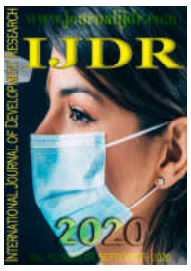
ISSN: 2230-9926

*Available online at http://www.journalijdr.com*

IJDR

*International Journal of Development Research*
*Vol. 10, Issue, 09, pp. 40391-40395, September, 2020*
https://doi.org/10.37118/ijdr.19866.09.2020




RESEARCH ARTICLE OPEN ACCESS

# ENVIRONMENTAL FACTORS RELATED TO PATIENT COMFORT IN THE INTENSIVE CARE UNIT

**Paula Cristina de Sousa Vieira[1] Roberto Carlos Lyra da Silva[2] Thiago Quinellato Louro[3] Nébia Maria Almeida de Figueiredo[4] Carlos Roberto Lyra da Silva[2] Daniel Coutinho dos Santos[5] Martin Dharlle Oliveira Santana*[6] and Marcela de Oliveira Feitosa[7]**

[1]Nurse. Master in Nursing, Secretary of Health of the State of Roraima, Boa Vista, Roraima, Brazil
[2]Nurse. PhD in Nursing, Federal University of the State of Rio de Janeiro, Rio de Janeiro (RJ), Brazil
[3]Nurse. Federal University of the State of Rio de Janeiro, Rio de Janeiro (RJ), Brazil
[4]Nurse. PhD in Nursing, Federal University of the State of Rio de Janeiro, Brazil
[5]Nursing Student at the Federal University of Maranhão, Imperatriz, Maranhão, Brazil
[6]Nurse. Specialist in ICU, Federal University of Tocantins, Palmas, Tocantins, Brazil
[7]Nurse. PhD in Health Sciences from the ABC Medical School, Federal University of Maranhão, Imperatriz, Maranhão, Brazil

**ARTICLE INFO**

***Article History:***
Received 18th June 2020
Received in revised form
27th July 2020
Accepted 09th August 2020
Published online 30th September 2020

***Key Words:***
Intensive Care Unit. Comfort,
Environmental Factors,
Patients. Nurses.

***Corresponding author:***
***Martin Dharlle Oliveira Santana***

**ABSTRACT**

The objective was to identify the environmental factors that can facilitate or hinder the promotion of comfort for clients hospitalized in the Intensive Care Unit (ICU). This is an exploratory and descriptive investigative study, based on the qualitative method, carried out between March and August 2017, with 40 professional nurses and nursing technicians from the Hospital Geral de Roraima (HGR) of Boa Vista, Roraima. A structured questionnaire with three categories of responses was used, based on the General Comfort Questionnaire (GCQ). Regarding the environmental factors that can hinder the promotion of comfort, they highlighted excessive noise (62.5%) and a cold place (75%). Conclusion: more limiting factors were found than facilitators for the promotion of comfort in ICU patients at the HGR. However, through the limiting factors, a comforting action plan for patients in the ICU of the HGR can be founded.



**Citation:** ***Maria Luíza Gaspar Amorim Sousa Silva, Maria Isabel de Souza Magalhães,Ana Paula Pereira Cardoso et al. 2020.*** "Environmental factors related to patient comfort in the intensive care unit*", International Journal of Development Research*, 10, (09), 40391-40395.

## INTRODUCTION

ICUs are places of great need for specialized people because they contain technologies, considered by many to be a frightening and lonely environment. Inpatients there need excellent care; multiprofessional teams working in these units must present different knowledge, skills and dexterity to perform procedures considered invasive and critical, in many moments, they represent the differential between life and death (VILA, ROSSI, 2002). As a basis for the foregoing, it is important to choose the appropriate technology to be used in nursing practice, in order to adopt it for the comfort of patients, since, in the intensive care environment, there is an appreciation of the use of hard technologies, using existing equipment in the unit. However, it is worth mentioning the light-hard and light technologies, which are also present in this environment. In general, such attitudes are significant in interpersonal relationships and, therefore, must be reinforced in the provision of care by nurses to hospitalized people. Actions like these, considered light technologies, can provide the patient with an improvement in the clinical condition, by making the environment pleasant, capable of providing. Among these theorists who have studied the phenomenon of comfort as part of the nursing care process, Katherine Kolcaba and Florence Nightingale stand out, as these theorists focus on comfort as a nursing action, offering a way to operationalize this concept and guide nurses in performing interventions to relieve individuals' feelings of discomfort (APÓSTOLO, 2009).

