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ORIGINAL ARTICLE

# SLEEP AS A BASIC HUMAN NEED IN THE SCENARIO OF A CRITICAL PATIENT

## SONO COMO NECESSIDADE HUMANA BÁSICA NO CENÁRIO DE PACIENTE CRÍTICO

## SUEÑO COMO UNA NECESIDAD HUMANA BÁSICA EN EL ESCENARIO DE UN PACIENTE CRÍTICO

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**ABSTRACT**

***Objective:*** to identify sleep stressors for nursing professionals in the intensive care unit. ***Method:*** cross-sectional, descriptive, study with a quantitative approach, conducted with 51 nursing professionals, having a professional experience of more than 6 months. Data were collected by applying structured questionnaires and the *Environmental Stressor Questionnaire*. The results were analyzed descriptively and presented as figures. ***Results:*** from the professionals' perspective, the most stressing factors for the sleep of patients admitted to an intensive care unit were: "being afraid to die," "feeling pain," and "being unable to sleep;" 36.7% of the professionals said they have acquired knowledge about sleep during the basic education process (undergraduate course/technical course). ***Conclusion:*** nursing professionals recognized that fear of death was on top among the very stressing factors to the sleep of a patient in the intensive care unit and that the restorative sleep is affected by these elements. ***Descriptors:*** Sleep; Intensive Care Units; Nursing; Skilled Nursing Facilities; Nursing Care.

**RESUMO**

***Objetivo:*** identificar os estressores do sono para profissionais de enfermagem na unidade de terapia intensiva. ***Método:*** estudo transversal, descritivo, de abordagem quantitativa, realizado com 51 profissionais de enfermagem, com experiência profissional de mais de 6 meses. Os dados foram coletados por meio da aplicação de questionários estruturados e do *Environmental Stressor Questionnaire*. Os resultados foram analisados descritivamente e apresentados em figuras. ***Resultados:*** na perspectiva dos profissionais, os fatores mais estressantes para o sono de pacientes internados em unidade de terapia intensiva foram: "sentir medo de morrer", "sentir dor" e "não conseguir dormir"; 36,7% dos profissionais afirmaram ter adquirido conhecimento sobre o sono durante o processo de formação básica (graduação/curso técnico). ***Conclusão:*** os profissionais de enfermagem reconheceram que o medo da morte esteve no topo dentre os fatores muito estressores para o sono do paciente em unidade de terapia intensiva e que o sono restaurador é comprometido por esses elementos. ***Descritores:*** Sono; Unidades de Terapia Intensiva; Enfermagem; Instituições de Cuidados Especializados de Enfermagem; Cuidados de Enfermagem.

**RESUMEN**

***Objetivo:*** identificar los estresores del sueño para profesionales de enfermería en la unidad de cuidados intensivos. ***Método:*** estudio transversal, descriptivo, con abordaje cuantitativo, realizado con 51 profesionales de enfermería, con experiencia profesional de más de 6 meses. Los datos fueron recogidos mediante la aplicación de cuestionarios estructurados y el *Environmental Stressor Questionnaire*. Los resultados se analizaron descriptivamente y se presentaron como figuras. ***Resultados:*** desde el punto de vista de los profesionales, los factores más estresantes para el sueño de pacientes ingresados en una unidad de cuidados intensivos fueron: "tener miedo a morir", "sentir dolor" y "no poder dormir", 36,7% de los profesionales dijeron haber adquirido conocimientos sobre el sueño durante el proceso de educación básica (curso de pregrado/curso técnico). ***Conclusión:*** los profesionales de enfermería reconocieron que el miedo a la muerte estaba en el topo de los factores muy estresantes para el sueño del paciente en una unidad de cuidados intensivos y que el sueño reparador se ve comprometido por estos elementos. ***Descriptores:*** Sueño; Unidades de Cuidados Intensivos; Enfermería; Instituciones de Atención Especializada de Enfermería; Cuidados de Enfermería.

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## INTRODUCTION

Sleep, as well as water, food, and oxygen, is a key basic need for human survival. When combined both with physical exercise and balanced diet, it becomes crucial for the homeostasis of body functions.[1]

Epidemiological studies show that poor quality sleep or reduced sleeping time, in the health scenario, and above all in the hospital environment, is associated with negative results.[2,3] Critically ill patients' sleep is a subject of growing interest in the literature, and there is no evidence that sleep in the intensive care unit has a poor quality.[4,5] On the other hand, the intensive care unit is a highly complex environment, where monitoring and observation are constant, thus humanization of care may be neglected. Although there are knowledge gaps on this subject, acute sleep deprivation per se may be negatively associated with patients' recovery in the intensive care unit.[4,5]

Poor sleep quality is consistently reported by patients admitted to the intensive care unit. The use of polysomnography within 24 hours to evaluate 57 patients admitted to the intensive care unit showed the sleep architecture as highly affected. Thus, the subjective evaluation to identify the elements involved becomes relevant to establish strategies and improve sleep quality.[2-5]

Critically ill patients experienced 41 ± 28 periods of sleep within 24 hours, which last about 15 ± 9 minutes, something which sets up a very fragmented process.[6] In another study, 60 patients were interviewed from 6 to 12 months after discharge from the intensive care unit, and 50% reported sleep disorders during their stay in the intensive care unit, although such a disturbance remained persistent after discharge around 30%.

