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Original

Sociodemographic, occupational and health aspects of nurses at a hospital specialized in Cardiology

Aspectos sociodemográficos, laborais e de saúde de enfermeiros de um hospital especializado em cardiologia

Aspectos sociodemográficos, laborales y de salud en enfermeros de un hospital especializado en Cardiología

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Abstract

Objectives: To identify sociodemographic, occupational and health aspects in nurses at a public hospital specialized in Cardiology from São Paulo. **Methods:** This is a descriptive and quantitative study involving 87 nurses working at the institution. Data collection took place from May to October 2023, using a questionnaire. Subsequently, the variables were grouped and analyzed. **Results:** Most of the professionals were female, married and white-skinned. Their mean age was 43.3 years old, with an mean income from 5,000 to 10,000 BRL; 85% were specialists, with cardiovascular care as the most common area of expertise. The most frequent health issues reported were high cholesterol and musculoskeletal disorders. The participants that reported higher happiness levels showed lower incidence of high cholesterol, cancer-related conditions and emotional disorders. Higher satisfaction levels were associated with private-sector employment contracts. The individuals who believed their health problems were not work-related reported greater happiness, higher satisfaction and lower stress levels. **Conclusion:** The analysis allowed characterizing the nurses in the context under study, revealing predominance of women, advanced-degree holders and professionals engaged in direct patient care. Most of the participants reported good health. An association was observed between happiness, satisfaction and self-reported stress levels.

Descriptors: Nurses; Cardiology Service, Hospital; Job Satisfaction; Occupational Stress.

Whats is already known on this?
The literature generally describes the profile of nursing teams on a national scale. There are also studies that highlight small specificities about this profile under different circumstances.

What this study adds?
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Resumo

Objetivos: *Identificar aspectos sociodemográficos, laborais e de saúde de enfermeiros de um hospital público especializado em cardiologia de São Paulo.* ***Métodos:*** *Estudo descritivo e quantitativo, com 87 enfermeiros atuantes na instituição. A coleta de dados ocorreu de maio a outubro de 2023, por meio de um questionário. Posteriormente, as variáveis foram agrupadas e analisadas.* ***Resultados:*** *A maioria dos profissionais eram do sexo feminino, casados e brancos. A média de idade foi de 43,3 anos e a renda média foi de 5.000 a 10.000 reais; 85% eram especialistas, sendo a área cardiovascular a mais comum. Os problemas de saúde mais frequentes foram colesterol alto e doenças osteomusculares. Participantes mais felizes apresentaram menor incidência de colesterol alto, doenças oncológicas e emocionais. Os profissionais mais satisfeitos relacionaram-se com vínculo empregatício de iniciativa privada. Indivíduos que não acreditavam que seus problemas de saúde estivessem relacionados ao trabalho eram mais felizes, satisfeitos e menos estressados.* ***Conclusão:*** *A análise permitiu caracterizar os enfermeiros do contexto estudado, com predominância de mulheres, pós-graduados e atuação assistencial. A maioria relatou boa saúde. Observou-se associação entre felicidade e satisfação e o nível de estresse autorrelatado.*

Descritores: *Perfil de Saúde; Perfil Profissional; Enfermeiros; Institutos de Cardiologia.*

Resumén

Objetivos: *Identificar aspectos sociodemográficos, laborales y de salud en enfermeros de un hospital público especializado en Cardiología de San Pablo.* ***Métodos:*** *Estudio descriptivo y cuantitativo, con 87 enfermeros que trabajan en la institución. Los datos se recolectaron entre mayo y octubre de 2023 por medio de un cuestionario. Posteriormente, se agruparon y analizaron las variables.* ***Resultados:*** *La mayoría de los profesionales pertenecían al sexo femenino, estaban casados y eran de raza blanca. La media de edad fue 43,3 años y los ingresos medios fueron de 5000 a 10.000 reales; el 85% eran especialistas, con el área Cardiovascular como la más común. Los problemas de salud más frecuentes fueron colesterol alto y enfermedades osteomusculares. Los participantes más felices presentaron menor incidencia de colesterol alto y de enfermedades oncológicas y emocionales. Los niveles de satisfacción más elevados entre los profesionales se relacionaron con vínculos laborales de iniciativa privada. Las personas que no creían que sus problemas de salud estuvieran relacionados con el trabajo estaban más felices y satisfechas y menos estresadas.* ***Conclusión:*** *El análisis permitió caracterizar a los enfermeros del contexto estudiado, con predominio de mujeres, posgraduados y dedicados a la asistencia. La mayoría declaró gozar de buena salud. Se observó una asociación entre felicidad/satisfacción y nivel de estrés autoinformado.*