The environmental comfort in Kolcaba, has a focus on external conditions and influences, including colors, lighting, sounds, noise, odor, temperature, natural and artificial elements, and the nurse must be focused on the patient's interaction with the environment. Furthermore, for environmental comfort, it is necessary for the professional to be affectionate, warm, attentive, loving and to provide the patient with growth, relief, security, protection and well-being (DANTAS, 2010). Kolcaba describes four contexts in which patient comfort can occur: physical (pertaining to body sensations), psychospiritual (refers to self-awareness, including self-esteem, self-concept, sexuality), environmental (includes the environment, external conditions and influences) and sociocultural (belongs to interpersonal, family and social relationships) (KOLCABA, 2010). Florence Nightingale, the first nursing theorist, already addressed environmental comfort as a goal of nursing care, and was concerned with a healthy environment, food, sleep and rest, interaction with family or another human being, personal hygiene and leisure activities as ways the caregiver to promote the patient's well-being.

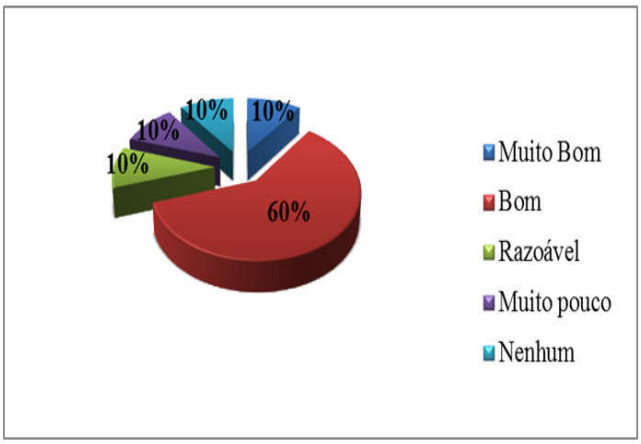
The practice of promoting comfort measures is inherent to the nurse's profession, and thus, essential to humanized and quality care to the patient, however it is often minimized in face of the technologies present in complex environments (POTT, *et al*., 2013). Its relevance in restoring the health of the individual is emphasized, since it is through comfort measures that nurses and their staff promote reinforcement, hope, comfort, support, encouragement and quality assistance. Still, it provides better nurse-patient interaction, as well as enabling the establishment of an effective bond, translated into trust by the individual being cared for. Thus, this study is justified based on the concern of how to promote comfort for patients in the ICU, the commitment and involvement with their own being and that many authors address on the theme that understand the aspects and their relationship with the environmental factors and nursing care for the comfort of patients in the ICU, with a bibliographic review being made, having as reference the Comfort Theory of (Katharine Kolcaba), Technology (Elias Merhy) and the Environmentalist of (Florence Nightingale), so that the human and environmental aspects that involve care and comfort with nursing in Intensive Care Centers and their importance can really be understood. In this context, this research aimed to identify the environmental factors that may facilitate or hinder the promotion of comfort for clients admitted to the ICU. And as specific objectives: Describe the acquired knowledge that is capable of being transferred to the nurse's practice, with a view to promoting comfort; Identify the environmental factors conditioning the comfort of patients in the ICU.

