

INVESTIGATION ARTICLE

## Compassion fatigue among nursing workers in critical care hospital units

Fatiga por compasión entre trabajadores de enfermería en unidades hospitalarias de cuidados críticos

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### Abstract

**Objective:** To identify the presence of compassion fatigue among nursing professionals in critical care units in a Brazilian university hospital and analyze its association with sociodemographic and professional characteristics. **Method:** This is a cross-sectional, descriptive and correlational study carried out with nursing professionals from an emergency care unit and three intensive care units of a Brazilian university hospital. Data collection took place between August and December 2019. A sociodemographic questionnaire and the fourth version of the Professional Quality of Life Scale, translated and validated in Brazil (ProQol-BR), were used. **Results:** Twenty-eight (19.2%) professionals presented compassion fatigue, of which 16 (57.1%) were nursing technicians. Most professionals with compassion fatigue were female (82.1%), aged between 18 and 39 years (60.7%), married (71.4%), had completed university education (50.0%), worked in the Emergency Service (50.0%), less than two years ago (35.7%), worked at night (42.9%), performed care activities (85.7%), had an income of two to five minimum wages (64.3%), had no other paid activity (89.3%) and did not practice physical activity (53.6%). **Conclusion:** Compassion fatigue affects a significant portion of health professionals, especially nursing technicians. Factors such as intense workload, night hours and lack of physical activity are determinant for the development of this condition. This highlights the urgent need to implement specific strategies to prevent and manage compassion fatigue in the workplace.

**Keywords:** nursing professionals; compassion fatigue; mental health; occupational health; critical care nursing.

### Resumen

**Objetivo:** Identificar la presencia de fatiga por compasión entre los profesionales de enfermería de las unidades de cuidados intensivos de un hospital universitario brasileño y analizar su asociación con características sociodemográficas y profesionales. **Método:** Se trata de un estudio transversal, descriptivo y correlacional, realizado con profesionales de enfermería de una unidad de emergencia y de tres unidades de cuidados intensivos de un hospital universitario brasileño. La recolección de datos se realizó entre agosto y diciembre de 2019. Se utilizó un cuestionario sociodemográfico y la cuarta versión de la *Professional Quality of Life Scale*, traducida y validada en Brasil (*ProQol-BR*). **Resultados:** Veintiocho (19,2%) profesionales presentaron fatiga por compasión, de los cuales 16 (57,1%) son técnicos de enfermería. La mayoría de los profesionales con fatiga por compasión son mujeres (82,1%), con edades entre 18 y 39 años (60,7%), casados (71,4%), con estudios superiores (50,0%), trabajaban en Urgencias (50,0%), llevaban menos de dos años (35,7%), trabajaban de noche (42,9%), realizaban actividades asistenciales (85,7%), con ingresos de entre dos y cinco salarios mínimos (64,3%), no tenían

otro trabajo remunerado (89,3%) y no practicaban actividad física (53,6%). **Conclusión:** La fatiga por compasión afecta a una proporción significativa de profesionales sanitarios, especialmente a los técnicos de enfermería. Factores como la intensa carga de trabajo, los turnos nocturnos y la falta de actividad física son determinantes en el desarrollo de esta patología. Esto pone de manifiesto la urgente necesidad de implementar estrategias específicas para prevenir y gestionar la fatiga por compasión en el lugar de trabajo.

**Palabras clave:** profesionales de enfermería; fatiga de la compasión; salud mental; salud ocupacional; enfermería de cuidados críticos.

## Introduction

In Brazil, nursing professionals are essential for the Unified Health System (SUS), working in areas such as Primary Care and hospital clinics. The team includes nurses with university education, technicians and nursing assistants with high school technical training (Law number 7.498; Silva & Machado, 2020). Nurses are responsible for supervising technicians and assistants, as well as conducting consultations, prescribing prescriptions, providing complex care and making immediate decisions. Mid-level professionals, on the other hand, offer direct and continuous care, under the supervision of nurses (Law number 7,498).