Descriptores: *Perfil de Salud; Perfil Laboral; Enfermeros; Instituciones Cardiológicas.*

INTRODUCTION

In 2020, the World Health Organization (WHO) released a document titled "State of the World's Nursing 2020: Investing in Education, Jobs, and Leadership". During the data collection process, key aspects were identified to better understand this state, through variables such as age, sex, and information related to education and training. Thus, not only is the current status of the nursing profession determined, but also the goals to be set for maintaining and improving the performance of nursing professionals worldwide.[1]

In response to WHO's call, the State of Nursing in Brazil was assessed, enabling the creation and planning of policies aimed at this group, given that nursing represents approximately 70% of the healthcare workforce in Brazil,[2] underscoring the importance of these professionals in ensuring the Brazilian population's constitutional right to health, as outlined in Article 6 of the 1988 Federal Constitution.[3]

Despite the size of the nursing workforce in Brazil, studies show there is a certain inequality in the distribution of these professionals across the country,[2,4] with the highest density found in the southeastern region, which is the only region where the professional-to-population ratio of nurses, nursing technicians (NT), and nursing assistants (NA) exceeds the national average. Moreover, nursing professionals tend to concentrate in urban areas.[4] These findings are significant as they not only alter the dynamics of the nursing profession but also impact the Brazilian healthcare system, highlighting important geographic disparities that directly affect the care provided to users of the Unified Health System (SUS).

Additionally, other perspectives related to the nursing team's profile may influence work-related aspects, as demonstrated in a recent study where variables such as sex, age, marital status, education level, type of employment contract, years of experience, number of departments worked in, self-assessment of health status, and presence of chronic diseases influenced absenteeism and presenteeism among the interviewed professionals.[5] It is assumed that one of the causes of these phenomena may be related to the biopsychosocial health status of these professionals. In this regard, a study conducted through a situational diagnosis with the nursing team found that the illness of professionals may be related to their work environment, which is generally classified as critical, with situations that promote tension, heavy workloads, and occupational risks.[6]

Another essential component concerning the profile of nurses is professional training. Specifically, regarding professionals working in cardiovascular health, in 2020, the American College of Cardiology released a document aiming to guide the clinical competencies of nurses in this specialty, as individuals

with cardiovascular conditions require specialized care.[7] It can therefore be assumed that there may be differences in the levels of education and skill development among nurses working directly in this area.

In 2017, the Federal Nursing Council (*Conselho Federal de Enfermagem*, COFEN) published the sociodemographic and occupational aspects of nursing workers in Brazil.[8] However, to develop action plans aimed at improving conditions for this population, it is necessary to gather data that identify these professionals and recognize their specific characteristics and needs. From this, the guiding question of the present study is: "What is the sociodemographic, occupational, and health profile of the nursing team working at a public hospital specialized in cardiology located in the city of São Paulo? Therefore, the objective of this research is to identify the sociodemographic, occupational, and health aspects of nurses at a public hospital specialized in cardiology in the city of São Paulo.

METHODS

This was a descriptive, objective study with quantitative data analysis, following methodological steps guided by the STROBE Checklist. The research was conducted at a cardiology-specialized hospital in the city of São Paulo.

The hospital in question is a reference institution in cardiovascular health and has been operating from primary to tertiary levels of healthcare since 1954, serving patients from across the State of São Paulo. Its administration is carried out through public management in partnership with a private entity, which contributes to the advancement of services by providing material and human resources, as well as hospital, teaching, and research support.

The target population included the hospital's nursing professionals with formal employment contracts, either through public contracts or private initiatives via a supporting foundation. In total, the hospital's nursing team consists of 210 nurses. Sampling was convenience-based, aiming to reach the largest number of eligible participants from the population of interest within the timeframe determined by the research.

Included were nurses under the institution's nursing directorate, actively working during the data collection period, who agreed to participate in the study. Excluded were nurses with employment contracts at the institution for less than three months.