## METHODS

It is an exploratory, descriptive investigative proposition, based on the qualitative method. This option was made with respect to the proposed object and objectives, so that it was possible to better understand how environmental factors can interfere in the comfort of patients admitted to the ICU of the General Hospital of the State of Roraima. The population of this study was made up of nursing technicians and nurses from the hospital's ICUs, totaling 40 professionals. Inclusion criteria were considered: having a minimum time of six months of activity in the ICU sector, considering that this is a minimum period to get to know the routine and care for these patients and be part of the service scale during the period of data collection. data and as exclusion criteria to be on leave at the time of this collection. For the collection, a questionnaire based on the General Comfort Questionnaire (GCQ) was used, structured with three categories of answers: I - Characterization of nurses (sex, age, years of graduation, complementary training, working time at the institution, number professional ties, work sector); II - Needs for patient comfort in the ICU (perception of the term comfort, physical, environmental and socio-cultural discomforts); III - Nursing interventions (interventions performed to provide comfort to the patient in the ICU). This study focuses on parts I and II. In the answers to open questions, the acronym (Nurse) was used to name the nurses' answers and (Tec / Nurse) for nursing technicians. Data collection was carried out after the release of the Free and Informed Consent Term (ICF), were carried out from March to August in the year 2017 at a time convenient to the participants and in a private place in the HGR. The collected data were organized in a database in Excel spreadsheet format, considering the independent and dependent variables contained in the data collection instrument. To analyze the sociodemographic, educational and professional categorization of nurses, and to identify nursing interventions in the ICU, descriptive statistics with absolute and relative frequencies and measures of central tendency were used. The results were presented through tables and discussed in the light of Kolcaba's comfort theory and based on the scientific literature. Emphasizing that the investigation was guided by the guidelines and standards of research involving human beings, which has its ethical and legal aspects regulated by the National Health Council through Resolution No. 466/2012. Always keeping participants confidential.

## RESULTS

As for sociodemographic characteristics, the majority of participants, 60% were male; the average age was 38 years (min = 26 years; max = 47 years). Regarding the professional profile, 85% are nursing technicians and 15% nurses, in the absolute 100% worked in the intensive care unit (ICU) sector. The average working time was 4 years min. 6 months; max. 21 years). A total of 15% obtained a degree in nursing. As for the employment relationship, 40% worked in only one place and 60% had two jobs. The results of the classification of the nurses' responses regarding understanding of the term comfort are shown in graph 1.




Source: Own elaboration, 2017.

**Graph 1 - Perception about the concept of comfort of nurses and nursing technicians at Hospital Geral de Roraima. Boa Vista, Roraima, Brazil. 2017. (N = 40)**

**Table 1. Discomfort identified by nurses and nursing technicians at Hospital Geral de Roraima as being observed in ICU patients and the context where they occur Boa Vista, Roraima, Brazil, 2017. (N = 40)**

| Discomfort and Context | N | % |
|---|---|---|
| Physical Context | | |
| Ache | 40 | 100 |
| Nausea | 25 | 62,5 |
| Cold | 35 | 87,5 |
| Locomotion difficulties | 28 | 70 |
| Hunger | 33 | 82,5 |
| Environmental Context | | |
| Excessive noise | 25 | 62,5 |
| Little private | 22 | 55 |
| Cold place | 30 | 75 |
| Hot Place | 18 | 45 |
| Inadequate lighting | 14 | 35 |
| Agitated | 10 | 25 |
| Social and Cultural Context | | |
| Absence or little attendance of family members | 27 | 67,5 |
| Less contact with family members / caregivers | 23 | 57,5 |
| Sensation of displacement of the residential environment | 20 | 50 |
| Affirmations of unhappiness because you are hospitalized | 12 | 30 |
| Difficulty communicating / making yourself understood | 15 | 37,5 |

Source: Own elaboration, 2017.

Examples of the concepts expressed in the view of nursing technicians and nurses, the physical discomforts mentioned were:

Pain and nausea. (Nurse1).
Positioning in beds. (Tec / Nurse3).
Decubitus change and bath. (Nurse4).

Physiological needs impaired by the fact of dependence on being bedridden, chills, modified facial expressions due to changes in places. (Nurse4). Graph 1 shows the relative frequency of discomfort, in the three contexts, observed by nurses in ICU patients. Among the 25 discomforts listed on the instrument, 22 were registered as present in ICU patients, even if at different frequencies. Busy place and excessive lighting were the discomfort least identified by nurses.