Worldwide, the nursing team has 27.9 million professionals, including approximately 19.3 million nurses. Between 2013 and 2018, there was an increase of 4.7 million professionals, consolidating nursing as the largest occupational health group, with 59% of workers in the sector (Mendes & Ventura, 2017; World Health Organization, 2020). In Brazil, nursing professionals constitute 50% of the health workforce, totaling more than two million people. These professionals are divided into nurses (23%), nursing technicians (57%) and nursing assistants (20%) (Conselho Federal de Enfermagem, 2019). Approximately half of these workers face precarious conditions, such as low wages, informality in hiring and high unemployment rates. In addition, there is a significant concentration of professionals in capitals and metropolitan regions, resulting in a shortage of workers in peripheral and less developed areas (Santos et al., 2023). These conditions make nursing professionals vulnerable to illness due to work overload, especially in complex care units such as Urgency, Emergency and Intensive Care Units (ICU), where they face exacerbated human suffering (Ames et al., 2017; Rocha et al., 2017). Nursing work in urgent, emergency and intensive care units is complex and marked by tension, exhaustion and physical and emotional wear and tear (Lourenção et al., 2023; Redü et al., 2024). In this context, the psychological illness of workers is associated with negative feelings generated by the lack of recognition and low professional appreciation, which causes dissatisfaction and harms interpersonal relationships (Cordioli et al., 2019; Julio et al., 2022).

In addition, factors such as a constant sense of loss and grief, work-related anxiety, and rigid and inflexible routines can intensify suffering in the work environment (Julio et al., 2021; Rotta et al., 2016; Souza et al., 2019), contributing to the development of compassion fatigue. This fatigue results from the deep involvement of the professional with traumatic situations, which leads to negative attitudes and feelings due to the stress caused by the desire to help patients in pain and distress. As a result, the professional ends up becoming physically and mentally exhausted (Borges et al., 2019; Lourenção et al., 2023; Pehlivan & Güner, 2018).

Compassion fatigue is seen as one of the main threats to the mental health of healthcare workers. It is associated with the experience of compassion, which involves concern and anguish for the well-being of others, in reaction to the stress and discomfort caused by the suffering of others (Lago & Codo, 2013). According to the Professional Quality of Life model, compassion fatigue is a result of the combination of high levels of burnout and secondary traumatic stress associated with low compassionate satisfaction. The burnout dimension evaluates feelings of hopelessness and difficulties in performing work effectively. The secondary traumatic stress dimension analyzes the trauma caused by exposure to people who have experienced stressful or traumatic events, manifested by fear, insomnia, intrusive images or avoidance of memories. The dimension satisfaction with compassion measures the pleasure and satisfaction resulting from good work in helping others (Borges et al., 2019; Duarte, 2017; Lago & Codo, 2013).

Fabri et al. (2021) identified that nurses in Primary Health Care units in Brazil showed signs of compassion fatigue, despite high compassion satisfaction. In Portugal, nurses in urgency and emergency units showed compassion fatigue, with high levels of burnout and secondary traumatic stress (Borges et al., 2019). It is assumed that in Brazil, nurses in university hospitals also faced high rates of compassion fatigue, even before the COVID-19 pandemic.

In Brazil, the nursing team consists of three professional categories, while in other countries there are only nurses (university education professionals). For this reason, we understand that the inclusion of professionals from the three categories (nurses, nursing assistants and technicians) in this study represents an additional contribution to the literature.

Given the above, this study aimed to identify the presence of compassion fatigue among nursing professionals in critical care units in a Brazilian university hospital and analyze its association with sociodemographic and professional characteristics.

## Method

### Study design

This is a cross-sectional, descriptive and correlational study, carried out between August and December 2019, with nursing professionals from the Emergency Department and Intensive Care Units of a university hospital in southern Brazil.

Teaching hospital Dr. Miguel Riet Corrêa Jr. is the teaching hospital of the Federal University of Rio Grande, in the state of Rio Grande do Sul, Brazil. It is a medium-sized hospital and reference in health care in the south of the state. It has a total of 221 beds distributed in various specialties, with a limited number of beds per operating unit. The total nursing team of the hospital is composed of 497 professionals, 146 nurses, 133 nursing assistants and 218 nursing technicians.

The number of professionals varies between units and the number of patients per nursing professional also varies between different units. This number can also vary at different times of the year.

