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# Prevalence of burnout syndrome among nursing professionals in an emergency room and in an intensive care unit

*Síndrome de burnout em profissionais de enfermagem de unidade de pronto atendimento e de terapia intensiva*

DOI: 10.1590/0047-2085000000386

## ABSTRACT

**Objective:** To identify the presence of burnout syndrome among nursing professionals in the emergency room and intensive care unit for adults of the University Hospital of Maringá. **Methods:** This is an exploratory and descriptive research study with a quantitative approach. It was developed by applying a questionnaire containing 22 questions from the Maslach Burnout Inventory instrument, which identifies the symptomatology dimensions of the burnout syndrome. Data analysis of the Maslach Burnout Inventory instrument was performed by adding up each dimension (Emotional Exhaustion, Depersonalization and Professional Fulfillment) of each questionnaire separately, according to the nursing professional's answers to each question. The values obtained were compared to the reference values of the Nucleus for Advanced Studies on Burnout Syndrome. **Results:** It was found that 31.36% of the nursing professionals at the University Hospital of Maringá emergency room had high Emotional Exhaustion, 30.92% had low Professional Fulfillment, and 39.25% had high Depersonalization. Regarding the nursing professionals in the Intensive Care Unit for Adults, 36.36% had high Emotional Exhaustion, 36.36% had low Professional Fulfillment, and 22.73% had high Depersonalization. **Conclusion:** The findings suggest that the Intensive Care Unit for Adults in the morning shift is the highest stressor and with a greater probability of the professionals developing burnout syndrome.

## KEYWORDS

Nursing, burnout syndrome, mental health, intensive care unit for adults, emergency room.

## RESUMO

**Objetivo:** Identificar a existência da síndrome de *burnout* entre os profissionais de enfermagem de pronto atendimento e unidade de terapia intensiva adulto do Hospital Universitário de Maringá. **Métodos:** Trata-se de pesquisa exploratória, descritiva e de abordagem quantitativa. O estudo foi desenvolvido por meio da aplicação de um questionário contendo 22 questões do instrumento *Maslach Burnout Inventory*, o qual identifica as dimensões sintomatológicas da síndrome de *burnout*. A análise dos dados do instrumento *Maslach Burnout Inventory* foi realizada por meio do somatório de cada dimensão (exaustão emocional, despersonalização e realização profissional) de cada questionário, separadamente, de acordo com as respostas que o profissional de enfermagem respondeu em cada questão. Os valores obtidos foram comparados com os valores de referência do Núcleo de Estudos Avançados sobre a Síndrome de *Burnout*. **Resultados:** Constatou-se que 31,36% dos profissionais de enfermagem do pronto atendimento do Hospital Universitário de Maringá apresentaram alta exaustão emocional, 30,92%, baixa realização profissional e 39,25%, alta despersonalização. Com relação aos profissionais de enfermagem da unidade de terapia intensiva adulto, 36,36% apresentaram alta exaustão emocional, 36,36%, baixa realização profissional e 22,73%, apresentaram alta despersonalização. **Conclusão:** Os resultados sugerem que o setor de unidade de terapia intensiva adulto do período matutino é o maior estressor e com maior probabilidade de os profissionais desenvolverem a síndrome de *burnout*.

## PALAVRAS-CHAVE

Enfermagem, síndrome de *burnout*, saúde mental, unidade de terapia intensiva adulto, pronto atendimento.

Received in: Feb/15/2022. Approved in: Jul/11/2022

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## INTRODUCTION

For centuries, human beings have been pursuing their personal, professional and family needs, desires and adaptations. This search can often lead to mental imbalances, including stress<sup>1</sup>.

Stress is part of human beings' routine and can be understood as something positive, when it works as a guide, allowing the brain to be creative, to elaborate, and to link ideas<sup>2</sup>. It can also be described as a natural response of the organism in the face of new situations, especially those that are understood as threatening and, therefore, affecting individual and personal development. However, stress can also be seen as negative, generating several physical, psychological and cognitive symptoms, which can compromise the individual and trigger several pathologies, including burnout syndrome<sup>3,4</sup>.