Data collection took place from May to October 2023. The study was disseminated through three strategies. Initially, access links were sent via email to department heads to assist in distributing the information to employees under their supervision. Simultaneously, banners containing information about the study, along with the questionnaire link and QR code, were placed in all hospital units. Finally, during the last two months of data collection, the researchers conducted active outreach in the departments to identify professionals interested in participating in the study.

Thus, individuals interested in participating gained access to the RedCap® platform, where the Free and Informed Consent Form (ICF) was presented in full for reading. Participants were required to provide their signature if they agreed with the terms. Only after completing the ICF did the platform direct participants to a questionnaire addressing sociodemographic data, education and health-related information, personal and family history, characteristics of their current employment relationship with the institution, and details about other positions held (optional responses). Additionally, participants were asked an optional question about their happiness with their current situation and completed numerical scales ranging from 0 to 10, developed by the authors, to assess self-reported stress and satisfaction levels.

Continuous variables were described using means, medians, standard deviations, and quartiles. Categorical variables were described using absolute and relative frequencies. Boxplot graphs were used to describe satisfaction and stress scales. The satisfaction and stress scales were categorized into values ranging from 0 to 5 and 6 to 10. Comparisons of baseline variables according to categories of satisfaction, stress, or happiness were performed using hypothesis testing. For continuous variables, the T-Student test was used, while for categorical variables, the Chi-square or Fisher test was applied. Analyses were conducted using the R software, version 4.2.1.

The study adhered to the regulations for conducting research involving human subjects. The project was approved by the Ethics and Research Committee of the Dante Pazzanese Institute of Cardiology, under CAAE number: 67894323.1.0000.5462.

All participants completed the ICF, where the risks and benefits of the study were disclosed, and data were collected only after participants were informed of the project stages and signed the consent form.

To minimize the risk of confidentiality breaches, the data were stored in a secure database protected by passwords, with no sharing of information with third parties.

RESULTS

The questionnaire received 87 valid responses during the data collection period, covering approximately 46.5% of the studied population deemed eligible to participate in the research.

The socioeconomic and demographic data are described in Table 1. The participants' mean age was 43.3 years old. Most of the nurses were female and self-identified as white; 55% reported having children, and 52% of the study population stated they were married. It was observed that both personal income and family income remained within the range of five to ten thousand BRL, according to the standard adopted by the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*, IBGE), for the majority of the respondents.

Table 1. Socioeconomic and demographic data. São Paulo, SP, Brazil, 2024. (n=87)

Variables	*n=87*
Age	
Mean (SD)	34.3 (9.7)
Median [25%; 75%]	43.0 (37.0; 49.0)
Gender	
Female	76/87 (87%)
Male	11/87 (13%)
Race/Skin color	
Asian	3/87 (3.4%)
White	61/87 (70%)
Brown	17/87 (20%)
Black	6/87 (6.9%)
Children	
No	39/87 (45%)
Yes	48/87 (55%)
Number of children	
Mean (SD)	1.8 (1.0)
Median [25%; 75%]	2.0 [1.0; 2.0]
Marital status	
Married	45/87 (52%)
Divorced	3/87 (3.4%)
Separated	1/87 (1.1%)
Single	36/87 (41%)
Widowed	2/87 (2.3%)
Income	
2,001.00 to 3,000.00 BRL	1/87 (1.1%)
3,001.00 to 5,000.00 BRL	13/87 (15%)
5,001.00 to 10,000.00 BRL	57/87 (66%)
10,001.00 to 20,000.00 BRL	16/87 (18%)
Family income	
1,001.00 to 2,000.00 BRL	1/87 (1.1%)
2,001.00 to 3,000.00 BRL	1/87 (1.1%)
3,001.00 to 5,000.00 BRL	7/87 (8.0%)
5,001.00 to 10,000.00 BRL	35/87 (40%)
10,001.00 to 20,000.00 BRL	31/87 (36%)
20,001,00 BRL or above	12/87 (14%)
Schooling	
Complete Higher Education	5/87 (5.7%)
Incomplete graduate studies	3/87 (3.4%)
Complete graduate studies	79/87 (91%)

Source: Prepared by the authors.

Regarding education, 91% of the employees held graduate qualifications. The data revealed a mean of 16.34 years of professional training since beginning their careers. The most common type of graduate degree was *lato sensu*, with 74 nurses (85%) reporting some form of specialization. The most prevalent areas

were cardiology (48%), followed by management (14%) and emergency care (14%). It is worth noting that most professionals had more than one specialization. Among the 14 participants who reported holding *stricto sensu* degrees (16% of the study population), the most common title was a master's degree, accounting for 11% (n=10), followed by doctoral degrees at 3.4% (n=3) and postdoctoral studies at 1.1% (n=1).