Surely, various factors contribute to impaired sleep quality of patients admitted to the intensive care unit, such as noise, light in the environment, medicines, use of mechanical ventilation, interventions by the medical staff, etc., in addition to intrinsic factors, pre-existing chronic conditions imposed by the fast daily pace itself, daily living habits, and those related to the severity of underlying disease.[6,7] In this case, knowing the various factors that interfere with sleep quality as a basic human need from the perspective of the nursing team may contribute to the construction of new strategies to address patients in the critical and high-risk scenario.

## OBJECTIVE

- To identify sleep stressors from the viewpoint of nursing professionals in the intensive care unit.

## METHOD

Cross-sectional, descriptive, study, with a quantitative approach, conducted in general and adult intensive care units at 2 public hospitals and a teaching hospital in the Brazilian Federal District, within the period from March 2015 to December 2015.

This study included 50 nursing professionals (nurses, nursing technicians) registered in the Regional Council of Nursing in the Federal District and it excluded those whose length of time working in the intensive care unit was less than 6 months, those occupying a temporary or substitute position, nursing residents, and individuals on vacation or any work leave mode.

Data were collected at a single phase, observing the service schedule, by using a structured data collection instrument consisting of demographic data, knowledge on the theme sleep in the intensive care unit, difficulties to sleep and rest among the patients in the unit, and perception of the nursing professional about the factors interfering with sleep.

In order to check the nursing professional's perception in relation to the factors interfering with sleep, we applied the Stressors Rating Scale in Intensive Care Units - Brazilian version[8] corresponding to the *Environmental Stressor Questionnaire* (ESQ)[9], an instrument that evaluates 50 items distributed into 5 categories: extremely stressful; very stressful; moderately stressful; not stressful; does not apply. The professionals evaluated the items in the ESQ according to the perception of which might be the patient's response under an in-patient regime. To analyze such data, we calculated the weighted average value of the responses, something which allowed us to assign a grade to each of the items. So, the items were staggered in positions as for the degree of importance identified by nursing professionals (ranking from 1 to 37). In this stagger, zero consisted in the items having no importance and 10 in those of utmost importance.

The results were expressed as absolute and relative frequencies, mean, standard deviation, and median (25 and 75 percentiles).

This study complied with the national and international standards of ethics in research

involving human subjects and it has been approved by the Research Ethics Committee of the Health Department of the Federal District (under the CAAE 45131915.7.0000.5553).

## RESULTS

The 51 nursing professionals included in the sample (Figure 1) had an average age of 35 ± 9 years and women were predominant (74.5%). The average length of professional experience in the intensive care unit was 72 months. Most professionals (64.7%) graduated in the Federal District.