The term burnout was first mentioned in 1969 by Schaufeli & Ezzmann. It became known through an article entitled Staff Burnout, published in 1974 by Herbert J. Freudembreguer, which addressed the problems health professionals went through<sup>5,6</sup>.

Burnout syndrome, or professional exhaustion syndrome, is an emotional disorder with symptoms of extreme exhaustion, stress and physical exhaustion resulting from exhausting work situations, requiring plenty of competitiveness or responsibility<sup>7</sup>.

On May 28<sup>th</sup>, 2019, the World Health Organization updated the definition of burnout syndrome as a "conceptual syndrome resulting from chronic workplace stress that has not been successfully managed" and stated that the syndrome will be included in the next revision of the International Classification of Diseases (ICD), which should come into effect in January 2022<sup>8</sup>.

Burnout syndrome has key symptoms for its occurrence, such as high emotional exhaustion levels, high depersonalization level, and low professional fulfillment level. Emotional exhaustion refers to the feeling of emotional depletion, lack of energy and enthusiasm. Depersonalization to negative, insensitive and carefree attitudes towards others is to treat others in a dehumanized way. Low professional fulfillment level refers to a low level of professional achievement, generating a feeling of inability and reducing the feeling of accomplishment<sup>4,9</sup>.

This syndrome is established by an ongoing gradual process of emotional exhaustion due to demotivation, followed by physical and psychological symptoms. The main triggering factor is overwork, which is very frequent among professionals who work daily under pressure and with constant assignments, such as physicians, nurses, teachers, police officers and journalists, among others<sup>7</sup>. Another important factor is related to the professionals thinking of

themselves as incapable of performing a task or even finding it very difficult to accomplish<sup>7</sup>.

A survey conducted by the International Stress Management Association (ISMA-BR) estimates that Brazil has a total diagnosis of burnout syndrome of 32% of workers, which would mean more than 33 million people. In a ranking of eight countries, Brazil is above China and the United States of America, only being behind Japan, with 70% of the population affected<sup>10</sup>.

The hospital environment is a predictable setting for the development of burnout syndrome, as it daily exposes workers to stressful situations such as witnessing pain, suffering, anguish (not only of the patient, but also of their family members) and, in some cases, death of patients, demanding from the professionals greater psychological and emotional balance than required by other professions<sup>9</sup>.

In turn, nursing professionals are more likely to develop this syndrome, as they are constantly exposed to stressful situations since, among all health professionals, they are the ones who have more contact and for a longer time with the patients. Moreover, we can also emphasize factors such as long working hours, low remuneration (which often leads to workers doing double shifts), exposure to biological risks, exhausting shifts and lack of leisure time<sup>11</sup>.

The University Hospital of Maringá (*Hospital Universitário de Maringá* – HUM) is a teaching hospital kept by the State University of Maringá (*Universidade Estadual de Maringá* – UEM) in the city of Maringá, Paraná. The HUM has 123 beds for exclusive care by the Unified Health System (*Sistema Único de Saúde* – SUS), which serves the population of the Paraná Northwest macro-region, with 115 municipalities and 2 million inhabitants. In 2018, more than 60,000 people were treated in different specialties of the hospital. In addition, the hospital is a reference for the following services: Wound Care Outpatient Clinic and Medication Information Service, highly complex services such as corneal transplantation, bariatric surgery and cochlear implantation, in addition to the Poison Control Center, which has a total of almost three thousand consultations per year<sup>12</sup>.

Specifically, we can underline two units that demand high complexity of care in the HUM, making them a more favorable setting for the development of the syndrome among professionals, the emergency room (ER) and the intensive care unit (ICU) for adults. The ER is responsible for assisting life-threatening or non-life-threatening patients whose health problems require immediate care. Therefore, it works 24 hours a day. The HUM's ER serves several specialties, such as orthopedics, oral and maxillofacial surgery, gynecology, high-risk pregnancy, Poison Control Center (PCC), and referrals from the 24-hour Emergency Care Units (ECU), hospitals and municipalities of Paraná's 15<sup>th</sup> health region<sup>13</sup>. The ICU for Adults is defined as a complex unit, with a specific continuous monitoring system to assist

potentially severe patients or patients with decompensation of one or more organ systems, and who, with the help of intensive support and treatment, have a greater chance of recovery<sup>14</sup>. In both scenarios, the professionals are daily exposed to higher stress levels, which can favor onset of the burnout syndrome.

