

The Health sector, whose nature is the provision of care and assistance services to the population, paradoxically takes little care of its own health professionals, subjecting them to intense work rhythms with high cognitive, emotional and physical demands⁹⁻¹². Hospitals employ a very high number of

nursing professionals in substandard working conditions and with inadequate PRFW management, which ends up triggering stress, physical and emotional distress, and illness. Furthermore, a sick nursing professional can also compromise the quality of care provided to patients⁹⁻¹¹.

The nursing category in hospital settings is predominantly female and works in shifts, with some professionals working double shifts due to low salaries^{10,12}. The high workload, uninterrupted care, and extended shifts trigger physical and mental fatigue, which are recurrent in the work of this professional category¹³. Systematic review studies point to psychosocial and organizational factors as the main causes of anxiety disorders, depression, stress, burnout syndrome, and psychosomatic symptoms in these professionals⁹⁻¹¹.

Among the several instruments available for assessing PRFW in organizations, the Copenhagen Psychosocial Questionnaire (COPSOQ) is comprehensive and robust¹⁴ for measuring multiple dimensions of the work psychosocial environment, which makes it an essential reference for understanding the complex interactions between working conditions and workers' health. In this context, this study¹⁰ takes on an innovative character by using for the first time the long version of COPSOQ III, recently adapted to Brazilian Portuguese to assess psychosocial factors in the nursing staff work in a private hospital institution.

Due to the increasing relevance of psychosocial risks in the hospital environment and their impacts on the quality of life and safety of health professionals, the use of COPSOQ III is an essential strategy for early diagnosis and the formulation of organizational policies aimed at promoting mental health and preventing work-related illnesses^{9,10}.

In Brazil, the short and medium versions of COPSOQ II and the long version of COPSOQ III have been applied to healthcare professionals and hospital settings for the collective diagnosis of psychosocial risks in the

workplace. Some recent references show: (a) the consolidation of COPSOQ III as an international instrument for psychosocial assessment; and (b) applications in healthcare workers in hospitals, including a study in a Brazilian teaching hospital⁹⁻¹².

Thus, this study¹⁰ contributes to the assessment of these stress-producing factors that can cause illness in the hospital nursing category, and whose results enable preventive actions, also strengthening COPSOQ III's applicability in identifying and managing psychosocial risks in Brazil.

Material and methods

This cross-sectional, descriptive, and analytical epidemiological study¹⁰ was conducted in Campinas, São Paulo, Brazil, with a sample of health professionals in the nursing category from a medium-sized general hospital, who worked predominantly in care activities in inpatient wards, outpatient clinics, surgical blocks, maternal-infant units, emergency rooms and adult Intensive Care Units (ICUs). Another part of the sample worked in administrative areas¹⁰.

The institution studied employed 440 professionals, including nurses, technicians, and nursing assistants. Inclusion criteria for participation in the study were being an active nursing professional, having been employed for at least 12 months, and having signed the Informed Consent Form. All eligible participants were invited to participate in the research. Twenty-four of these were excluded from the study due to partial completion of the instruments, resulting in a final convenience sample of 416 participants, totaling 95% of those eligible.

Fieldwork was performed from January to March 2019 at the participants' workplace and during their working hours¹⁰. At each location, the researcher presented the scope of the study and the Informed Consent Form. Upon signing the document, she delivered

the research material in an opaque envelope to each participant, with instructions for its return, after completion, to a box placed in the appropriate sector.

The research instruments included two questionnaires¹⁰: 1) Biopsychosocial and occupational, with closed-ended questions (gender, age, professional category, workplace, work schedule and shift, position, and work sector); and 2) The latest version of COPSOQ III, recently validated for Brazilian Portuguese, with good psychometric properties, containing 8 domains, 41 dimensions and 126 items, and which obtained good psychometric properties^{10,13}. The data collected were entered by the researcher into a Microsoft Office® 2010 Excel spreadsheet, tabulated, and double-checked to correct any possible data entry errors. This study was reported according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guideline.

