

## QUALITY OF PROFESSIONAL LIFE IN THE NURSING STAFF OF THE SECTORS DEDICATED TO COVID-19 CARE

### QUALIDADE DE VIDA PROFISSIONAL NA EQUIPE DE ENFERMAGEM DOS SETORES DEDICADOS AO ATENDIMENTO DA COVID-19

### CALIDAD DE VIDA PROFESIONAL DE LOS TRABAJADORES EM ENFERMERÍA DEDICADA A LA ATENCIÓN DEL COVID-19

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#### ABSTRACT

**Objective:** to verify the Professional Quality of Life scores of the nursing team in the sectors dedicated to caring for patients with COVID-19. **Methods:** cross-sectional study, developed in a public hospital in the south of the country, from February to June 2021, with the nursing team from units dedicated to caring for patients with COVID-19. A sociodemographic questionnaire and the Professional Quality of Life scale were used. Data analysis occurred using descriptive and analytical statistics. **Results:** the sample consisted of 157 nursing professionals, with a mean age of  $39.6 \pm 7.9$  years. A medium and high level of compassion satisfaction (114;72.3%) was identified in most of the team, but also medium and high scores of burnout (112;71.3%) and secondary traumatic stress (113;72%). **Conclusion:** there were worrying levels of burnout and secondary traumatic stress, but professionals had compassion satisfaction as a protective factor.

**Descriptors:** COVID-19; Compassion Fatigue; Burnout, Professional; Nursing, Team

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## RESUMO

**Objetivo:** verificar escores de Qualidade de Vida Profissional da equipe de enfermagem dos setores dedicados ao atendimento de pacientes com COVID-19. **Métodos:** estudo transversal, desenvolvido em um hospital público do sul do país, de fevereiro a junho de 2021, com a equipe de enfermagem das unidades dedicadas ao atendimento de paciente com COVID-19. Utilizou-se um questionário sociodemográfico e a escala de Qualidade de Vida Profissional. A análise dos dados ocorreu por meio de estatística descritiva e analítica. **Resultados:** a amostra foi composta por 157 profissionais da enfermagem, com média de idade de  $39,6 \pm 7,9$  anos. Identificou-se nível médio e elevado de satisfação por compaixão (114;72,3%) na maioria da equipe, mas também escores médios e altos de burnout (112;71,3%) e de estresse traumático secundário (113;72%). **Conclusão:** verificaram-se níveis preocupantes de burnout e estresse traumático secundário, mas os profissionais possuíam a satisfação por compaixão como fator de proteção.

**Descritores:** COVID-19; Fadiga de Compaixão; Esgotamento Profissional; Equipe de Enfermagem

## RESUMEN

**Objetivo:** verificar los puntajes de Calidad de Vida Profesional del equipo de enfermería en los sectores dedicados a la atención de pacientes con COVID-19. **Métodos:** estudio transversal, desarrollado en un hospital público del sur del país, de febrero a junio de 2021, con el equipo de enfermería de unidades dedicadas a la atención de pacientes con COVID-19. Se utilizó un cuestionario sociodemográfico y la escala de Calidad de Vida Profesional. El análisis de los datos se realizó mediante estadística descriptiva y analítica. **Resultados:** la muestra estuvo compuesta por 157 profesionales de enfermería, con una edad media de  $39,6 \pm 7,9$  años. Se identificó en la mayoría del equipo un nivel medio y alto de satisfacción por compasión (114; 72,3%), pero también puntuaciones medias y altas de burnout (112; 71,3%) y estrés traumático secundario (113; 72%). **Conclusión:** hubo niveles preocupantes de burnout y estrés traumático secundario, pero los profesionales tuvieron la satisfacción por la compasión como factor protector.

**Descriptor:** COVID-19; Desgaste por Empatía; Agotamiento Profesional; Grupo de Enfermería

## INTRODUCTION

COVID-19 is a disease caused by SARS-CoV-2, which has a high rate of infectivity, pathogenicity, and virulence. The outbreak was initially identified in Wuhan, Hubei Province, in the People's Republic of China. In late 2019, the World Health Organization (WHO) received information about cases of “viral pneumonia of unknown cause,” which was soon considered a public health emergency

and declared a pandemic on March 11, 2020. On that day, there were already 118,000 cases in 114 countries and 4,291 deaths.<sup>1</sup>