Thus, given its relevance, it is extremely important to verify the current situation of nursing professionals' mental health, so that they can provide patients with resolute and good quality care. Especially in the ER and ICU for Adults, which, in addition to being highly complex, have high demand and work overload, as well as high patient morbidity and restricted time and resources to care for them, among many other factors, which tend to allow onset of this syndrome. Furthermore, through the results obtained with this research, it will be possible to develop strategies to improve mental health among nursing professionals.

## METHODS

This is an exploratory and descriptive research study with a quantitative approach, developed through application of a questionnaire with 22 questions from the Maslach Burnout Inventory (MBI) instrument, which aims at identifying the symptomatology dimensions of the burnout syndrome, such as Emotional Exhaustion (EE), Professional Fulfillment (PF) and Depersonalization (D), which correspond to questions 1 to 9, 10 to 17 and 18 to 22, respectively. The MBI instrument was created by Maslach and Jackson in 1981, and validated for the Portuguese language in 2001<sup>6,15</sup>, version that was used in the questionnaire answered by the participants.

The research participants were nursing professionals (nurses and nursing technicians), working in the ER and ICU for Adults units in the morning and night shifts at the HUM. A total of 53 professionals answered the questionnaire: 12 from the ER in the morning, 19 from the ER at night, 11 from the ICU for Adults in the morning and 11 from the ICU for Adults at night. Professionals who were on medical leave and/or extended absences or vacations during data collection were not eligible for the study.

Data collection was carried out face-to-face at the HUM in November 2020. Employees from each of the units, ER and ICU for Adults, in the morning and night shifts, were interviewed in their workplace and shift by the author of the study, where the professionals were guided about the research and its objective and, after accepting and signing the Informed Consent Form (ICF), they were included in the study. The questionnaires were answered and filled in by the participants themselves. To ensure the participants' privacy, their names were not disclosed or used for preparation of the study. Data collection was carried out with all teams of nursing professionals from each unit participating in the

research, in the morning and night shifts, following their workflow.

A Likert scale was adopted for the scores of all items in the questionnaire. The scale allows measuring attitudes and knowing the agreement level of the study participant with any statement proposed, which will vary from zero (0) to six (6), as follows: zero (0) never, one (1) once every year or less, two (2) once a month or less, three (3) a few times a month, four (4) once a week, five (5) a few times a week, and six (6) every day.

Data analysis of the MBI instrument was performed by adding up each dimension (Emotional Exhaustion, Depersonalization and Professional Fulfillment) of the questionnaire, separately, according to the nursing professionals' answers to each question. The scores found were compared to the reference values of the Center of Advanced Studies on Burnout Syndrome (*Núcleo de Estudos Avançados sobre a Síndrome de Burnout – NEPASB*), presented in Table 1. Choice of NEPASB reference values for analysis of the results is explained by the fact that it has several studies proving the regularity and effectiveness of these values, and validated for Portuguese.

**Table 1.** MBI scale values developed by the Center of Advanced Studies on Burnout Syndrome, 2001

Dimensions	Cut-off values		
	Low	Average	High
Emotional Exhaustion (EE)	0-15	16-25	26-54
Depersonalization (D)	0-02	03-08	09-30
Professional Fulfillment (PF)	0-33	34-42	43-48

Source: Jodas and Haddad, 2009 (apud Benevides-Pereira, 2001)

The MBI guidelines mention as a principle for the diagnosis of burnout syndrome among the research participants reaching high levels for emotional exhaustion (26-54) and depersonalization (09-30) and low levels for professional fulfillment (0-33). Therefore, for professionals who obtain these results in the three-dimensional criteria, this is considered a sign for the manifestation of burnout. The risk of developing this syndrome was determined after analyzing all dimensions, to assess the possibility of the professional expressing the disease.