The COPSOQ III dimensions were assessed and scaled to the range 0-100; that is, each dimension was scored according to its significance^{10,14}. The closer the assessed dimension was to zero, the greater the risk of triggering stress and illness. After standardization of the dimensions, the respective scores were divided into tertiles (0.33; 0.66; and 0.99), and the variables were categorized as low (first tertile), medium (second tertile), and high (third tertile), respectively. The result can be visualized graphically. In this study, we indicated the colors white for low risk, gray for intermediate risk, and black for high risk to workers' health. Specifically, quantitative, cognitive, and emotional demands were analyzed in conjunction with sociodemographic and occupational variables.

To investigate the association between sociodemographic and occupational variables and work dimensions, such as Quantitative Demands (QD), Cognitive Demands (CD), and Emotional Demands (ED) from COPSOQ III¹⁴, we performed the analysis using a generalized regression model for multinomial response (low, medium, and high risk), considering

the effects of gender, age, position, and work sector¹⁰. We evaluated interactions between the effects, but none were significant. The level of statistical significance considered was 0.05. The statistical software JMP Pro 17 was used to fit the models.

The Human Research Ethics Committee of the State University of Campinas approved this research with Certificate of Presentation for Ethical Appraisal (CAAE) N°02237818.0.0000.5404 and Opinion N°3.056.049, attached to the article submission, complying with the National Health Council ethical principles.

Results

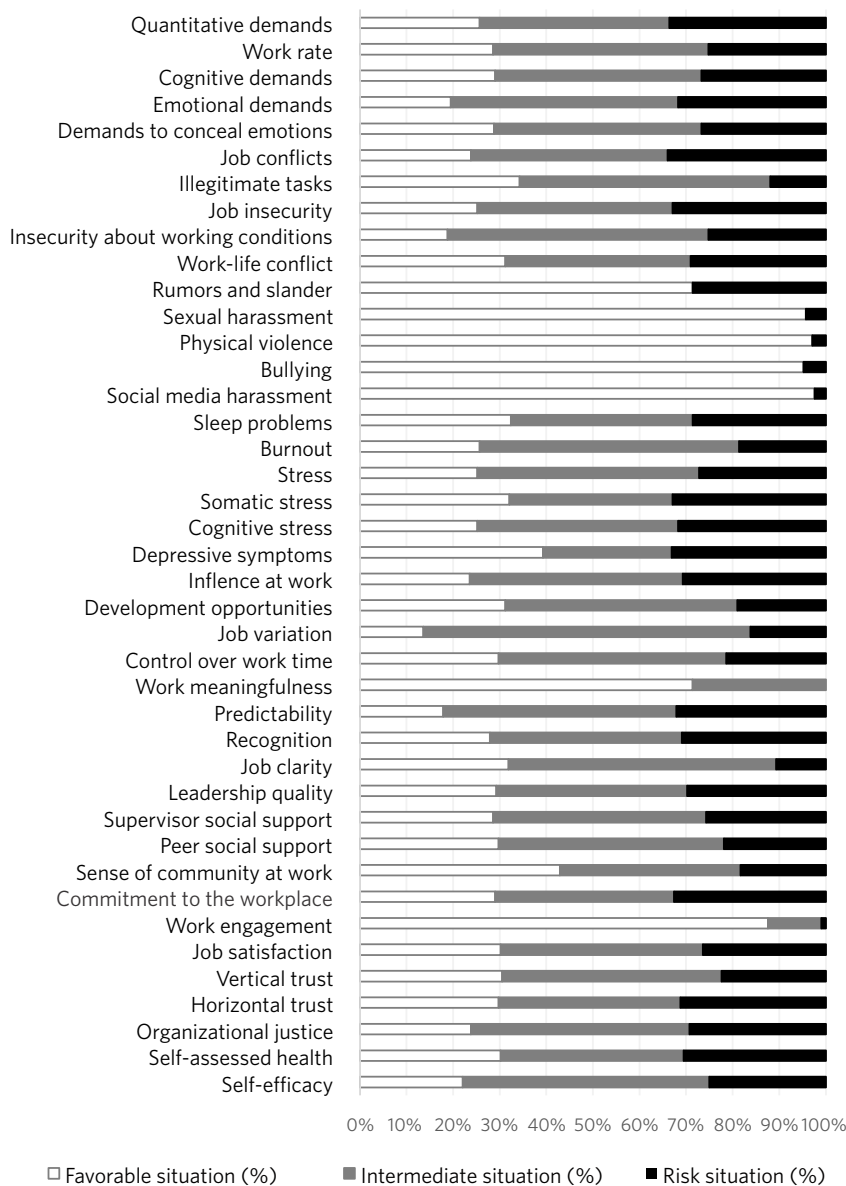
Most participants were women (77.6%), aged 35-44 years (45%), and working as nursing technicians (67%). The professionals predominantly worked in caregiving activities (92%), with 36-hour work weeks (78.7%), on a 12x36 schedule, mainly distributed between the night shift (31.6%) and the morning shift (30%). Professionals who