In this scenario, the Unified Health System (SUS) played a vital role, assisting the population throughout the pandemic period. However, it also ended up exposing its infrastructure weaknesses in providing care to patients with medium and high complexity, as well as the precariousness of

the workforce, with an inadequate number of professionals and a lack of preparation to act in pandemic situations.<sup>2</sup>

Healthcare professionals are at risk for COVID-19 because they are directly exposed to infected patients, which causes them to receive a high viral load. Since the beginning of the pandemic in March 2020, until February 2021, the Federal Nursing Council (COFEN) recorded 564 nurses, nursing technicians and assistants who died from COVID-19. São Paulo was the state with the highest incidence of fatalities, with 87 deaths. Rio de Janeiro came next, with 59. In third place was Amazonas, with 44.<sup>3,4</sup>

In this context, health professionals have been constantly subjected to intense stress in their daily work routine, working in inadequate working conditions. Furthermore, it is important to mention that the health workforce is not homogeneous, with significant differences in gender, race and social class. The professional/patient relationship in traumatic events of suffering and intense pain or risk of death increases the chance of damage to the professional's health, thus increasing the expenditure of physical and mental energy, leaving the worker vulnerable to stress and occupational exhaustion.<sup>4</sup>

However, it is possible to maintain a balance between positive and negative feelings related to work. This balance is

called Professional Quality of Life (PQL). QoL incorporates two aspects: compassion satisfaction (positive feelings) and compassion fatigue (negative feelings). Compassion satisfaction (CS) is characterized by the feelings of well-being and pleasure obtained through work. It's the satisfaction felt from helping people who have experienced a traumatic event, the ability to contribute to a healthy working environment or even to society. In contrast, compassion fatigue (CF) results from prolonged exposure to compassion stress and is divided into two dimensions: burnout and secondary traumatic stress.<sup>5</sup>

In view of the above, the objective of the study is to verify QVP scores in the nursing team of the sectors dedicated to the care of patients with COVID-19. The result of this research can serve to support prevention and health promotion activities for nursing workers, as well as for the management of health services.

## **METHODS**

This is a cross-sectional study, carried out from February to June 2021. This design recommends that data collection be carried out at a specific time. They are appropriate for describing the situation or the relationships between phenomena at a fixed point in time.<sup>6</sup>

The research was conducted at a public university hospital in southern Brazil, which provides care primarily to patients enrolled in the SUS. It has 842 inpatient beds and a modern structure for diagnosing and treating various pathologies in 60 specialties. The study was conducted with professionals from the sectors that were designated as specific locations for treating patients with COVID-19, including the emergency department, Intensive Care Unit (ICU) and inpatient units, with the following number of beds: Emergency B (13 beds), ICU 2 (13 beds), ICU A and block B (18 beds) and inpatient units 9 South (18 beds) and 7 South (32 beds).

The target population consisted of 340 nursing professionals, of which 220 were nursing assistants and technicians and 120 were nurses. For the purposes of the research, the professionals were stratified by area of activity and professional activity. The WinPepi program, version 11.65, was used to calculate the sample size. Considering a stratified random sample with 80% power, a significance level of 5% and a minimum correlation of 0.25, the sample size was at least 124 individuals, of which 25% (31) were nursing assistants, 25% (31) were nursing technicians and 50% (62) were nurses. All professionals assigned to these sectors were invited to participate in the study, characterizing a convenience sample.

Nurses, nursing technicians and nursing assistants of both sexes, who are active in their position, admitted for more than 90 days, in any of the three work shifts, who have directly cared for patients with COVID-19 in exclusive units for COVID-19, were included. Professionals who were pregnant or breastfeeding; on prolonged leave (social security benefits and maternity leave), on vacation and who returned less than 15 days ago from these leaves were excluded.

Data collection was carried out by the authors of the research, who approached the professional during working hours. The instruments used were a sociodemographic questionnaire and the QVP scale. The first aimed to collect sociobiographical data (age, marital status, number of children, education, religion), socio-occupational data (professional category, length of service, area of activity in the institution, work shift, income, weekly workload, number of jobs), health conditions and presence of previous illnesses.

