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NECESSIDADES DE CONFORTO DA PESSOA EM SITUAÇÃO CRÍTICA SUBMETIDA A VENTILAÇÃO MECÂNICA À LUZ DA TEORIA DE KOLCABA: UM ESTUDO QUALITATIVO

COMFORT NEEDS OF PATIENTS UNDERGOING MECHANICAL VENTILATION IN LIGHT OF KOLCABA'S THEORY: A QUALITATIVE STUDY

NECESIDADES DE CONFORT DE LOS PACIENTES SOMETIDOS A VENTILACIÓN MECÁNICA A LA LUZ DE LA TEORÍA DE KOLCABA: UN ESTUDIO CUALITATIVO

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RESUMO

Introdução: A pessoa em situação crítica sob ventilação mecânica invasiva encontra-se num estado de falência ou iminência de falência das suas funções vitais sendo sujeita a terapêuticas *lifesaving* extremamente invasivas que põem em causa as suas necessidades de conforto. Este facto desafia os enfermeiros a uma prática de enfermagem avançada, alicerçada num conjunto de competências altamente diferenciadas e especializadas, de modo a satisfazer essas necessidades.
Objetivo: Descrever as necessidades de conforto experienciadas pelo doente crítico submetido a ventilação mecânica invasiva.
Métodos: Estudo exploratório, descritivo, de natureza qualitativa. Realizadas entrevistas não estruturadas a nove participantes que foram submetidos a ventilação mecânica invasiva numa Unidade de Cuidados Intensivos. O tratamento dos dados foi realizado recorrendo ao método de Análise de Conteúdo de Bardin.
Resultados: Os resultados apontam que os participantes manifestam necessidades de conforto nos quatro contextos da experiência: contexto físico; contexto psicoespiritual; contexto ambiental e contexto sociocultural, nomeadamente a nível do autocuidado, da esperança, da temperatura, da responsabilidade económica e social, e da relação interpessoal com a equipa de saúde.
Conclusão: O conforto é considerado um estado imediato em que a pessoa vê satisfeitas as necessidades nos quatro contextos da experiência. Satisfazer as necessidades de conforto ajuda a reduzir a ansiedade e reforça a confiança do doente.

Palavras-chave: conforto do doente; teoria de enfermagem; enfermagem; cuidados intensivos; ventilação mecânica

ABSTRACT

Introduction: The person in a critical condition under invasive mechanical ventilation is in a state of organ failure or imminent organ failure, requiring extremely invasive lifesaving therapies that compromise their comfort needs. This challenges nurses to engage in advanced nursing practice, based on a set of highly specialized and differentiated skills, in order to meet these needs.
Objective: Describe the comfort needs experienced by critically ill patients undergoing invasive mechanical ventilation
Methods: This is an exploratory, descriptive, qualitative study. Unstructured interviews were conducted with nine participants who underwent invasive mechanical ventilation in an Intensive Care Unit. Data analysis was carried out using Bardin's Content Analysis method.
Results: The findings indicate that participants experience comfort needs in four contexts: physical, psychospiritual, environmental, and sociocultural. These needs include aspects such as self-care, hope, temperature regulation, economic and social responsibility, and interpersonal relationships with the healthcare team.
Conclusion: Comfort is considered an immediate state in which a person's needs are met across these four contexts. Meeting comfort needs helps reduce anxiety and strengthens patient confidence.

Keywords: patient comfort; nursing theory; nursing; critical care; artificial respiration