Regarding health-related variables, 30 participants (34%) reported having chronic health issues. The most prevalent conditions were high cholesterol (18%), musculoskeletal disorders (16%), hypertension (15%), elevated triglycerides (10%), psychiatric disorders (9.2%), and diabetes and heart disease (both at 6.5%). Out of the 87 responses, 24 (27.5%) indicated that their health problems were work-related.

It was observed that 47.1% of individuals reported using some form of medication, with antihypertensives being the most common (14%), followed by anxiolytics and mood stabilizers (13%), and antidepressants (9.2%). Responses related to health habits revealed that the majority of nurses did not consume alcohol or smoke.

The participants' family history showed a prevalence of hypertension at 76%, followed by diabetes at 52%, heart disease at 47%, and cancer at 41%.

Concerning the anthropometric data collected, the self-reported mean weight was 72.6 kg, while the mean height was 1.6 m. The mean BMI for this population was 26.9 kg/m², indicating overweight status.

When asked about physical activity, 39% of participants reported not engaging in any exercise, while 61% reported participating in some form of physical activity. Of those who exercised, 30% did so 3 to 5 times per week, 26% exercised 1 to 2 times per week, and 4.6% exercised 6 to 7 times per week.

The questionnaire included the question: "How would you rate your health?" The majority of participants categorized their response as "Very good" (51%), followed by "Fair" (29%), "Good" (18%), and "Poor" (2.3%).

Regarding work characteristics, the data show that the majority (80%) of participants held clinical roles as nurses, followed by 17% in managerial roles, as shown in Table 2. Most of these professionals began their employment between 2011 and 2020, and the most common work schedule covered by the research was the 12-hour day shift followed by 36 hours off. The majority of questionnaire responses were provided by employees from the Emergency Department and the Intensive Care Unit, which focuses on postoperative care following cardiac surgery.

Among the population surveyed, 34% reported maintaining another professional position outside the institution, with most holding private-sector contracts.

Table 2. Work-related aspects. São Paulo, SP, Brazil, 2024. (n=87)

| Variables	n=87
Position held at the institution	
Assistance	70/87 (80%)
Teaching	2/87 (2.3%)
Managerial	15/87 (17%)
Year of entry into the institution	
1988-2000	12/87 (14%)
2001-2010	18/87 (21%)
2011-2020	36/87 (41%)
2021-2023	21/87 (24%)
Work shift	
12-hour day shift followed by 36 hours off	36/87 (41%)
12-hour night shift followed by 36 hours off	11/87 (13%)
6x1 schedule, morning period	12/87 (14%)
6x1 schedule, afternoon period	8/87 (9.2%)
Monday to Friday, 10 hours per day	2/87 (2.3%)
Monday to Friday, 8 hours per day	18/87 (21%)
Type of employment contract	
Dual employment relationship	9/87 (10%)
State	26/87 (30%)
Support foundation	52/87 (60%)
Sector of activity	
Clinical Outpatient Clinic	3/87 (3.4%)
Diagnostic Methods Outpatient Clinic	3/87 (3.4%)

|	
HICC	1/87 (1.1%)
Central Sterilization Department	2/87 (2.3%)
Surgical Center I	3/87 (3.4%)
Surgical Center II	4/87 (4.6%)
Nursing Directorate	1/87 (1.1%)
Pre- and Postoperative Ward	6/87 (6.9%)
Vascular, Transplant, and Adult Congenital Ward	6/87 (6.9%)
Hemodynamics	6/87 (6.9%)
Day Hospital and Hemodialysis	1/87 (1.1%)
Organ Procurement Organization (OPO)	4/87 (4.6%)
Nursing Residency Program	1/87 (1.1%)
Emergency Care	14/87 (16%)
Continuing Education Service	2/87 (2.3%)
General Cardiology Unit	2/87 (2.3%)
Coronary Unit (CU)	6/87 (6.9%)
Pediatric Hospitalization Unit	4/87 (4.6%)
Clinical Intensive Care Unit	4/87 (4.6%)
Pediatric Intensive Care Unit	6/87 (6.9%)
Adult Postoperative Intensive Care Unit	8/87 (9.2%)
Number of departments worked in within the institution	
Mean (SD)	2.5 (1.8)
Maintains employment outside the institution?	
No	57/87 (66%)
Yes	30/87 (34%)
Type of employment contract outside the institution	
Freelancer	4/30 (13%)
Working under the consolidation of Labor Laws	14/30 (47%)
Public employee	11/30 (37%)
Legal entity	1/30 (3.3%)

Source: Prepared by the authors.