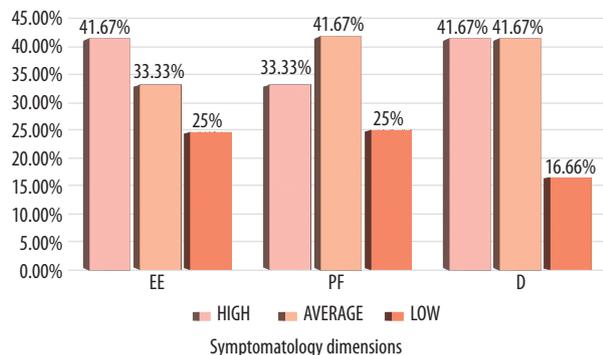
Each questionnaire was analyzed individually and compared according to the parameters and principles for assessing incidence of the syndrome. The findings were shown by means of bar graphs, in percentages. Each shift of the ER and ICU for Adults units was analyzed individually.

To conduct this research, we followed the regulatory standards established by Resolutions 466/2012 and

510/2016 of the National Health Council (*Conselho Nacional de Saúde – CNS*), which establish ethical guidelines for conducting studies with human beings. This research was authorized by the HUM, accepted by the Academic Activities Regulation Commission (*Comissão de Regulação de Atividades Acadêmicas – COREA*) with request number 014/2020, as well as evaluated and approved for its ethical aspects by the Standing Committee on Ethics and Research with Human Beings of the State University of Maringá, according to CAAE nº 35432220.3.0000.0104 and opinion nº 4,271,562. The professionals agreed to participate in the research by signing the informed consent form.

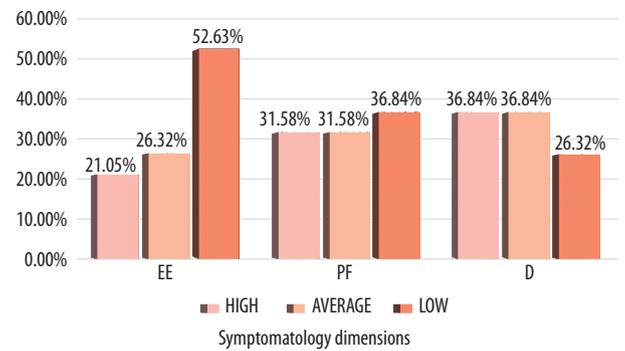
## RESULTS

Figure 1 shows that the morning shift nursing professionals from the ER obtained the following results for the Emotional Exhaustion symptomatology dimension: 5 (41.67%) had high scores, 4 (33.33%) had average scores and 3 (25%) had low scores. Regarding Professional Fulfillment, 4 (33.33%) obtained high scores, 5 (41.67%) obtained average scores and 3 (25%) obtained low scores. For Depersonalization, 5 (41.67%) had high scores, 5 (41.67%) had average scores and 2 (16.66%), low scores.



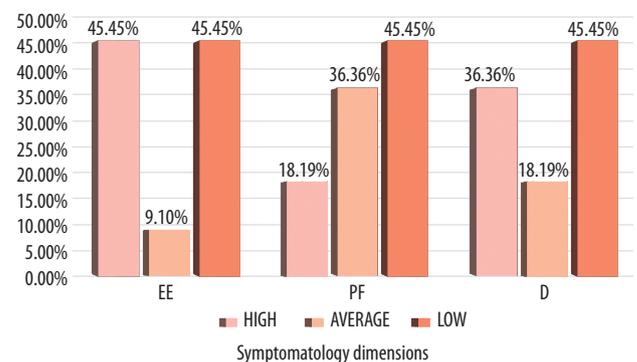
**Figure 1.** Bar graph showing the analysis of the answers given by the nursing professionals from the ER – Morning shift, regarding each symptomatology dimension of the burnout syndrome. EE → Emotional Exhaustion; PF → Professional Fulfillment; D → Depersonalization.