performed administrative activities (7.7%) worked 44-hour weeks¹⁰.

Graph 1 describes in numerical and visual format the result obtained. White indicates low risk, gray indicates intermediate risk, and black indicates high health risk. The principal dimensions with the highest risk were as follows: quantitative, cognitive, and emotional demands; role conflict; job insecurity; lack of predictability; low quality of leadership; and life-work conflict, perceived by more than a third of the participants. Other dimensions, such as the lack of recognition, support, and trust in leadership, and social injustice, may also have contributed to job dissatisfaction¹⁰.

As a result, about one-third of the participants¹⁰ negatively self-assessed their health and reported sleep problems, somatic and cognitive stress, and depressive symptoms. On the other hand, most respondents felt engaged in their work, believing that it had meaning and provided a sense of community. However, because the work demands were high, professionals were unable to support each other in managing tasks within this organizational context.

Graph 1. Graphical representation of the risk and protective factors of COPSOQ III in a medium-sized hospital. Campinas (SP), 2021



Source: Prepared by the authors.

Specifically, since the demands were considered very critical, they were analyzed together with sociodemographic and occupational variables¹⁰. The results of the logistic regression are described in *table 1*. We found that QD, CD

and ED regarding variables gender and age were not statistically significant different in the risk distribution. However, the variables position and work sector were statistically different in all the COPSOQ III demands.

Table 1. Effects of the generalized regression model on sociodemographic and occupational variables

Sociodemographic and occupational variables	COPSOQ III		
	QD (P-value)	CD (P-value)	ED (P-value)
Gender	0.5116	0.0564	0.3196
Age	0.2509	0.2857	0.8222
Position	0.0440*	< 0.0001**	< 0.0001**
Work sector	0.0096*	0.0148*	0.0006*

Source: Prepared by the authors.

* Statistical significance level of 0.05. Regarding the position and quantitative demands, no differences were observed in the perception of risk (low, medium, and high) reported by nurses and nursing technicians.

** $p \leq 0.001$.

On the other hand, nurses' CDs were more demanding and concentrated at medium and high levels when compared to those of nursing technicians. Regarding the work sector, lower

cognitive demands were observed in outpatient clinics and higher demands in the surgical block sector (*table 2*).

Table 2. Occupational variables and the proportion of risk distribution for cognitive demands

Sociodemographic and occupational variables	Classification of cognitive demands					
	Low		Medium		High	
	N	%	N	%	N	%
Job Title						
Nurse	5	3.8	66	49.6	62	46.6
Nursing Technician	115	40.6	118	41.7	50	17.7
Work sector						
Administration	6	18.2	18	54.5	9	27.3
Inpatient Wards	26	25.5	48	47.1	28	27.5
Outpatient Clinics	28	52.8	17	32.1	8	15.1
Surgical Block	26	32.1	30	37	25	30.9
Maternal and Child Health	11	23.4	28	59.6	8	17
Emergency Room	11	23.4	20	42.6	16	34
Adult ICU	12	22.6	23	43.4	18	34

Source: Prepared by the authors.

Finally, the ED were also higher (medium and high) in nurses compared to the nursing technicians. Regarding the work sector, more

than 50% of professionals in the maternal and child health sector reported high emotional demands (*table 3*).