### Sample and Participants

This study included all nursing professionals who worked in the Emergency Room (ER) and in the three Intensive Care Units (ICU) of the University Hospital Dr. Miguel Riet Corrêa Jr. (adult ICU, pediatric ICU and neonatal ICU) for at least six months, so that they were adapted to organizational dynamics. Professionals who did not meet these criteria and those who were on sick leave and/or vacation at the time of data collection were excluded from the study.

Thus, the study population consisted of 146 nursing professionals, 41 (28.1%) nurses, 92 (63.0%) nursing technicians and 13 (8.9%) nursing assistants. Sampling was done for convenience. All eligible professionals were invited to participate in the study and adherence was 100%.

Although there is a balance in the distribution of the total number of hospital nursing professionals among the different categories (nurses, nursing technicians and nursing assistants), this is not the rule for all units. In the case of the studied units (ER and ICU), due to the greater complexity of care, it is common for the teams to be composed of professionals with a higher level of qualification, such as nurses and nursing technicians, to the detriment of nursing assistants.

### Data Collection Instruments and Procedures

Data were collected by students from the Graduate Nursing Program and researchers from the School of Nursing of the Federal University of Rio Grande, participating in the multicenter study "Compassion fatigue, work engagement, occupational stress and musculoskeletal symptoms in nursing professionals of university hospitals".

Professionals were approached individually or in groups, in their respective workplaces, and invited to participate in the study. When they accepted, they signed the Informed Consent Form, received the printed questionnaire and had a deadline to respond until the next shift. At the end of this period, the researchers returned to the sectors to collect the completed questionnaires, without identification. For cases in which professionals forgot or claimed not to have had time to answer the instruments, the deadline was extended until the next shift.

For data collection, two self-administered instruments were used: a questionnaire containing sociodemographic variables (professional category, sex, age, marital status and education) and professional variables (work sector, type of activity, work shift, family income, time working, if you have another job), and the fourth version of the Professional Quality of Life Scale, translated and validated in Brazil (ProQol-BR) (Lago & Codo, 2013).

ProQol-BR is composed of 30 questions, with answers in a Likert scale, directed to the worker's experiences with compassion. The answers to the questions are: never = 0; rarely = 1; sometimes = 2; often = 3; very often = 4; almost always = 5.

The items of ProQol-BR comprise three dimensions related to the quality of professional life. Each consists of 10 items, as follows: items 3, 6, 12, 16, 18, 20, 22, 24, 27 and 30 assess satisfaction with compassion (SC); items 1, 4, 8, 10, 15, 17, 19, 21, 26 and 29 assess Burnout (BO); items 2, 5, 7, 9, 11, 13, 14, 23, 25 and 28 assess Secondary Traumatic Stress (STS). To determine the score of each dimension, it is necessary to sum the score of the 10 items. However, to calculate the scores, it is necessary to reverse the values of items 1, 4, 15, 17 and 29. Compassion fatigue is a result of the association between high levels of burnout and secondary traumatic stress (Stamm, 2010).

## Ethical considerations

The study received ethical approval from the Institutional Research Ethics Committee (Certificate of Presentation and Ethical Appreciation: 93476218.2.0000.5324; Opinion: 2.896.620, of September 15, 2018). Participants were included in the study after obtaining their informed consent. All procedures performed were compatible with the ethical standards of the institutional research committee and the Declaration of Helsinki.

## Data analysis

Data were stored in a Microsoft Excel® spreadsheet and analyzed with the SPSS® software, version 25.0. Descriptive statistics (frequencies, mean, median, minimum and maximum values and standard deviation) and inferential statistics (Pearson correlation coefficient, t test and Mann-Whitney test) were used, with p values  $\leq 0.05$  being considered significant. The correlation between the variables was classified as weak if  $r \leq 0.30$ ; moderate if  $r \geq 0.40$  and  $\leq 0.60$ ; and strong if  $r \geq 0.70$  (Carvalho et al., 2023). The Kolmogorov-Smirnov test was applied to verify the normality of the data distribution.

The calculation of the cutoff points of the ProQol-BR scale was performed according to the guidelines of The Concise ProQol Manual (Stamm, 2010). The raw scores of the ProQol-BR dimensions (SC: satisfaction with compassion; BO: burnout and STS: secondary traumatic stress) were transformed into Zscores through descriptive analysis, selecting the command "save standardized values as variables". Then, the Zscores were transformed into tscores, using the formulas:  $(ZSC*10)+50$ ;  $(ZBO*10)+50$ ;  $(ZSTS*10)+50$ , allowing the comparison of the three dimensions.