The states of "satisfaction" and "stress" were measured using a numerical scale ranging from 0 to 10. The mean "satisfaction" score was 7.17 with a standard deviation of 2.22, while the mean "stress" score was 5.43 with a standard deviation of 2.70. In Illustration 1, it is possible to view the boxplot generated for these variables.

Illustration 1. Boxplot of stress and satisfaction scales. (n=87)
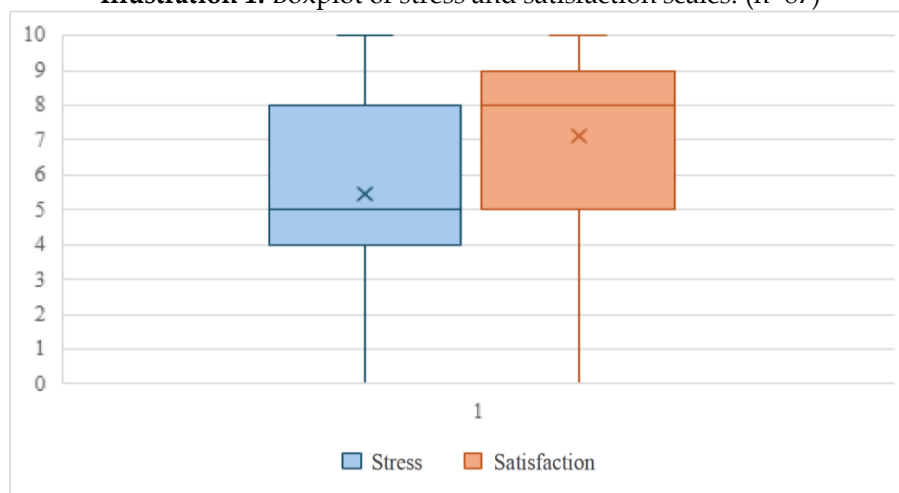
Source: Prepared by the authors.

The data collection questionnaire also included an optional question about the participants' state of happiness. Out of the 87 responses to the form, 5 did not provide an answer to this question. Thus, among the 82 responses, 72 (88%) individuals reported being happy, while 10 (12%) stated they were not happy. In Illustration 2, it is possible to observe the boxplot showing the association between the stress and satisfaction scales according to the state of happiness.

Illustration 2. Boxplot of stress and satisfaction scales by happiness status. (n=87)
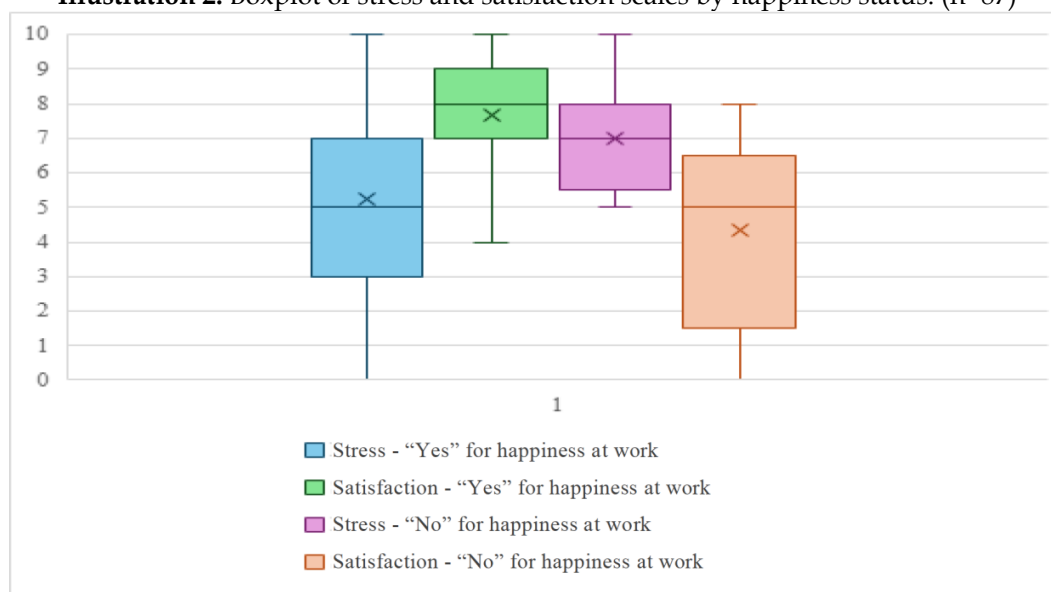
Source: Prepared by the authors.