RESUMEN

Introducción: La persona en situación crítica bajo ventilación mecánica invasiva se encuentra en un estado de fallo o inminente fallo de sus funciones vitales, siendo sometida a terapias lifesaving extremadamente invasivas que comprometen sus necesidades de confort. Este hecho desafía a los enfermeros a una práctica de enfermería avanzada, basada en un conjunto de competencias altamente diferenciadas y especializadas, con el fin de satisfacer estas necesidades.
Objetivo: Describir las necesidades de confort que experimentan los pacientes críticos sometidos a ventilación mecánica invasiva
Métodos: Se trata de un estudio exploratorio, descriptivo, cualitativo. Se realizaron entrevistas no estructuradas con nueve participantes que se sometieron a ventilación mecánica invasiva en una Unidad de Cuidados Intensivos. El tratamiento de los datos se realizó mediante el método de Análisis de Contenido de Bardin.
Resultados: Los resultados indican que los participantes manifiestan necesidades de confort en los cuatro contextos de la experiencia: contexto físico; contexto psicoespiritual; contexto ambiental y sociocultural, principalmente en términos de autocuidado, esperanza, temperatura, responsabilidad económica y social, y relación interpersonal con el equipo de salud.
Conclusión: El confort se considera un estado inmediato en el que la persona ve satisfechas las necesidades en los cuatro contextos de la experiencia. Satisfacer las necesidades de comodidad ayuda a reducir la ansiedad y genera confianza en el paciente.

Palabras Clave: comodidad del paciente; teoría de enfermería; enfermería; cuidados intensivos; respiración artificial

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INTRODUCTION

Concern for the comfort of the person in a critical condition has been a constant focus in nursing practice, aiming to promote the quality of care delivered. Invasive mechanical ventilation (IMV), commonly employed as a lifesaving intervention, is a form of artificial ventilatory support that is essential to ensure adequate oxygenation and ventilation for patients with respiratory failure (Damiani et al., 2023), regardless of aetiology, for as long as required until clinical reversal occurs. Despite being indispensable for survival, IMV involves a wide range of alterations to the patient's comfort needs. Patients receiving IMV are subject to various diagnostic and therapeutic procedures that may compromise their comfort. Hospitalization itself can be an intense and stressful experience due to continuous exposure to stressors and multiple threats. Providing care to critically ill patients requires highly specialized and differentiated nursing interventions. Nurses are challenged to develop advanced nursing practice, grounded in a set of specialized skills, in order to address patients' needs through a holistic approach to care.

Comfort is a fundamental concept in nursing practice. Over time, it has taken on different meanings related to the historical, political, social, and religious evolution of humanity, as well as to the technoscientific advances in health sciences in general, and nursing in particular. The verb "to comfort," from the Latin *confortare*, means to restore physical strength, vigour, and energy; to make strong, strengthen, and reinvigorate (Apóstolo, 2009; Coelho et al., 2016). The term comfort refers to the feeling of physical tranquillity and bodily well-being, and the nurse is the professional who promotes the strengthening and comfort of the person who is ill (Apóstolo, 2009; Relvas, 2019).

The evolution and significance of the concept of comfort have advanced considerably throughout the history of nursing, influenced by the guiding frameworks of nursing and medical education, technological progress, and the development and application of conceptual models. In the 1990s, Katharine Kolcaba made a notable contribution by conceptualising and operationalising comfort as an immediate experience that fulfils fundamental human needs for relief, ease, and transcendence across physical, psycho-spiritual, environmental, and social domains. Comfort thus encompasses the individual's perception of having benefitted from some form of supportive intervention, which consequently enhances or restores their capacity to cope with a given situation in the present moment. This concept holds substantial relevance and potential within nursing practice when appropriately recognised and applied. It may be regarded as an outcome particularly sensitive to nursing interventions, given the immediacy of the experience and the inherent emphasis on empowering, restorative support (Goldin et al., 2023; Oliveira, 2013).