## DISCUSSIONS

The term comfort is used in different contexts of nursing practice, and is part of the usual language of the team, being considered as a component of care (LOURO, 2012). In the present study, nurses described their view of comfort as being predominantly good, reporting comfort as the patient's well-being. Well-being is a result of care interventions refers to the Comfort Theory, which proposes that after the holistic assessment of the patient, comfort needs should be identified in a multidimensional way and proposed actions. From then on, in the proportion in which the interventions are carried out, behaviors seeking well-being emerge in these individuals, divided between internal and external behavior and peaceful death. Thus, it is clear that well-being is closely related to care and the feeling of feeling cared for and comfort is associated with nursing practice (KOLCABA, 2009). However, most studies that address this phenomenon focus on identifying the levels of comfort that patients demonstrate. The nurse's perspective on this process and the concept he has about comfort are rarely addressed. Investigations that focus on nurses generally seek to identify the actions to promote comfort that they perform in their care and, as a result, they mainly identify measures to meet physical needs (NONINO, ANSELMI, DALMAS, 2008) or combined with care techniques, such as the administration of medications (CUNHA, ZAGONEL, 2008). Therefore, the results of the study are explained, in which most nurses interpret comfort as the physical well-being of the patient, since both are subjective and very close. Both terms, directly or indirectly, depend on the interpersonal relationship between the caregiver and the caregiver, either in a more adjacent way to nursing interventions, minimizing discomfort, or in a more complex way as a positive balance of various life outcomes personal (OLIVEIRA, 2013). In the study, nurses reported pain as the main discomfort in the physical context. Due to the subjective character of pain, the best way to identify it is through the patient's own report (OLIVEIRA, 2013). Therefore, it is essential for the nursing professional to recognize it through facial expressions, gestures, moans, concerns, changes in mood, hypoactivities, adapting interventions to relieve this (HAGEMEYER, GUSMAN, 2011).

As for the main environmental discomfort that affects patients in the ICU, it stood out in the perception of nursing technicians and nurses, the cold and excessive noise. This thermoregulation factor, the decrease in body metabolism, the exposure to cold in the ICU, including the effect of anesthetics, contribute to the installation of hypothermia and consequent common discomfort in the first hours of the patient's hospitalization (MACHADO, BRÊTAS, 2006). Thus, it can be highlighted that of the signs and symptoms evaluated by nurses as being the most present in patients in discomfort, a large number is not foreseen in the defining characteristics of the nursing diagnosis impaired comfort, which may or may not influence the survey of the diagnosis impaired comfort. In this sense, there are several reasons for surveying nursing diagnoses, especially knowing the patient's real needs and developing objective care plans (SALLUM, SOUSA, 2012). This diagnosis has the defining characteristics: anxiety, crying, reports of feeling uncomfortable, lack of satisfaction with the situation, lack of feeling at ease with the situation, hunger, restlessness, itching, heat, cold, sighs, inability to relax, restlessness, regret, fear, disturbed sleep pattern and symptom of distress (HERDMAN, 2013). Identify the importance that the author attributes to the physical environment for the patient (NIGHTINGALE, 1989).

His concern with aspects of the environment included not only hospital settings, but also the homes of the sick and the physical conditions of life for the poor. The author believed that a healthy environment was necessary for nursing care and its specific condition of adaptability. The nurse's focus should extend throughout the environment, as it favors healing and promotes patient health in the ICU. For this purpose, attention should be paid to the choice of colors, noise management, lighting and temperature, as well as ensuring the view of the external area, natural and artificial elements. The surrounding environment should also be taken into account as a space for people to circulate, considering aspects related to ventilation, packaging of equipment and devices connected to the patient (PONTE, 2014).