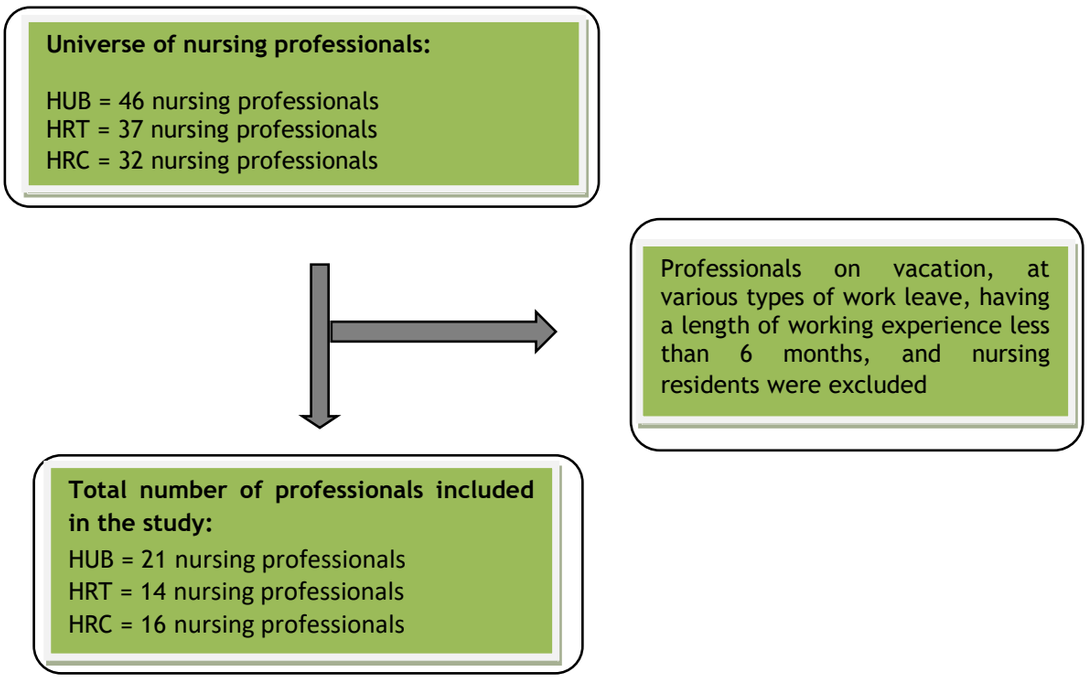


**Figure 1.** Flowchart of the distribution of nursing professionals in the hospitals selected for the study. HUB: University Hospital of Brasília; HRT: Regional Hospital of Taguatinga; HRC: Regional Hospital of Ceilândia.

Although everyone regarded sleep as an important component for patients admitted to an intensive care unit, only 36.7% said they have access to the theme during the basic education process (undergraduate course/technical course). The inclusion of this theme in graduate courses was indicated by only 13.7% of the nurses.

Out of the total number of professionals surveyed, 98% said there is a lack of specific protocols to promote sleep health in the intensive care unit.

While for 49.1% of the nursing professionals sleep had a moderate importance (7 to 8 points), for 41.2% it was of utmost importance (10 points).

Out of the total number of professionals, 27.5% indicated 8 hours as the ideal sleeping time for an adult patient admitted to the intensive care unit, but for 15.7% 6 hours were adequate (Figure 2).

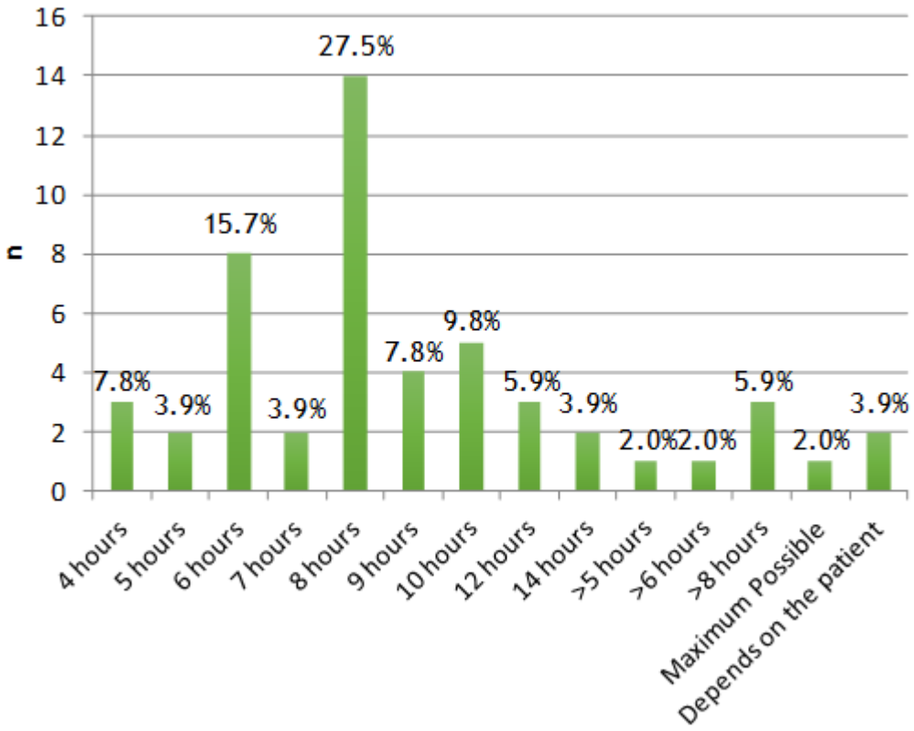


**Figure 2**. Distribution of the optimal sleeping time (hours) for adult patients admitted to the intensive care unit according to the nursing professionals.

In Figure 3, in response to the Stressors Rating Scale in Intensive Care Units - Brazilian version, as for the perception of the nursing professionals, the items "being afraid to die" and "feeling pain" were categorized as extremely stressing factors for the patient. On the other hand, the less stressing factors were "nursing team member does not introduce her/himself by the name," occupying the 37th position, and "seeing saline solution bags hanging over the head," in the 36th position, distributed among the ranking from 1 to 37 importance degrees.

| Issue | Grade (average) | Ranking (position) |
|---|---|---|
| Being afraid to die (45) | 1.08 | 1 |
| Feeling pain (32) | 1.10 | 2 |
| Being unable to sleep (28) | 1.31 | 3 |
| Staying with tubes/probes in the nose and/or mouth (18) | 1.35 | 4 |
| Being attached to pipes and drains (1) | 1.37 | 5 |
| Being unable to communicate (44) | 1.39 | 6 |
| Having no control over oneself (37) | 1.43 | 7 |

**Figure 3.** Distribution of the most stressing conditions related to the nursing professionals, according to the Stressor Rating Scale.