The Professional Quality of Life Scale (ProQOL-IV) was created by Stamm (2005) and validated for Portuguese by Lago and Codo (2013). It consists of 28 items divided into two factors: Compassion Satisfaction (SC) and Compassion Fatigue (CF), with 15 and 13 items, respectively. The CF, in turn, consists of items on secondary traumatic stress (STS) and

Burnout. Through the ProQOL-IV, it is possible to assess the QOL of individuals who provide individual or community assistance to people in situations of pain, suffering or risk of death.<sup>7,8</sup>

The instrument's response scale is of the Likert type, ranging from 0 to 5 points, where 0 = never, 1 = rarely, 2 = a few times, 3 = sometimes, 4 = often and 5 = almost always. According to the Manual of the fifth version of ProQol, the quartile criteria (25% and 75%) were used to establish cutoff points, depending on the score achieved in each factor, it can be considered low, moderate or high in each dimension.

The data were grouped into spreadsheets using the SPSS statistical package, version 27. The variables were analyzed individually using descriptive statistics, with the calculation of the mean and standard deviation or median and interquartile range for quantitative variables, and absolute and relative frequency for qualitative variables. Pearson's chi-square test was used to compare proportions. The significance level adopted was 5% ( $p < 0.05$ ) and the analyses were performed using the SPSS program, version 21.0.

Table 1 presents the health characteristics of nursing professionals.

**Table 1.** Description of the physical and psycho-emotional health characteristics of nursing professionals in the sample. Brazil, 2022.

Health characteristics (n=157)	Results n(%)
Do you have any health problems?	35(22.3)

This work is linked to the matrix research called “Non-psychotic mental disorders and quality of professional life in the nursing team in times of COVID 19”, approved by the Research Ethics Committee under number CAEE 23346619.0.0000.5327.

## RESULTS

The sample consisted of 157 nursing professionals, 112 (71.3%) nursing assistants and technicians and 45 (28.7%) nurses.

Regarding sociodemographic data, the average age was  $39.6 \pm 7.9$  years, 110 (70.5%) had a partner and 111 (70.7%) had children.

Regarding the work sectors, 58 (36.9%) were from the ICU, 39 (24.8%) from the emergency room and 60 (38.2%) from the hospitalization units, 58 (36.9%) from the day shift and 99 (63.1%) from the night shift. Furthermore, 46 (29.3%) had another employment relationship, 112 (71.3%) worked overtime during the pandemic and 144 (92.3%) cared for patients with COVID-19 for more than 60 days.

Do you use any type of medication?	57(36.3)
There was a prolonged absence due to health problems	51(32.5)
Practice physical activity	68 (43.3)
Perform some integrative practice	16(10.2)
Provides mental health support	16(10.2)
Drink some amount of alcohol	79(50.3)
BMI classification	
Normal	43(27.4)
Overweight	68(43.3)
Obesity	46(29.3)

Source: survey data, 2024.

There was a high number of professionals classified as overweight and obese (total 114; 72.6%) and who drink alcohol (79; 50.3%). Table 2 presents the descriptive analysis of the scale dimensions.

**Table 2.** Descriptive analysis of means, standard deviation and interquartile range, according to the dimensions of professional quality of life. Brazil, 2022.

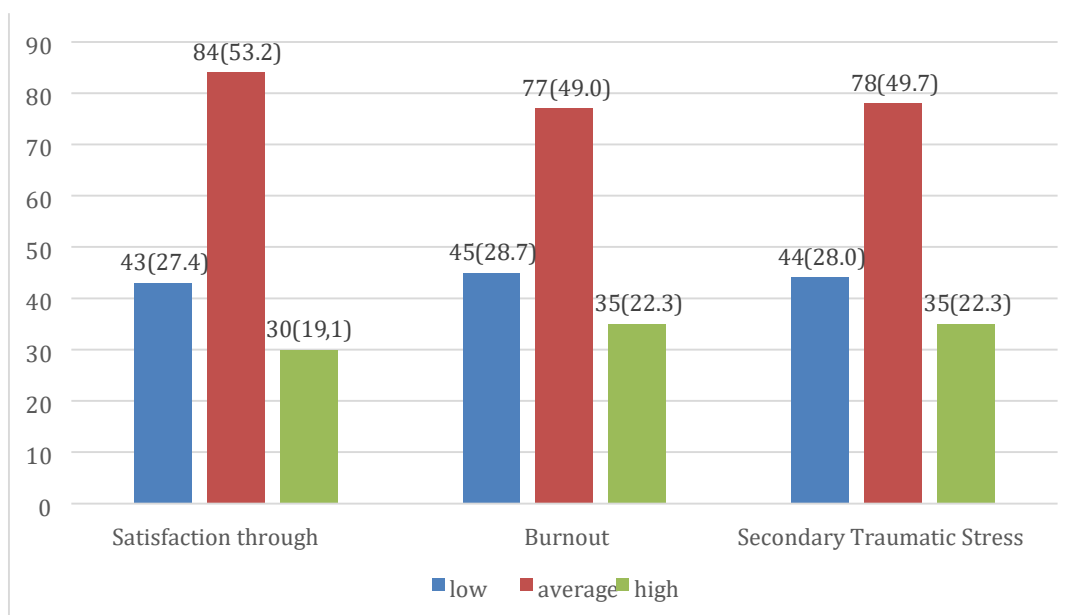
	Min	Max	Average	DP	P25	P50	P75
Compassion Satisfaction	24.0	50.0	42.5	5.2	39.0	43.0	47.0
Burnout	12.0	41.0	24.3	5.3	20.0	25.0	28.0
Secondary Traumatic Stress	2.0	36.0	13.1	7.3	8.0	12.0	18.0