The reliability of the subscales was assessed using Cronbach's alpha coefficient. We considered the internal consistency weak if  $\alpha \geq 0.60$  and  $< 0.70$ ; reasonable if  $\alpha \geq 0.70$  and  $< 0.80$ ; good if  $\alpha \geq 0.80$  and  $\leq 0.90$ ; and very good if  $\alpha > 0.90$  (Lourenção et al., 2023).

## Results

A total of 146 nursing professionals participated in the study, 28.1% nurses, 63.0% nursing technicians and 8.9% nursing assistants. Age ranged from 23 to 62 years, with a mean of 37.6 years (95% CI: 36.2 to 38.9 years). There was a predominance of female professionals (80.8%), aged 18 to 39 years (58.9%), with complete university education (47.9%), married (67.1%) and with a family income of two to five minimum wages (60.3%). Regarding the workplace, 55.5% worked in the Urgency and Emergency sector, 8.9% in the Adult ICU, 26.7% worked in the Neonatal ICU and 8.9% in the Pediatric ICU. Professionals predominantly developed care activities (82.9%); worked the night shift, on a 12x36-hour scale (41.8%); had up to two years of work at University Hospital Dr. Miguel Riet Corrêa Jr. (42.5%), did not practice physical activity (58.9%) and had no other paid activity (87.0%) (Table 1).

**Table 1.** Sociodemographic and professional profile of nursing workers.

Variables	n	%
<b>Professional category</b>		
Nurse	41	28.1
Nursing technician	92	63.0
Nursing assistant	13	8.9
<b>Sex</b>		
Male	27	18.5
Female	118	80.8
Did not answer	1	0.7
<b>Age group (years)</b>		
18 to 39	86	58.9
40 to 59	45	30.8
60 or more	2	1.4
Did not answer	13	8.9
<b>Education</b>		
Elementary School	23	15.8
High School	52	35.6
Complete University Education	70	47.9
Did not answer	1	0.7
<b>Marital status</b>		
Married	98	67.1
Single	37	25.3
Separated	10	6.8
Widowed	1	0.7
<b>Family income*</b>		
Two to five minimum wages	88	60.3
From 6 to 10 Minimum Wages	46	31.5
Over 20 minimum wages	10	6.8
Did not answer	2	1.4
<b>Work sector</b>		
Emergency Service	81	55.5
Adult ICU	13	8.9
Neonatal ICU	39	26.7
Pediatric ICU	13	8.9
<b>Type of activity</b>		
Assistance	121	82.9

Administrative and Assistance	21	14.4
Did not answer	4	2.7
<b>Work shift</b>		
Morning (six hours)	43	29.5
Afternoon (six hours)	40	27.4
Night (12 x 36 hour scale)	61	41.8
Full Day (eight hours)	2	1.4
<b>Time working at the University Hospital Dr. Miguel Riet Corrêa Jr.</b>		
Up to two years	62	42.5
> two and ≤ five years	27	18.5
> five and ≤ 10 years	21	14.4
Over 10 years	31	21.2
<b>Practices regular physical activity</b>		
No	86	58.9
Yes	59	40.4
Did not answer	1	0.7
<b>Has other paid activity</b>		
No	127	87.0
Yes	17	11.6
Did not answer	2	1.4

\* Minimum wage amount: R\$998.00 / USD 236.29 (1 USD = R\$4.2235).

As observed in [Table 2](#), the Cronbach's alpha coefficient values for the Compassion Satisfaction (0.81), Burnout (0.79) and Secondary Traumatic Stress (0.78) subscales were obtained. In the general evaluation, nursing professionals from complex care units had scores compatible with a high level of compassion satisfaction (44.1) and low mean scores for burnout (19.3) and secondary traumatic stress (16.0).