Nurses also reported excessive noise as a common discomfort for ICU patients, which is attributed to a high number of audible alarms from technological equipment, which bring physiological and psychological damage to patients, prolonging hospitalization and interfering with recovery. This fact was also identified in a study carried out in a Brazilian ICU (HEIDEMANN, 2011). Through all that has been addressed, promoting comfort from nursing care with a view to quality of life in an intensive care environment becomes an issue at least challenging for nursing, above all, the one we are referring to, immersed in a markedly technological environment, providing specific care and that, despite the fact that it is not generalized, much less universal acceptance, it is an environment understood by common sense and even among academics, as (un) human (SILVA, 2006). This technology was called hard, light-hard and light, it has a relevant and decisive role for the success of therapy and fulfillment of the unit's purpose (MERHY, 1997). Wide, intense and with greater visibility in view of the space given to hard technologies in this intensive care environment and how they interfere with the nursing care provided, even though they are aware that they are fundamental, when well handled and properly indicated for them. patients from the point of view of biomedical discourse.
The practice of promoting comfort measures is essential to patient care and quality, however it is often minimized in the face of technologies, its relevance in restoring the health of the individual is emphasized, since it is through comfort measures that nurses and their team promote quality reinforcement, hope, comfort, support, encouragement and assistance. Still, it provides better nurse-patient interaction, as well as enabling the establishment of an effective bond, translated into trust by the individual being cared for (POTT, *et al*., 2013).

Thus, an articulation between care and technology is suggested, so that technological competence is an expression of care, by valuing the interaction between the professional, the patient and the technology - an effective care experience (HALLDÓRSDÓTTIR, 1997. BITENCOURT, 2007). As for the difficulties in providing comfort to patients, they evidenced the physical structure of the unit, occupational stress, the complexity of the care provided, physical structure, noise, equipment, isolation (loneliness), pain and difficulty sleeping, and these are aspects that cause both psychological changes as affective (RIBEIRO, COSTA, 2012); anxiety and fear are often found among critically ill patients (MURPHY, 2008). Therefore, it is essential to develop other studies relevant to comfort in ICU patients, which investigate with the ICU patient and nurses, what the main discomforts of all contexts proposed by Kolcaba, afflict these individuals, so that they can complement the data presented in this study.

Depending on the context in which the patient is inserted, their particularities, needs, beliefs and values, nursing care, related to comfort, can take on numerous meanings. Since, each individual expresses their anxieties, fears, malaise, expectations or discomfort according to their individuality and particularity, in the face of the disease and stress of hospitalization (APÓSTOLO, 2009. DURANTE, TONINI, ARMINI, 2014).

**Conclusion**

It is concluded that the perception of nurses regarding the concept of comfort is confusing within the diversity of the studied contexts aimed at comfort in nursing, the information cited by the research participants brings us observations focused most of the time on care, I obtained ambiguous answers for both terms, with emphasis on limiting the promotion of comfort, in noise and cold. One difficulty encountered in carrying out the study was the delay in obtaining the data completed by nursing professionals from ICUs I and II of the HGR. As research evidence emerged, it was found that environmental factors such as excessive noise, poor privacy, cold place, inadequate lighting, busy place and hot place were identified as one of the limitations to promote comfort in HGR ICUs. This study offers a contribution to the reflection on the concept of comfort and its theoretical and philosophical perspective, as well as on nurses' sensitivity to the needs of patients in the ICU, in this context of comfort. Thus, it is possible to generate knowledge that underlies the planning of nursing care in an individualized way aimed at a comforting action plan for these patients. Also aiming to contribute to the improvement of the concept of comfort from the perspective of Kolcaba's theory of comfort and the Nightingale environment, clarifying for the teams that work in the ICUs.

## REFERENCES

Apóstolo, JLA. O conforto nas teorias de enfermagem – análise do conceito e significados teóricos. Revista Referência II Série. Coimbra. v.2, n. 9. Mar 2009, p. 61-67.

Bitencourt AGV, *et al*. Análise de estressores para os pacientes em unidade de Terapia Intensiva. Rev Brasileira de Terapia Intensiva. 2007.

Cunha PJ, Zagonel IPS. As relações interpessoais nas ações de cuidar em ambiente tecnológico hospitalar. Acta Paul Enferm 2008; 21(3).

Dantas, F. M. S. A relação entre os fatores sócio-demográficos e o nível de conforto da mulher com cancro da mama em tratamento com quimioterapia. 2010. 121f. Tese (Mestrado em Enfermagem) – Programa de Pós-Graduação em Enfermagem, Universidade Católica Portuguesa, Lisboa, 2010.