## DISCUSSION

It is worth describing the stressing experiences of patients undergoing intensive care, even from the nursing professional's viewpoint, to expand clinical evaluation, providing holistic care and eliminating the stressors, besides providing feedback to health care providers.[8]

Sleep deprivation and fragmentation in the intensive care unit remains as a recurring situation, despite the fact that the promotion of sleep was regarded as key in the health scenario, however, the degree to which sleep deprivation may be associated with the provision of nursing care remains unclear.[9]

Nurses who work in intensive care units do not have a full understanding of the importance of sleep and the interventions needed to promote it.[10] In literature review, authors point out neglect to specialized training and lack of structured protocols in clinical practice as elements restricting the provision of restorative sleep.[9]

Until today, the lack of a curriculum that covers the sleep support area in undergraduate and graduate programs in nursing is a reality.[11] Scientific evidence recognizes that the contributions of nursing to the science of sleep has grown, but applying this science to the practice and education in nursing are below the scientific progress, as seen in this study. The structured approach to

teaching on the theme of sleep, covering all levels of the nursing curriculum, as well as continuing education for professionals who are in the labor market, are key conditions to expand the clinical reasoning on the promotion of sleep as a health care systematization process.[12]

Patients in critical care units require an uninterrupted and good-quality sleep, but these same patients are those who are at high risk of losing sleep and/or undergoing a poor sleep quality. Sleep physiology in patients undergoing intensive care indicates that, despite its total time is often normal (7 to 9 hours), it is highly fragmented, where some patients experience 6 wake episodes per hour.[6,13] Sleep quality is even more affected, because most sleep is spent at the stages N1 and N2, which are recognized as "light sleep" and having limited restorative benefits. Consequently, sleep not consolidated by the presence of stressors result in patients in the intensive care unit with sleep deprivation. Patients admitted to intensive care units enjoy less and less sleep quality and adequate sleeping duration.[13,14]

Descriptive scientific evidence conducted in Turkey with 155 patients and 152 nurses in the intensive care unit assessed the perception of stressors observed in the unit through the modified version of the instrument *Intensive Care Unit Environmental Stressor Scale* (ICUESS), by Cochran and Ganong, having 50 items.[14] We identified the issue "being afraid to die" as the main stressor for both groups. In second and third places, from the nurses' perspective, "feeling pain" and "being attached pipes and drains" were eligible. These data confirm the findings of this study, which showed, from the nursing professionals' perspective, that the most stressing factors were "being afraid to die," followed by "feeling pain," and "being unable to sleep." We also identified the factor "nursing team member does not introduce her/himself by the name" (in 50$^{th}$ place) and less stressing from the professionals' viewpoint. However, the same item occupied the 35$^{th}$ place from the patients' viewpoint.[15]

The identification of stressors provides the basis for developing measures aimed at promoting sleep.[16] Evidence reveals that the patient care activities are among the main factors contributing to change sleep during the night in the intensive care unit environment.[11] These findings demonstrate the mechanism experienced in many intensive care units, as well as the absence of reflection by professionals on interference within the 24 hours, and its impact on the patient. It is suggested that clustered care is included in nocturnal sleep promotion protocols in such units[17], because, despite decades of research do identify the impact of the clinical environment on patients' sleep in the intensive care unit, little has been done to overcome the factors whose purpose is contributing to sleep disturbance.[18]

Further research should be aimed at the identification of a monitoring method/accurate and viable sleep protocols, in order to facilitate the deployment of strategies for sleep promotion and recovery, while reducing the complications associated with sleep deprivation.[19]

The limitation of this study was particularly related to the sample, limited to the nursing professional's viewpoint. The authors recognize that the patient's perception is also of paramount importance. On the other hand, the contribution is based on the opportunity to show nursing professionals the significance of providing a rather comprehensive care, also aimed at promoting restorative sleep. Moreover, we meet the purpose of stimulating the study of sleep and its implications in maintaining and restoring health by means of nursing professionals.

## CONCLUSION

The nursing professionals recognized that fear of death was on top among the very stressing factors to the sleep of a patient in the intensive care unit and, moreover, they recognized that restorative sleep was affected by these elements.

Poor scientific knowledge, lack of specific care protocols, and the recognition of losses arising from the lack of sleep in intensive care patients were recognized by nursing professionals as limiting the deployment of preventive and restorative measures of sleep among patients.

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