The correlation analysis between the dimensions of quality of professional life revealed a negative and weak correlation between compassion satisfaction and secondary traumatic stress ( $r=-0.316$ ;  $p<0.001$ ); negative and moderate between compassion satisfaction and burnout ( $r=-0.491$ ;  $p<0.001$ ) and positive and moderate between burnout and traumatic stress ( $r=0.668$ ;  $p<0.001$ ) ([Table 2](#)).

**Table 2.** Scores of the ProQol-BR dimensions, according to the evaluation of nursing workers.

ProQol-BR dimensions	Cronbach's Alpha	Min	Max	Mean	Standard Deviation	Compassion satisfaction	Burnout
Compassion satisfaction	0.81	26.0	50.0	44.1	4.6		
Burnout	0.79	6.0	38.0	19.3	5.9	-0.491 (<0.001) <sup>†</sup>	
Secondary traumatic stress	0.78	4.0	39.0	16.0	7.1	-0.316 (<0.001) <sup>†</sup>	0.668 (<0.001) <sup>†</sup>

<sup>†</sup> Significant Pearson's Correlation Coefficient at the level of 0.01 (two-tailed).

The analysis of the dimensions of professional quality of life, according to ProQol-BR, in relation to sociodemographic variables did not show a statistically significant difference between compassion satisfaction and sociodemographic variables. As shown in [Table 3](#), the mean score for burnout was significantly higher among nurses ( $p=0.008$ ), workers with university education ( $p=0.012$ ) and those who perform care and administrative activities ( $p=0.018$ ) that professionals working in the morning; these professionals have a significantly higher score for secondary traumatic stress ( $p=0.033$ ).

There was no significant difference between the scores of the burnout and secondary traumatic stress dimensions and the variables sex, age group (years), marital status, family income, work sector, time working at the University Hospital Dr. Miguel Riet Corrêa Jr. and have another paid activity ( $p>0.05$ ).

**Table 3.** Scores of the burnout and secondary traumatic stress dimensions of ProQol-BR, according to sociodemographic and professional variables of nursing workers.

Variables	ProQol-BR dimensions		p-value
	Burnout	Secondary Traumatic Stress	
	Mean $\pm$ SD	Mean $\pm$ SD	
<b>Professional category</b>			
Nurse	21.6 (5.2)		0.008*
Nursing Technician	20.2 (8.1)		
Nursing Assistant	18.1 (5.6)		
<b>Education</b>			
Elementary School	16.3 (5.3)		0.012 *
High School	18.7 (6.0)		
Complete University Education	20.5 (5.8)		
<b>Type of activity</b>			
Assistance	18.9 (6.1)		0.018
Administrative and Assistance	21.5 (3.8)		
<b>Work shift</b>			
Morning (six hours)		18.3 (7.5)	0,033*
Afternoon (six hours)		15.1 (6.5)	
Night (12 x 36 hours)		15.0 (6.9)	
Full Day (eight hours)		16.5 (3.5)	
<b>Practices regular physical activity</b>			
No	20.8 (5.9)		0.017
Yes	18.3 (5.8)		

\*ANOVA. \*\* Student's t.

Considering percentiles as cutoff points, 26.1% of professionals had high compassion satisfaction; 17.5% had high burnout and 22.0% had high secondary traumatic stress. On the other hand, 26.1% of professionals had a low level of compassion satisfaction, 49.7% had a medium level of burnout and 46.1% had a medium level of secondary traumatic stress (Table 4).

**Table 4.** ProQol-BR cutoff points and frequencies of nursing workers by level of classification of the dimensions of quality of professional life.

ProQol-BR dimensions	Cut-off points - Percentiles (t scores)			Classification Levels n (%)		
	25	50	75	Low	Medium	High
	Compassion satisfaction	43.3	51.9	58.4	35 (26.1)	64 (47.8)
Burnout	42.8	49.5	54.6	45 (32.8)	68 (49.7)	24 (17.5)
Secondary traumatic stress	41.8	48.5	57.0	45 (31.9)	65 (46.1)	31 (22.0)

It was observed that 19.2% of professionals presented compassion fatigue, of which 57.1% were nursing technicians. Regarding sociodemographic and professional variables, it was observed that most professionals with compassion fatigue were female (82.1%), aged between 18 and 39 years (60.7%), married (71.4%), had completed university education (50.0%), worked in the Emergency Service (50.0%), less than two years ago

(35.7%), worked at night (42.9%), performed care activities (85.7%), had an income of two to five minimum wages (64.3%), had no other paid activity (89.3%) and did not practice physical activity (53.6%).