Figure 2 shows that the night shift nursing professionals from the ER obtained the following results for the Emotional Exhaustion symptomatology dimension: 4 (21.05%) had high scores, 5 (26.32%) had average scores and 10 (52.63%) had low scores. Concerning Professional Fulfillment, 6 (31.58%) professionals obtained high scores, 6 (31.58%) obtained average scores and 7 (36.84%) obtained low scores. For Depersonalization, 7 (36.84%) professionals had high scores, 7 (36.84%) had average scores and 5 (26.31%), low scores.



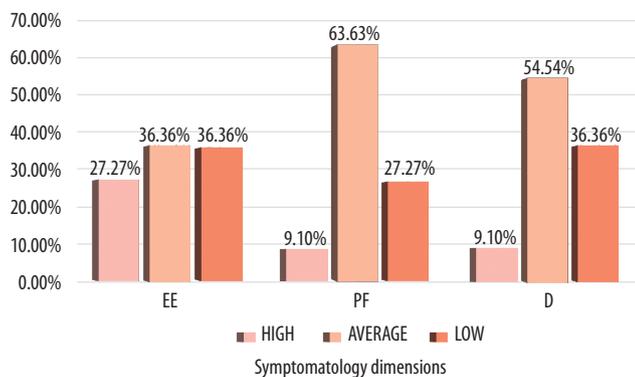
**Figure 2.** Bar graph showing the analysis of the answers given by the nursing professionals from the ER – Night shift, regarding each symptomatology dimension of the burnout syndrome. EE → Emotional Exhaustion; PF → Professional Fulfillment; D → Depersonalization.

In Figure 3, it is evidenced that the morning shift nursing professionals from the ICU for Adults obtained the following scores for the Emotional Exhaustion symptomatology dimension: 5 (45.45%) obtained high scores, 1 (9.10%) obtained average scores and 5 (45.45%) obtained low scores. For Professional Fulfillment, 2 (18.19%) professionals had high scores, 4 (36.36%) had average scores and 5 (45.45%), low scores. For depersonalization, 4 (36.36%) obtained high scores, 2 (18.19%) obtained average scores and 5 (45.45%), low scores.



**Figure 3.** Bar graph showing the analysis of the answers given by the nursing professionals from the ICU for Adults – Morning shift, regarding each symptomatology dimension of the burnout syndrome. EE → Emotional Exhaustion; PF → Professional Fulfillment; D → Depersonalization.

Figure 4 shows that the night shift nursing professionals from the ICU for Adults obtained the following scores for the Emotional Exhaustion symptomatology dimension: 3 (27.27%) had high scores, 4 (36.36%) had average scores and 4 (36.36%) had low scores. In addition, for Professional Fulfillment, 1 (9.10%) had a high score, 7 (63.63%) had average scores and 3 (27.27%) had low scores. For Depersonalization, 1 (9.10%) had a high score, 6 (54.54%) had average score and 4 (36.36%), low scores.



**Figure 4.** Bar graph showing the analysis of the answers given by the nursing professionals from the ICU for Adults – Night shift, regarding each symptomatologic dimension of the burnout syndrome. EE → Emotional Exhaustion; PF → Professional Fulfillment; D → Depersonalization.

In general, in both units participating in the research it was found that 31.36% of the nursing professionals from the emergency room of the University Hospital of Maringá showed high emotional exhaustion, 30.92% presented low professional fulfillment and 39.25% showed high depersonalization. Regarding the nursing professionals from the intensive care unit for Adults, 36.36% had high emotional exhaustion, 36.36% had low professional fulfillment and 22.73% of the professionals presented high depersonalization.

## DISCUSSION

This study aimed at identifying burnout syndrome among nursing professionals at the HUM. The findings pointed that the Emotional Exhaustion symptomatology dimension for the ER and ICU for Adults in the morning shift had high percentages, with 41.67% of the ER professionals and 45.45% of the ICU for Adults professionals, evidencing greater emotional exhaustion in the nursing professionals. A number of studies show that professionals working in ICUs for Adults are more likely to experience emotional exhaustion. The causes of emotional exhaustion are varied. We may highlight the high complexity of the patients in the unit, the excessive workload resulting in lack of energy and motivation, fatigue, a feeling of exhaustion of emotional resources required to deal with continuous stressful situations, and a feeling of frustration and pressure for workers<sup>4</sup>.