When analyzing the baseline variables according to happiness status, it was observed that the variables significantly associated ($p<0.05$) with higher levels of happiness were: individuals who do not have high cholesterol ($p=0.021$), cancer ($p=0.038$), or psychiatric disorders ($p=0.006$), and those who do not believe their health issues are related to work-related factors ($p=<0.001$).

The association of baseline data with the stress levels reported by participants, as indicated by the p-value, showed that less stressed individuals were less likely to have bronchitis/asthma ($p=0.045$). Additionally, individuals with lower self-reported stress levels were generally those who did not believe their health problems were work-related ($p=0.02$).

Regarding baseline variables analyzed in relation to the satisfaction scale, higher satisfaction levels were associated with individuals who did not believe their health issues were linked to workplace factors ($p=0.011$) and with those employed through the hospital's affiliated support foundation ($p=0.029$).

DISCUSSION

Regarding the sociodemographic data obtained, when compared to the Nursing Profile in Brazil as outlined in research conducted by COFEN and the Oswaldo Cruz Foundation (FIOCRUZ) in 2017, it was observed that the hospital's team in question correlates with the data found for nurses at the federal level. This is because the study population was predominantly composed of women, individuals who self-identified as white, and those who were married.[8] Similar findings were reported in a study analyzing the same factors among nurses from various hospitals in a city in Mato Grosso do Sul, with the exception of race/color, which was not mentioned in the results of the study in question.[9]

Moreover, other studies assessing the sociodemographic profile of nursing teams comprising nurses, technicians, and nursing assistants also showed that the majority of participants were female,[10-12] highlighting the feminization of nursing.

The mean age of participants in this study correlated with the second most frequent age group in the national profile, 36 to 50 years, which represents 34.6% of nurses in Brazil.[8] This demonstrates that although the national reality reflects a younger workforce, the institution in question still predominantly employs older professionals, with a mean time since graduation of approximately 16 years, diverging from the national mean of 10 years or less.[8]

The self-reported personal income of the study participants mostly ranged from 5,000 to 10,000 BRL, consistent with the mean nurse salary found in the literature,[9] but differing from the findings of the national nurse profile survey, where the most common salary range was below 3,000 BRL.[8]

As for professional education highlighted in the collected data, 90% of the professionals had completed graduate studies, indicating an abundance of specialized professionals. In Brazil, 80.3% of nurses hold *lato sensu* specialization degrees.[8] Notably, the most common specialization area among the

hospital hosting the research was cardiovascular, aligning with the hospital's area of expertise. This contrasts with a study conducted on the profile of nurses working in pediatric-related sectors of a public hospital, which revealed only 27.2% of nurses trained in the areas they worked in.[12]

A 2020 study conducted with the nursing staff working in cardiology units of a university-affiliated, public, tertiary hospital in São Paulo aimed to identify cardiovascular risk factors based on the sociodemographic characteristics of the studied population. The findings pointed to sedentary lifestyles, excessive sleepiness, obesity, hypertension, and symptoms of depression as significant risks.[13] In the present study population, we observed a tendency toward overweight and a high incidence of emotional disorders and hypertension, consistent with findings in the literature.

In an integrative literature review conducted in 2021 to outline the profile of work-related illnesses among nursing professionals, mental health disorders were the most frequently cited group of diseases, followed by musculoskeletal disorders.[14] Such conditions also exhibited significant occurrence rates in the present study. It is important to emphasize that, despite these findings and the number of individuals who believe their work affects their health, the majority rated their health as "Very good".