## Discussion

This study sought to identify the presence of compassion fatigue among nursing professionals and analyze how this condition is related to sociodemographic and professional characteristics. The results show that the profile of the professionals evaluated in this study portrays the profile of nursing in Brazil, a category composed predominantly of female, medium-level workers (nursing assistants and technicians), aged 26 to 40 years (Santos et al., 2023).

The scores obtained by professionals in complex care units in the dimensions related to compassion fatigue are similar to those presented by other studies (Borges et al., 2019; Lourenção et al., 2023) and show that these professionals have a positive view of their own effectiveness at work and feel extremely satisfied with performing their tasks, collaborating with the team and contributing to a healthy work environment (Carvalho et al., 2023; Lourenção et al., 2023).

The significantly higher levels of burnout observed in this study, among nurses, university education workers, who work in care and management, confirm that these professionals perform activities with a higher risk of burnout due to the greater workload, as they accumulate care and administrative activities, imposing greater responsibilities related to people management and conflicts present in the workplace (Membrive-Jiménez et al., 2020).

The constant presence of burnout and traumatic stress in the workplace can induce compassion fatigue, culminating in a compromise of overall well-being. Professionals in sectors such as health and care, when continuously dealing with situations of suffering, can experience significant emotional overload (Lourenção et al., 2023). This phenomenon not only compromises the psychological well-being of professionals but can also negatively affect the quality of care provided (Pehlivan & Güner, 2018).

The higher level of secondary traumatic stress found in this study among professionals working in the morning may be associated with the stress generated by the distribution of tasks. During this period, there is usually a greater concentration of procedures, such as bathing, medication administration, dressing changes, medical visits and adjacent interventions by other professionals, such as physical therapists. This can cause nursing professionals to not have enough time to work, leading them to stress and compromising their health and quality of life (Carvalho et al., 2023; Julio et al., 2021).

Nursing professionals working in complex care environments can develop compassion fatigue, secondary traumatic stress and burnout, requiring the implementation of therapeutic interventions aimed at health care and increasing the resilience of these workers (Borges et al., 2019). The number of Neonatal ICU nurses who report compassion fatigue is high, which makes the implementation of emotional health care urgent, as compassion fatigue points to a mental and physical illness resulting from chronic stress at work and subjective experiences suffered in a unique way by each professional in the course of the treatment of the patients they assist (Beck et al., 2017).

The mean values resulting from the cutoff points for the dimensions of the ProQol-BR scale observed in this study were similar to those found in other Brazilian (Lourenção et al., 2023) and non-Brazilian (Borges et al., 2019; Duarte, 2017) studies. There is a high percentage of professionals with medium and high rates of burnout and secondary traumatic stress, indicative of compassion fatigue, corroborating the national and international literature, which points to the nursing profession as a risk category (Borges et al., 2019; Fabri et al., 2021).

In this context, it is noteworthy that it is common for nurses to provide care to critically ill patients and develop feelings of compassion, as they see in their patients desires and sufferings that may be common to a family

member or to themselves (Borges et al., 2019; Rocha et al., 2017). However, when the feeling of compassion interferes with personal and emotional life and becomes a pathological psychological suffering, it can interfere with professional conduct and decision-making, compromising the quality of care (Julio et al., 2021; Pehlivan & Güner, 2018).

If not identified and treated in time, compassion fatigue can impair the care provided to users of health services, since nursing workers can develop defensive behaviors, such as detachment and denial of feelings, denial of the importance of the person, postponement of decisions and reduction of the feeling of responsibility, which may cause iatrogenesis (Al Barmawi et al., 2019; Lourenção et al., 2022).

A study carried out with ICU health professionals from four university hospitals in São Paulo showed the existence of an imbalance in the quality of professional life (QPL), indicating suffering of professionals. Imbalance occurs when negative experiences (such as secondary traumatic stress and burnout, which are related to compassion fatigue) prevail over positive experiences (such as compassion satisfaction). This can occur due to emotional and affective involvement with patients' suffering and pain or due to emotional exhaustion and frustration related to work and its conditions (Souza et al., 2019).