Thus, it is deemed pertinent to investigate the experience of patients subjected to invasive mechanical ventilation (IMV) in order to contribute to the enhancement of nursing care quality for individuals in critical condition. Personalising care plans centred on actual patient needs undoubtedly reflects a holistic and unique approach to the person. Within the scope of a systematic literature review conducted by Relvas (2019), a scarcity of studies in Portugal on this subject was identified, which justified the development of the present study. Accordingly, the research question to be addressed is: *What are the comfort needs experienced by critically ill patients undergoing invasive mechanical ventilation?*

1. METHODS

An exploratory and descriptive qualitative study was developed. Qualitative research does not seek to generalise results; rather, it aims to provide an important understanding of reality from the perspective of the participants rather than the researchers (Streubert & Carpenter, 2013). This entails a comprehensive understanding of phenomena and an inductive, holistic, and idiographic approach to analysis (Almeida & Freire, 2017). From this perspective, qualitative research is most appropriate for studying human experience in health, as qualitative methods enable a more insightful comprehension of the subject matter, considering the diverse perspectives of participants. To maintain methodological rigour, the Consolidated Criteria for Reporting Qualitative Research (COREQ) was employed as a supporting framework.

1.1 Sample

Within a qualitative approach, it is considered that the phenomenon under study is best understood when observed within its context. In this case, it was not feasible to conduct the interviews in participants' homes — a setting where they might have felt more at ease to share relevant information. Instead, the interviews were carried out in a hospital in northern Portugal, at the time when participants attended their follow-up consultation. To this end, a dedicated room was made available, providing a particularly pleasant and appropriate space where the interviews took place face-to-face and without interruptions. Initially, the researcher was introduced by a member of the nursing team, after which the topic and objectives of the interview were explained to the interviewee. This approach aimed to establish a partnership-based relationship that enabled reflexivity for both participants in the interaction.

Of the seventeen patients referred by the institution, only nine agreed to participate in the study. The sample thus comprised nine individuals; the sample size was not predetermined and was obtained intentionally. Participants met the following eligibility criteria: being aged 18 years or older; having undergone invasive mechanical ventilation; and possessing sufficient cognitive capacity to participate in the research.

1.2 Data Collection Instruments

An unstructured interview was employed as the primary data collection instrument, conducted by the principal investigator, who possesses training and expertise in this area. The interview guide was composed of two parts. The first part, containing seven questions, was designed to characterise the participants' biographical and social profiles (including age, gender, marital status, educational level, occupation, reason for admission to the ICU, and length of ICU stay). The second part consisted of a single broad

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question that invited participants to provide a detailed description of their experience during their stay in the intensive care unit, thus allowing them the freedom to narrate their stories openly. The interview guide was piloted in a context similar to that in which the study was carried out. All interviews were audio-recorded with the participants' consent, which enabled the identification of important aspects such as silences, changes in tone of voice, and emotional nuances. Each interview had an average duration of approximately 30 minutes.

1.3 Data analysis

All material collected was analysed using content analysis techniques as described by Bardin (2016), allowing for the clarification and systematisation of the interview content and the categorisation of the data. The process began with the full transcription of the interviews, followed by an initial floating reading of the content. Subsequently, more thorough readings of the narratives were conducted in order to categorise the data appropriately. The categorisation criterion adopted was semantic (thematic categories), whereby all concepts with the same meaning were grouped under the same category, based on Kolcaba's theoretical framework. The categories were then validated by two independent researchers to ensure rigour and reliability.

1.4 Ethical considerations

To carry out this study, approval was sought from the Subcommittee of Ethics for Life and Health Sciences (Opinion CEICVS 071/2019), the Department of Education, Training and Research, and the Health Ethics Committee of the Hospital Centre where the study was conducted (Opinion 2019.190 (156-DEFI/162-CE)), all of which issued favourable opinions.

The study was conducted in accordance with the principles of the Declaration of Helsinki, the Convention on Human Rights and Biomedicine, the guidelines of the Council for International Organizations of Medical Sciences (CIOMS), and the Good Clinical Practice (GCP) Guidelines. The principle of confidentiality was strictly upheld throughout. No participant was identified by name. To ensure anonymity, each participant was assigned an alphanumeric code (e.g., P1, P2...), thereby preventing any potential identification of individuals or the institution involved.

It is important to note that prior to the start of each interview, participants were fully informed about its purpose and the overall objectives of the research. Confidentiality of the data and anonymity of all participants were assured. After giving their informed and voluntary consent to participate, each individual signed a written consent form. Participants were also informed that interviews would be audio-recorded and that these recordings would be destroyed upon completion of the study.