Min.: minimum; max.: maximum, SD: standard deviation.

Source: survey data, 2024.

Graph 1 presents the descriptive analysis of the SC, ETS and nursing team burnout categories.

**Graph 1.** Descriptive analysis of the categories of compassion satisfaction, burnout and secondary traumatic stress of the nursing team. Brazil, 2022.



Categorization according to interquartile range  
Source: survey data, 2024.

It can be seen that in this sample a considerable percentage of participants presented medium and high levels of SC, burnout and ETS. Table 3 presents the

analysis of the subscales of the QVP dimensions according to the professional category.

**Table 3.** Distribution of absolute and percentage frequency of satisfaction due to compassion, burnout and secondary traumatic stress according to category of nursing professionals. Brazil, 2022.

		Professional category		P*
		Assistants/technicians (n=112)	Nurses (n=45)	
SC	low	32(28.6)	11(24.4)	0.547
	average	61(54.5)	23(51.1)	
	high	19(16.9)	11(24.5)	
BO	low	37(33.0)	8(17.8)	0.130
	average	53(47.3)	24(53.3)	
	high	22(19.7)	13(28.9)	
ETS	low	33(29.5)	11(24.4)	0.800
	average	55(49.1)	23(51.1)	
	high	24(21.4)	11(24.4)	

\*Chi-square test  
Source: survey data, 2024.

When evaluating SC, ETS and burnout among assistants/technicians and nurses, it was observed that there was no

statistically significant difference. Table 4 presents the analysis of the subscales of the QVP dimensions according to the shift.

**Table 4.** Distribution of absolute and percentage frequency of satisfaction with compassion, burnout and secondary traumatic stress according to work shift. Brazil, 2022.

		Shift		p*
		Daytime(n=58)	Night(n=99)	
SC	low	14(24.1)	29(29.3)	0.825
	average	34(58.6)	50(50.5)	
	high	10(17.3)	20(20.2)	
BO	low	10(17.3)	35(35.4)	0.069
	average	32(55.2)	45(45.5)	
	high	16(27.5)	19(19.1)	
ETS	low	12(20.7)	32(32.3)	0.022
	average	31(53.5)	47(47.5)	
	high	15(25.8)	20(20.2)	

\*Chi-square test

Source: survey data, 2024.

There was a statistically significant difference in the ETS values between shifts, where the average scores were higher among daytime professionals when compared to nighttime professionals ( $p=0.022$ ).

## DISCUSSION

This study identified the presence of burnout at levels medium (49%) and high (22.3%), ETS at medium (49.7%) and high (22.3%) levels, as well as medium (49%) and high (19.1%) SC, with averages of  $42.5 \pm 5.2$  in SC,  $24.3 \pm 5.3$  in burnout and  $13.1 \pm 7.3$  in ETS. The pandemic was a critical period for nursing professionals, with increased workload, exposure to even more precarious working conditions than usual, psychological suffering due to uncertainty and daily confrontation with death. Exposure to the virus and illness from COVID-19, of the professional, their

family and colleagues, left the worker vulnerable.<sup>9</sup>

The presence of burnout and ETS may probably be representing the impact of the pandemic on the mental health of professionals. This data reinforces that factors such as the work environment, patient aspects and the worker's own characteristics may directly influence CF, even during a pandemic period.