Through the results of this study, we can observe that the concept of happiness is closely related to the participants' health, as there was an association with the absence of physical and mental illnesses, low cholesterol levels, and the belief that their health issues were unrelated to their work activities. These data indicate higher levels of positive feelings regarding quality of life at work, given that worker health is one of the pillars of this concept.[15]

Job satisfaction was more strongly associated with employees who secured employment through the foundation supporting the institution. Studies show that satisfaction is influenced by factors such as remuneration, professional fulfillment, and issues related to work schedules.[16,17] In the context of this research, it can be inferred that the satisfaction of employees hired through the foundation is due to better remuneration compared to statutory employees, resulting in poor compensation and, in some cases, the pursuit of dual employment within the same institution or in others to supplement personal income. It is worth noting that during the data collection period, the minimum salary for nursing professionals had not yet been firmly established.

Finally, individuals who associated their health problems with work-related issues reported higher stress levels and lower levels of happiness and satisfaction. In general, studies confirm that dissatisfaction, stress, and unhappiness stem from common factors, such as lack of recognition, elements affecting interpersonal relationships and bonding, challenges with organizational climate, workload, double shifts, compensation and scheduling issues, difficulties in relating to management, lack of material and physical resources, and intrinsic aspects of the profession when dealing with critically ill patients and life-threatening situations.[16-20] However, strategies such as laughter therapy,[21] improved management and education practices, dialogue, integrative and complementary practices, and coping mechanisms[22] have been cited in the literature as efficient tactics to promote happiness and reduce stressors.

There were methodological limitations in the study regarding sample size, as it was not possible to reach more nurses from the institution. This was due, among other factors, to challenges in conducting remote data collection, participant adaptation to the technological tools used, obstacles in covering different shifts, and the difficulty of balancing participation with work demands. Nevertheless, the data collected and analyzed allow for the formulation of new action plans and the development of further studies focused on the studied population.

CONCLUSION

Based on the results and statistical analysis, it was possible to comprehensively characterize the nurses in the studied context. Nuances of the sociodemographic profile were identified, with a predominance of women and graduate degree holders. Working conditions revealed a majority of bedside nurses, and most reported good health. A significant association was noted between workplace well-being—expressed in happiness and satisfaction—and the modulation of stress experienced by these professionals.

CONTRIBUITIONS

Contributed to the conception or design of the study/research: Santos BLB, Marcelino CAG, Simonetti SH. Contributed to data collection: Santos BLB, Simonetti SH. Contributed to the analysis and/or interpretation of data: Santos BLB, Marcelino CAG, Simonetti SH. Contributed to article writing or critical

review: Santos BLB, Marcelino CAG, Simonetti SH. Final approval of the version to be published: Santos BLB, Marcelino CAG, Simonetti SH.

REFERENCES

1. World Health Organization (WHO). State of the world's nursing 2020: investing in education, jobs and leadership. 2020.

2. Oliveira APC, Ventura CAA, Silva FV, Angotti Neto H, Mendes IAC, Souza KV, *et al*. State of nursing in Brazil. Rev Lat Am Enfermagem. 2020;28:0–3. DOI: https://doi.org/10.1590/1518-8345.0000.3404

3. Brasil. Constituição 1988. Constituição da República Federativa do Brasil. Brasília (DF): Senado; 1988.

4. Carneiro FA, Linch GFC, Paz AA. Desigualdade da distribuição de profissionais de enfermagem no contexto brasileiro. Rev Enferm UFPE online. 2021;15(1). DOI: https://doi.org/10.5205/1981-8963.2021.244551

5. Tracera GMP, Santos KM, Nascimento FPB, Fonseca EC, Abreu ÂMM, Zeitoune RCG. Fatores associados ao presenteísmo em profissionais de enfermagem ambulatorial. Rev Gaúcha Enfermagem. 2022;43:e20210222. DOI: https://doi.org/10.1590/1983-1447.2022.20210222

6. Fonsêca LCT, Holmes ES, Albuquerque TM, Santos, SR. Vulnerabilidade da saúde dos profissionais de enfermagem no contexto hospitalar: Revisão integrativa. Rev Enferm UFPE online. 2016;10(7):2687–95. DOI: https://doi.org/0.5205/reuol.9106-80230-1-SM1007201648

7. Rodgers GP, *et al*. 2020 ACC NP/PA Competencies for adult CV medicine. JACC. 2020;75(19):2483-517. DOI: https://doi.org/10.1016/j.jacc.2020.01.005

8. Conselho Federal de Enfermagem (COFEN), Fundação Oswaldo Cruz (FIOCRUZ). Relatório final da Pesquisa Perfil da Enfermagem no Brasil. 2017.