Table 3. Occupational variables and the proportion of risk distribution for emotional demands

Sociodemographic and occupational variables	Classification of emotional demands					
	Low		Medium		High	
	N	%	N	%	N	%
Job Title						
Nurse	9	6.8	67	50.4	57	42.9
Nursing Technician	72	25.4	136	48.1	75	26.5
Work sector						
Administration	6	18.2	20	60.6	7	21.2
Inpatient Wards	13	12.7	53	52	36	35.3
Outpatient Clinics	13	24.5	32	60.4	8	15.1
Surgical Block	26	32.1	34	42	21	25.9
Maternal and Child Health	6	12.8	14	29.8	27	57.4
Emergency Room	9	19.1	20	42.6	18	38.3
Adult ICU	8	15.1	30	56.6	15	28.3

Source: Prepared by the authors.

Discussion

In addition to dealing with distress, pain, and death daily, nursing professionals perform their work in a complex environment, simultaneously facing situations involving direct care for vulnerable people, in a context of lack of human resources, escalated work demands, extended working hours, shift work, and double shifts to supplement the category's low salaries. Furthermore, the activities of these professionals require a high level of responsibility, constant confrontation with unpredictable events, and the possibility of errors, affecting the quality of care and assistance to patients⁹⁻¹¹.

The participant profile¹⁰ evidenced a predominance of females (77.6%), an age range of 35-44 years, and nursing technicians (67%). To reduce costs, the private sector absorbs 72% of nursing assistants and technicians. The Nursing Council (COFEN) recommends a proportion of 33-42% of nurses in teams, and the remaining professionals are nursing assistants or technicians, according to the care level¹⁴.

Most of the psychosocial risk factors described in *graph 1* were identified as critical by about one-third of the participants, contributing to increased cognitive and somatic stress, as well as reported depressive symptoms and sleep problems. The hospital institution analyzed does not have a policy for promoting mental health or preventing mental illness among its healthcare professionals. This gap reveals a weakness in care and, above all, an insufficient management of psychosocial and organizational risks at work.

The joint guidelines of the International Labour Organization (ILO) and the World Health Organization (WHO) reinforce that the prevention of stress, psychological distress, and mental illness should be treated as an organizational responsibility, prioritizing the quality of leadership, in addition to primary actions on psychosocial factors; and secondary actions on people who need support; and tertiary actions to reinstate those who have been absent due to mental health conditions, and in an integrated manner¹⁵; that is, the protection of mental health at work must be integrated into institutional health and safety policies,

especially in health services, characterized by high complexity and exposure to psychosocial risks.

Although the role of leadership and human resources is relevant in preventing stress and illness, an approach focused exclusively on individual training can reinforce an individualistic view of organizational problems. The occupational health literature and ILO guidelines emphasize that the collective prevention of psychosocial risks requires structural interventions in work organization, including the management of workloads, pace, working hours, autonomy, and hierarchical relationships, especially in health services^{9,10}.

As shown by Vieira et al.¹⁶, psychosocial factors in the work environment – such as excessive demands, low control, lack of support, interpersonal conflicts, and fear of job loss – can trigger severe forms of psychological distress, including the risk of suicide. These elements are especially critical in professions that demand high emotional and physical demands, such as hospital nursing. The recurrence and persistence of these factors over time make the implementation of preventive and corrective measures in the field of occupational health all the more urgent, focusing on the early identification and transformation of organizational conditions that expose workers to extreme risks.

Although professionals are engaged, difficulties in reconciling work content, low influence on it, and low control over working time highlight communication difficulties and the impossibility of performing work well. Recognition for work done is a protective factor to prevent work-related distress from turning into illness, as is the need for corrective actions with more participatory dialogues, under the responsibility of managers, to promote a sense of belonging and professional recognition, besides improving patient care quality^{15,16}.