A study revealed that 74.5% of the ICU nursing professionals at a public hospital in Botucatu also had high levels of emotional exhaustion<sup>4</sup>. A survey conducted with professionals from an intermediate intensive care unit (IICU) found that 44% of the nursing professionals had high levels of emotional exhaustion<sup>16</sup>. A study carried out in the emergency room of the Federal University of Triângulo Mineiro clinical hospital showed that 55.6% of the nursing

professionals had moderate to high emotional exhaustion<sup>17</sup>, corroborating the findings observed in the current research.

A number of studies point out that, due to the nursing professionals' low wages, they end up working double shifts or more, resulting in overload, which may compromise their physical and mental health<sup>18</sup>. During the study, it was observed that most of the nursing professionals from the ICU for Adults at the HUM worked two or three shifts, favoring emotional exhaustion.

Observing the PF symptomatology dimension for the ER and ICU for Adults units, the morning shift professionals from the ICU for Adults are the ones with the lowest rates for Professional Fulfillment, corresponding to 45.45% of the professionals. A number of studies link low PF among professionals working in ICUs for Adults to lack of confidence in performing their work, overload and lack of appreciation by colleagues, situations of constant conflicts, mostly from supervisors and patients' family members<sup>17</sup>. A study found that 48% of the nursing professionals from an ICU and an IICU at a university hospital had low professional competence<sup>19</sup>. Another study noticed that 93.7% of the ICU nursing professionals at a public hospital in Botucatu had low levels of professional fulfillment, indicating that ICU nursing professionals have lower levels of professional achievement than those from other units<sup>4</sup>.

A number of studies suggest that low professional fulfillment is due to the nursing professionals' constant self-questioning regarding choice of their profession, where many end up doubting about their aptitude for the professional practice<sup>17</sup>. In addition, some studies show that low professional fulfillment in the work environment is a result of the decrease or loss of satisfaction and efficiency at work, as well as of not performing activities of their tasks, leading professionals to not seeing their work as something satisfying, but rather as a burden, without any feeling of accomplishment<sup>1</sup>.

Lack of professional fulfillment comes from a feeling of personal and professional inadequacy, which can lead to negative responses in the work environment and in personal life, such as depression, low productivity, low self-esteem and scarce interpersonal relationships, among others. All the consequences linked to the lack of professional fulfillment can result in self-defense attitudes in relation to the feelings experienced and, consequently, changing their way to respond<sup>15,20</sup>.

It is important to emphasize that, in the Professional Fulfillment symptomatology dimension, both the ER in the morning shift and the ICU for Adults in the night shift presented average scores, corresponding to 41.67% and 63.63%, respectively. This result is extremely relevant, and these professionals must be constantly monitored, as they can undergo changes and worsen, becoming low fulfillment professionals in a brief period of time.

When analyzing the scores regarding the Depersonalization symptomatology dimension for the ER and ICU for Adults units in the morning and night shifts, the morning shift professionals from the ER are the ones with the highest depersonalization rate, totaling 41.67%. It is important to observe the findings of various studies, which showed that 66.7% of the nursing professionals in an emergency room presented moderate to high depersonalization<sup>17</sup>. The studies by Fernandes *et al.* (2017) point out that the ICU is also a place that can cause emotional distancing, considering that 93.7% of the ICU nursing professionals at a public hospital in Botucatu showed high levels of depersonalization. The literature mentions that depersonalization is an emotional disconnection, which results in a feeling of isolation from others, whether co-workers or patients and/or family members, making professionals less sensitive to the suffering of other human beings. The behavior of professionals with high levels of depersonalization can be characterized by deletion of stressful situations and by isolation as a way of protecting themselves, thus distancing emotionally from people<sup>1</sup>.