9. Matos Filho SA, Souza NVDO, Santos NA. Aspectos sociodemográficos, laborais e de saúde de trabalhadores de enfermagem de uma organização hospitalar. Open Sci Res II. 2022;1:531–43. DOI: https://doi.org/10.37885/220207701

10. Araújo MAN, Lunardi Filho WD, Alvarenga MRM, Oliveira RD, Souza JC, Vidmantas S. Perfil sociodemográfico dos enfermeiros da rede hospitalar. Rev enferm UFPE online. 2017;11(11):4546–53. DOI: https://doi.org/10.5205/1981-8963-v11i11a231214p4716-4725-2017

11. Farias JR, Chermont AG, Savino Neto S, Mauro MYC, Frazão AGF, Almeida CSC, *et al*. Riscos ocupacionais dos profissionais de enfermagem hospitalar: perfil sociodemográfico e laboral. Res Soc Dev. 2022;11(9):e38311931974. DOI: http://dx.doi.org/10.33448/rsd-v11i9.31974

12. Silva PRM, Araújo FL, Montenegro LC, *et al*. Socio-demographic and work profile of nursing professionals who provide care for children and adolescents with cancer. Revista de Enfermagem do Centro-Oeste Mineiro. 2021;11:e4067. DOI: http://doi.org/10.19175/recom.v11i0.4067

13. Valentini AB, Veloso FC, Abuchaim ESV, Santos VB, Lopes JL. Fatores de risco cardiovascular modificáveis em profissionais de enfermagem do setor de cardiologia: estudo transversal. Rev Eletrônica Enferm. 2020;22(59914):1–7. DOI: http://doi.org/10.5216/ree.v22.59914

14. Damiani B, Carvalho M. Illness in nursing workers: A literature review. Rev Bras Med do Trab. 2021;19(2):214–23. DOI: https://doi.org/10.47626%2F1679-4435-2020-592

15. Teixeira GS, Silveira RCP, Mininel VA, Moraes JT, Ribeiro IKS. Qualidade de vida no trabalho e estresse ocupacional da enfermagem em unidade de pronto atendimento. Texto e Contexto Enfermagem. 2019; 38:e20180298. DOI: http://dx.doi.org/10.1590/1980-265X-TCE-2018-0298

16. Pimentel NJS, Silva RRC, Oliveira YHA, Silva AGI. A satisfação dos trabalhadores de enfermagem como indicador de gestão. Rev Eletrônica Acervo Saúde. 2020;55(e3258):1–8. DOI: https://doi.org/10.25248/reas.e3258.2020

17. Santos EL, Silva CEP, Oliveira JM, Barros VF, Romão CMSB, Santos JJ, *et al*. Professional satisfaction of nurses in the intensive care unit environment. Rev Baiana Enferm. 2021;35(e42812):1–11. DOI: https://doi.org/10.18471/rbe.v35.42812

18. Ferreira PG, Fakuda CC. Felicidade no trabalho no Brasil: Uma revisão sistemática da literatura. Psicol Argumento. 2021;39(107):1321–46. DOI: https://doi.org/10.7213/psicolargum39.107.AO15

19. Sousa CNS, Silva FB, Silva JL, Santos AJA, Rocha EP, Mello FRF, *et al*. Analysis of occupational stress in nursing: integrative review. Rev Eletrônica Acervo Saúde. 2020;52(e3511):1–8. DOI: https://doi.org/10.25248/reas.e3511.2020

20. Santana LC, Ferreira LA, Santana LPM. Estresse ocupacional em profissionais de enfermagem de um hospital universitário. Rev Bras Enferm. 2020;73(2):1–7. DOI: http://dx.doi.org/10.1590/0034-7167-2018-0997

21. Videira I, Martins R. Laughter therapy: benefits in humor and hapiness for health professionals. Gestão E Desenvolv. 2023;31:103–121. DOI: https://doi.org/10.34632/gestaoedesenvolvimento.2023.11845

22. Calil TZN, Francisco CM. Estratégias nas instituições de saúde para reduzir estresse na enfermagem. Revista Recien. 2020; 10(29):40-7. DOI: https://doi.org/10.24276/rrecien2358-3088.2020.10.29.40-47