Weak work organization and interactions between peers and managers can lead to the emergence of mental disorders, such as stress

and depression. These factors are related both to work overload and lack of support in the work environment¹⁶. We observed psychological insecurity regarding the work environment, due to conflicts arising from rumors or even slander and job-related conflicts, affecting professional and personal relationships. This type of offensive and repetitive behavior can be characterized as workplace harassment and jeopardize the mental health of health professionals, manifesting as mental and behavioral disorders¹⁷.

Furthermore, the high quantitative, cognitive, and emotional work demands reported compromise the physical and mental health of these professionals. In the hospital nursing, work demands refer to the requirements imposed on professionals during their provision of care and management activities.

QDs relate to the work volume and pace expressed, for example, in the high patient-to-professional ratio, the accumulation of functions, the need to perform multiple tasks simultaneously, prolonged working hours, and shift work – aspects frequently reported by nursing professionals in hospitals.

CDs' difficulties involve the mental effort required to maintain sustained attention, process complex information, make rapid decisions, and manage clinical risks, especially in highly complex settings such as ICUs, where failures can result in severe adverse events.

On the other hand, EDs are associated with the constant need to address distress, pain, clinical deterioration, and death of patients, as well as the distress of family members, interpersonal conflicts, and asymmetrical hierarchical relationships in the hospital environment.

The fact is that persistent exposure to high quantitative, cognitive, and emotional demands is associated with a higher risk of occupational stress, burnout, depressive symptoms, and impaired mental health among nursing professionals¹⁸⁻²⁰.

Nursing activities require a high degree of attention and responsibility. The conditions,

content, and work context of these professionals subject them to several situations that can harm their health. Therefore, safer environments increase productivity and the well-being necessary for this work²¹.

Lack of recognition at work, lack of participation in decisions, unpredictability, and lack of autonomy were significant risk factors for dissatisfaction and illness among approximately one-third of professionals. These reported conditions corroborate findings regarding the perception of high work demands and numerous pressures related to financial gains. Furthermore, these results highlight that caring for those who care for the organization brings numerous benefits to all parties involved²².

Prolonged exposure to excessive demands, low autonomy, escalated work, and weak care organization are associated with higher levels of stress, burnout, and common mental disorders, especially in hospital settings. These findings reinforce that persistent psychosocial factors is not an individual event, but the result of organizational conditions that demand structural and continuous interventions^{23,24}.

Considering the protective factors and dimensions represented here, which express the risk situation for one-third of the respondents from this health institution, the problem is aggravated by the low quality of leadership regarding the subjectivity of the team under their responsibility, as reported, in addition to the lack of recognition and symbolic compensation for the work performed by nursing professionals.

Psychosocial and organizational factors, identified as injustice, lack of trust, lack of support from peers and superiors, as well as poor leadership quality, contribute to job dissatisfaction and signs of distress among nursing professionals at the health institution, and should be a cause for attention and concern. The inability to do a good job, the lack of participation or influence in decisions, as well as the lack of predictability and autonomy, also appeared as relevant risk factors for illness

for about one-third of the professionals^{25,26}.

The negative record regarding the health of nursing professionals is the perception of unfair treatment and the leadership's lack of transparent criteria with team professionals, which can trigger stress and illness and compromise patient care quality²⁷. Notably, the meaning attributed to the work, as well as the reported high engagement levels, are protective factors in this research, a finding also corroborated by evidence from other studies^{9,20,22}.

The different risk distribution among areas of activity and QDs showed a higher risk for professionals in the administrative sector (60.6%) and workers in the adult ICU (54.7%). This situation indicates that escalated work in the institution extends to the care and administrative aspects, aggravated by the high demands from the institution, clients, and other multidisciplinary team members. These results are corroborated by another study, which highlights the troubling situation of the nursing category regarding managerial and care aspects. In general, a higher workload is found in this category, with double shifts and complex tasks²⁸.

The high workload associated with the administrative role of nursing professionals, distances them from care and assistance and overburdens them physically and emotionally. This study found high levels of burnout, insecurity, and demotivation among nursing professionals in administrative activities or functions, which are services with a high impact on the financial aspect of hospital institutions²⁹.