Some authors associate depersonalization with loss of motivation, anxiety and increased irritability. The professionals have negative feelings, whether for themselves or for coworkers and patients, having selfish behaviors, reducing work goals and accountability to others<sup>20</sup>. Thus, depersonalization is a harmful aspect in the relationship between professionals and patients, as it hinders bonding and humanized care, so encouraged in the hospital environment, also impairing or not accomplishment of the treatment.

By analyzing the questionnaires individually, they all have at least one altered symptomatology dimension. It is important to mention that these cases will need good quality preventive occupational and organizational care, both physical and emotional, so as to avoid their worsening, as well as onset or advancement of burnout syndrome<sup>21</sup>.

When analyzing 100% of our sample, which totals 53 professionals, we were able to show that 9.43% of the study population had some burnout syndrome sign, that is, 5 cases. Corroborating our study, Silva *et al.* (2018) showed that 12% of the nursing professionals in their study had some burnout syndrome sign, an expressive number similar to that found in the current research<sup>19</sup>.

Regarding burnout syndrome, in general, a number of studies show that circumstances in which the patient has difficulty recovering or even when there is no recovery found through science can result in feelings of dissatisfaction or impotence in nursing professionals<sup>22</sup>. In addition, lack of training and teaching regarding the death process can also lead to a feeling of weakness, questioning their professional skills and mission<sup>15</sup>. Some organizational aspects are also factors for the emergence of burnout syndrome, such as

poor distribution of employees in the units, work overload, lack of control, shortage of professionals, conflict of values and insufficient wage, aspects many times greater than the very conflicts and relationships with the patients<sup>15,20</sup>.

## CONCLUSION

The percentages found in all three dimensions suggest a potential for burnout syndrome, both in the morning and night shifts of the ER, as well as in the morning shift in the ICU for Adults.

In a clearly paradoxical way, the percentages of our findings do not strongly point to the triggering of burnout syndrome among nursing professionals working the night shift in the ICU. However, we must emphasize that answering a questionnaire is very subjective, and that there may be biases in the answers, among many other factors that affect quantitative research in general. Based on this same reasoning, we may suggest that the numbers found in the other units and shifts may also be higher.

Finally, analyzing all the data, we may suggest that the ICU for Adults in the morning shift is the higher stressor and with higher chances for the professionals to develop burnout syndrome. In addition to all the elements mentioned, this finding can be associated with the fact that the morning routine is more intense when compared to the others because the demand for care is slightly higher in this shift, a common procedure to the hospital routines of this shift.

The theme of this research is becoming increasingly important, for contributing to the work process of nursing teams since, as mentioned in the study, burnout syndrome puts the professionals' physical, psychological and emotional health at risk, exerting a direct impact on the quality of care provided, which can often put the patient's life at risk.

In addition, the findings of this research can support the development of preventive actions to avoid burnout syndrome cases among nursing professionals, as well as to carry out care actions for those who already have the syndrome.

More studies that evaluate health professionals' occupational quality and mental health, especially those of nursing professionals, become crucial for improving the quality of life of these professionals, as well as for the improvement of the care provided to the patients.

## INDIVIDUAL CONTRIBUTIONS

All listed authors made contributions to conception and design of the study, data analysis and interpretation, drafted the manuscript, critically reviewed its intellectual content, and approved its final version to be published. In addition

to the aforementioned contributions, the main author contributed to the drafting, conduction and application of the research method in the research loci.

## CONFLICTS OF INTEREST

Authors Jéssica Loubak Paes, Martina Mesquita Tonon, Zuleide Maria Ignácio and Paula Tersinha Tonin have no conflicts of interest to declare.

## ACKNOWLEDGMENTS

The authors would like to acknowledge the participation of all the authors and study participants, who agreed to participate of their own free will, contributing to the scientific society. The authors would like to acknowledge the University Hospital of Maringá (*Hospital Universitário de Maringá* – HUM) and the specific units for accepting and approving conduction of this research. We emphasize that the total cost of this project was sponsored by the authors. The HUM and any other institution had no financial burden with the project.

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