Durante ALTC, Tonini T, Armini LR. Conforto em cuidados paliativos: o saber-fazer do enfermeiro no hospital geral. Rev. Enferm UFPE online. 2014; 8 (3): 530-6.

Hagemeyer V, Gusman FT. Pós-operatório no idoso. In: Tratado de geriatria e gerontologia. 3a ed. Rio de Janeiro: Guanabara Koogan, 2011; 3-13.

Halldórsdóttir S. Implications of the caring competence dichotomy. In: Thorne SE, Hayes VE, editors. Nursing praxis: Knowledge and action; 1997. p.105-124.

Heidemann AM, *et al*. Influência do nível de ruídos na percepção do estresse em pacientes cardíacos. Rev Bras Ter Intensiva. 2011; 23(1): 62-67.

Herdman, T. Diagnósticos de Enfermagem da NANDA: definições e classificação – 2012/2014. 2. ed. Porto Alegre: Artmed, 2013.

Kolcaba, K. Comfort theory and practice: a vision for holistic health care and research. New York: Springer publishing company, Inc., 2009.

Kolcaba, K. The comfort line. 2012.

Louro TQ, *et al*. A terapia intensiva e as tecnologias como marca registrada. Rev Pesq Cuid Fundam 2012;4(3):2465-82.

Machado ACA, Brêtas ACP. Comunicação não-verbal dos idosos frente ao processo de dor. Rev Bras Enferm. 2006; 59(2): 129-33.

Merhy, EE. Em busca da qualidade dos serviços de saúde: os serviços de porta aberta para a saúde e o modelo tecnológico em defesa da vida (ou como aproveitar os ruídos do cotidiano dos serviços de saúde e colegiadamente reorganizar o processo de trabalho na busca da qualidade das ações de saúde). In: CECÍLIO, L. C. O. (Org.). Inventando a mudança na saúde. São Paulo: Hucitec, 1997.

Murphy CA, *et al*. Patient-entered electronic healthcare records with electronic medical record integration: lessons learned from the field (Paper Presentation). Comput Inform Nurs. 2008 Sep-Oct; 26(5):302

Nightingale, F. Notas sobre Enfermagem. São Paulo: Cortez, 1989.

Nonino, EAPM, Anselmi ML, Dalmas JC. Avalia o da qualidade do procedimento curativo em pacientes internados em um Hospital Universitário. Rev Latino-Am Enferm 2008.

Oliveira CM, *et al*. Dor em idosos hospitalizados com comprometimento osteomuscular. Rev Med. 2013; 23(1): 33-8.

Ponte KMA, *et al*. Cuidado clínico de enfermagem para conforto de mulheres com infarto agudo do miocárdio. Texto Contexto Enferm, Florianópolis, 2014 Jan-Mar; 23(1): 56-64.

Pott, FS, *et al*. Medidas de conforto e comunicação nas ações de cuidado de enfermagem ao paciente crítico. Rev Bras Enferm, Brasília 2013; mar-abr; 66(2): 174-9.

Ribeiro, PCPSV; Costa, MAM. O conforto do doente idoso crônico em contexto hospitalar: contributos para uma revisão sistemática da literatura. Revista de Enfermagem Referência. vol. serIII. n.7. 2012; 149-158.

Sallum AMC, Sousa RMC. Diagnósticos de enfermagem em vítimas de trauma nas primeiras seis horas após o evento. Acta Paulista Enferm. 2012; 25(2).

Silva, RCL. O significado do cuidado em unidade de terapia intensiva e a (DES)construção do discurso de humanização em unidades tecnológicas. Tese de Doutorado, EEAN/UFRJ. RJ, 2006.

Vila, VSC, Rossi, LA. O significado cultural do cuidado humanizado em unidade de terapia intensiva: ”muito falado e pouco vivido”. Rev. Latino. Am. Enfermagem, v.10, n.2, Ribeirão Preto, mar/abr., 2002.

*******