However, considerable levels of SC were also observed, a fact that may have minimized the illness of some professionals, serving as a protective factor. It is noteworthy that, although the professionals reported that they did not receive regular monitoring regarding their emotional health, the company provided support in the form of discussion and listening groups, which may have contributed to the increase in SC levels.



When comparing the findings of this study with results prior to the pandemic, a study conducted with emergency and urgent care nurses found lower values of SC ( $37.1 \pm 5.9$ ), as well as higher averages of burnout ( $26.0 \pm 5.6$ ) and ETS ( $23.9 \pm 5.5$ ). The author found that nurses who did not engage in leisure activities were more exposed to burnout and ETS, which confirms the hypothesis that professionals who do not invest in their personal quality of life are at greater risk of compassion fatigue.<sup>10</sup>

Although a higher percentage of nurses presented burnout and ETS at medium and high levels, there was no statistically significant difference when compared to mid-level professionals. A study on mental health conducted with nursing professionals in the northeast identified that technical-level professionals were those who presented the highest rate of absence from work (68.1%), with a high prevalence of mood disorders. The author relates this result to the fact that technicians are in greater numbers within hospitals and have more direct contact with patients.<sup>11</sup>

There was a statistically significant difference between day and night shift workers in relation to ETS, with higher averages among day shift professionals than night shift professionals ( $p=0.022$ ). Research conducted with primary care nurses found that HR decreases as

professional experience increases, which leads us to observe that the night shift is made up of more experienced professionals with more time in the profession, while the day shift is made up of professionals who have recently graduated or have little professional experience.<sup>12</sup>

Regarding physical health, in this sample it was identified that more than half of the participants were overweight or obese, a condition acquired prior to the pandemic, which raises a warning, since weight gain and increased waist circumference are important markers of Systemic Arterial Hypertension (SAH), with obesity being the main indicator of cardiovascular risk in 75% of men and 65% of women. Scientific evidence directly or indirectly links obesity to high-risk factors for COVID-19, and people with DM, SAH and severe obesity are more likely to be infected and to manifest more complications and to progress to death.<sup>13</sup>

The presence of overweight and obesity in COVID-19 makes professionals more susceptible to a worse prognosis. Studies have shown that patients with obesity are more likely to be hospitalized compared to other individuals when infected with the influenza virus. This association is more important when exploring SARS-CoV-2, since there is genetic affinity between the current virus and previous forms of the coronavirus. A

review of the literature identified that obesity is one of the comorbidities that led to hospitalization, occurring in 48.3% of cases.<sup>14</sup>

Healthy lifestyle habits have a positive impact on health, one example being physical activity. Of the professionals surveyed, less than half practiced some type of activity. A survey conducted during the pandemic found that professionals who practice some type of physical activity routinely have better SC levels, and consequently, a better quality of professional life.<sup>15</sup>

The COVID-19 pandemic has heightened the need for healthcare, and as a result, professionals have been overworked in a way that has never been experienced before. They have also been exposed to countless stressful situations. As a result, society and healthcare professionals committed to caring for infected people have become mentally ill. In addition to harming professionals, these conditions also have a future impact on absenteeism and the quality of care.<sup>16</sup>

Given the relevance of this topic, it is believed that the evidence provided will contribute to scientific production on the quality of life of nursing professionals in the care of patients with COVID-19, highlighting the importance of preventing and reducing several factors and thus achieving greater satisfaction, motivation

and conditions that negatively affect the quality of life of these professionals, directly impacting the quality of care provided to the patient. However, the positive impacts were the notoriety of nursing, as the development of this research corroborates the reaffirmation of the professional and its importance in the face of health care essential to human life.

## CONCLUSION

This study aimed to evaluate the QVP of nursing professionals during the COVID-19 pandemic. The results showed high levels of negative experiences (BO and ETS), but also high SC, which may have acted as a protective factor against illness.

As a limitation of this study, we can point out the cross-sectional design, which prevents us from assessing the influences of variables over time. The second is the fact that participants may have answered the questions during or after a stressful workday, which may have influenced the result. However, as mitigating factors, we highlight the use of an established instrument that is widely used in the literature, and the recognized importance of assessing QVP.

It is understood that monitoring of professionals who worked during the pandemic must be continuous over the next few years. Stress management programs and interventions to reduce the effects of CF

need to be tested and implemented in health institutions, aiming to support programs to reduce harm to workers' health in the post-COVID-19 period.

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