Complex care units, such as ICUs and the ER, appear to be more prone to the emergence of compassion fatigue due to the fact that patients are at greater risk of complications and deaths and the demand for specific professional skills and quick responses. Scores compatible with the presence of compassion fatigue among professionals working in these sectors, associated with lower scores of satisfaction with compassion, are directly related to the development of depression, anxiety and stress (Duarte, 2017).

However, work in other less critical health sectors, such as Primary Health Care units, can also lead to the emergence of compassion fatigue. Studies carried out in Brazil and Spain detected high levels of compassion fatigue and burnout in Primary Care service professionals and showed signs of fatigue among workers, even with high levels of satisfaction with compassion (Fabri et al., 2021; Ruiz-Fernández, Pérez-García & Ortega-Galán, 2020).

Nurses with little ICU experience tend to have higher compassion fatigue scores and are considered at high risk for psychological illnesses. In addition, workers who remain in these environments for periods of more than 40 hours per week are at greater risk for the development of compassion fatigue (Dikmen, Aydın & Tabakoğlu, 2016). Although the present study showed a low percentage of workers with other employment relationships, it is common for Brazilian nursing professionals to have more than one job and therefore work more than 60 hours per week, which can increase the risk of developing compassion fatigue, especially when working in critical sectors, such as ICUs. Another aspect that may contribute to the presence of high levels of compassion fatigue is young age (20 to 35 years), which is pointed out as more susceptible to the development of compassion fatigue (Dikmen et al., 2016) and, as demonstrated in this study, more than 50% of professionals were under 39 years old.

It is worth mentioning that there is an important relationship between the development of compassion fatigue, sex and the work environment. Although female professionals, predominant in Brazil, tend to present better levels of compassion satisfaction compared to males, the work environment/sector significantly impacts the secondary stress syndrome, which compromises the professionals' ability to solve problems and seek social support, favoring the development of compassion fatigue (Faria et al., 2021; Lago & Codo, 2013; Moretti et al., 2022). This aspect corroborates the results presented by the Brazilian professionals evaluated in this study and justifies the levels of compassion fatigue described in the literature among nursing workers in complex care units, since there is a great emotional burden on these professionals in relation to other nursing specialties (Dikmen et al., 2016).

The cross-sectional design of this study does not allow establishing cause and effect relationships. In addition, the unequal distribution of participants among professional categories limits the ability to make inferences and generalizations, especially in complex care units. In these units, the teams usually have more nurses and nursing technicians and fewer nursing assistants, which reflects the reality of Brazilian health services. In addition, the proportion of patients per nursing professional varies between units and can change throughout the year, affecting the emotional and physical conditions of workers. Despite these limitations, the results should be analyzed with caution, as they indicate the presence of compassion fatigue among nursing professionals in complex care units.

## Conclusion

The professional quality of life of nursing professionals working in complex care units of a Brazilian university hospital, assessed through the dimensions of Compassion Satisfaction, Burnout and Secondary Traumatic Stress, showed high levels of compassion satisfaction and medium levels of burnout and secondary traumatic stress. The analysis revealed a negative correlation of compassion satisfaction with burnout and secondary traumatic stress, and a positive correlation between burnout and secondary traumatic stress. Nurses and professionals with university education showed greater burnout, while morning workers had greater secondary traumatic stress.

The percentiles indicated that a considerable part of the professionals present high levels of satisfaction for compassion, burnout and secondary traumatic stress, although there are also a significant number with low or medium levels in these dimensions.

In addition, a considerable number of professionals showed signs of compassion fatigue, especially among nursing technicians, with a higher incidence among women, young people, married and with university education. Factors such as work in the Emergency Service, little experience, night work, and lack of physical activity were associated with compassion fatigue.

These results suggest that, despite a high satisfaction with general compassion, the significant presence of burnout and secondary traumatic stress, in addition to compassion fatigue in a fraction of professionals, targeted interventions are needed to improve the quality of professional life and well-being of these health workers. In addition, it is essential to include this subject in continuing education, so that professionals can identify the symptoms of compassion fatigue early and seek help as soon as possible, avoiding sick leave and improving their health, well-being and quality of life.

## Conflict of Interest

Nothing to declare.

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