Furthermore, the high workload demands in the outpatient sector in this research are particularly characterized by the fact that this sector generally gives power and autonomy to medical professionals, who often interact intimidatingly and overtly with the nursing staff. These medical professionals are exempt from any kind of punishment, confirming the hierarchical structure in the Health sector^{30,31}.

Working conditions with high CDs, associated with pressure in decision-making, affected nurses (46.6%) and nursing technicians (17.7%). These records reveal an organization that imposes high work demands, triggering physical fatigue among professionals, besides the high work pace and demands compromising attention and focus levels, aggravating dissatisfaction with the workplace, where much is demanded and little is recognized³².

We should underscore that the nursing profession is not homogeneous. Nurses, in general, occupy leadership and management positions, experience working conditions distinct from those faced by nursing technicians and assistants, whose activities are essentially prescribed and marked by the execution of care, lack of autonomy, suffering from greater hierarchical control and more precarious employment relationships. These differences are traversed by social class, race, and gender markers, unequally influencing exposure to psychosocial risks and impacts on mental health. Thus, analyses of the 'health of nursing professionals' must consider these internal inequalities, avoiding generalizations³³⁻³⁵.

This hierarchical process, coupled with the high mental workload, compromises the nursing team activities, especially by nurses working in ICUs, since their job functions require complex decision-making at an accelerated work pace^{36,37}.

Low autonomy, limited influence over work, and poor leadership are psychosocial factors that restrict the decision-making capacity of nursing professionals, compromising their mental health and the quality of care they provide. Therefore, leadership should be understood not only as interpersonal support but as a central element in mediating working conditions, professional autonomy, and symbolic recognition³⁸.

Regarding EDs, the high self-reported prevalence among nurses (medium risk for 50.4% and high risk for 42.5%) and nursing technicians (medium risk for 48.1% and high risk for 26.5%) stems from the intersubjective nature

of relationships with patients, staff, and leadership, which makes the health of participating professionals more vulnerable. Furthermore, the lack of a defined work scope, work overload, helplessness, and fatigue further compromise the health of these professionals^{39,40}.

This research has some limitations, such as its cross-sectional nature that did not address temporal issues throughout the study period, making it impossible to establish causal relationships. Furthermore, few studies in private hospitals are available for comparison with other research on psychosocial factors in nursing that also used the COPSOQ dimensions in Brazil and other countries, as shown in types of studies that corroborate the present research¹⁸.

The fact that data collection occurred in a pre-pandemic period may also minimize the impact of global changes during the pandemic itself, especially on nursing. This fact also reinforces the importance of new research applying COPSOQ III to assess psychosocial factors in the hospital environment, including the increase and impact of new technologies in healthcare, the restructuring and mergers of hospitals, and the consolidation of large Brazilian University Hospitals that monopolize the healthcare sector.

The main contributions to nursing are associated with the relevance of the topic, the study's novelty, and the use of the Brazilian version of COPSOQ III, besides the fact that the research was developed in a private hospital institution, where access to research and obtaining authorization are challenging when searching for results on psychosocial factors for nursing professionals in the private sector. The application of the long version of the COPSOQ III allowed for a more comprehensive collective diagnosis of the psychosocial risk factors of the hospital institution analyzed.

Conclusions

This study highlighted the psychosocial factors in nursing hospital work and the impact of

these factors on the physical and mental health of this professional category. Quantitative, cognitive, and emotional demands, adversities in performing the function, job insecurity, lack of predictability, low quality of leadership, and life-work conflict stood out among the psychosocial dimensions with the highest risk. These dimensions resulted in sleep problems, stress, and depressive symptoms. An association was found between position and work sector and quantitative, cognitive, and emotional demands.

The results point to the need for organizational interventions on the psychosocial factors identified as a critical action in the

perception of nursing professionals, which promote psychological safety, appreciation, and recognition of this professional class. Thus, preserving the health of nursing professionals will also improve the quality of care provided to patients, ensuring a more efficient and humane health service.

Authorship contributions

Pousa PCP (0000-0002-1997-0301)*, Rodrigues CA (0000-0002-7023-182X)*, and Lucca SR (0000-0001-6023-0949)* equally contributed to the preparation of the manuscript. ■

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