No copies or documents containing identifiable participant information were produced during data collection. All data were securely disposed of following the conclusion of the study. At no point were participants subjected to harm, thus upholding the principle of beneficence.

2. RESULTS

Nine individuals who had undergone invasive mechanical ventilation participated in this study. Their ages ranged from 21 to 68 years, with six women and three men. In terms of marital status, one participant was single, another widowed, and the remaining participants were married. Educational attainment varied from completion of the 4th to the 12th year of schooling. The length of stay in the ICU ranged from 3 to 11 days, with a mean duration of 5.33 days (Table 1).

Table 1 – Participants Sociodemographic Characterization

	Variable	*Fr*
Age	Minimum: 21 Maximum: 68 Mean: 48,88	
Gender	Male Female	3 6
Marital status	Married Single Widower	7 1 1
Educational level	4th year of schooling 8th year of schooling 9th year of schooling 10th year of schooling 11th year of schooling 12th year of schooling	1 1 1 1 3 2
ICU length of stay	Minimum: 3 Maximum: 11 Mean: 5,33	

Note. Fr = Relative frequency

From the corpus of analysis, following the successive application of the various analytical procedures, four categories emerged relating to the theme of Comfort Needs. These were designated as: i) Physical context; ii) Psychospiritual context; iii)

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Environmental context; and iv) Sociocultural context. It is important to note that the categories identified are theoretical in nature, grounded in Kolcaba's Theory of Comfort. The categories and their respective subcategories are presented in Table 2.

Table 2 – Categories and Subcategories related to comfort needs

Theme	Category	*Subcategory*
Comfort needs	Physical Context	Self-care Thirst Pain Well-being
	Psychospiritual Context	Cognitive disturbance Religiosity Hope Emotions
	Environmental Context	Noise Furniture Lighting Temperature
	Sociocultural Context	Economic/social responsibility Interpersonal relationship with the healthcare team Communication Social support Social life

Physical context

This category refers to bodily sensations and encompasses aspects that affect the physical state, such as relaxation and rest, levels of elimination and hydration, oxygenation, pain, positioning, various metabolic indicators, as well as other factors related to treatment and medical conditions (Kolcaba, 1992). Through the analysis of participants' narratives, the subcategories of self-care, thirst, pain, and well-being emerged.

During the period in which they were under invasive mechanical ventilation, some participants described, in their narratives, their high level of dependency regarding the performance of self-care. Memories relating to hygiene and elimination were thus brought to mind: *"I remember them giving me a bath."* (P9); *"I wanted to go to the bathroom."* (P3)

The experience of thirst was mentioned as a source of discomfort. Consequently, it was identified as one of the needs, as expressed in the following account: *"I was so thirsty… very thirsty… at night, I even developed sores on the roof of my mouth."* (P6)

Participants also recalled the experience of pain: *"I remember having pain… pain in my arm, a lot of pain […] I really had pain in my arm, it's the only pain I remember."* (P1)

The well-being of individuals subjected to invasive mechanical ventilation was affected both by the technology used and the presence of medical devices, such as catheters and the endotracheal tube: *"I had two catheters, one on each side […] and I could feel the tube."* (P6)

This situation may also be responsible for disturbances in the circadian rhythm, impacting sleep quality, as evidenced by the following excerpts: *"I remember waking up sometimes during the night."* (P3); *"[…] to be able to sleep, you really have to be doped up."* (P8), and then the urge to *"throw myself out of bed."* (P2).

These accounts reflect a disruption in well-being and consequent patient agitation. Such agitation necessitates the use of physical restraints by nurses as a means to minimise risks and accidents, notably to prevent extubation, removal of devices, and falls in patients experiencing psychomotor agitation. However, this intervention is identified by participants as a source of discomfort: *"I was raising my arm, and it was tied down."* (P1); *"I was tied up, and that's how I woke up."* (P3).

Although considered absolutely essential by the multidisciplinary team for patient safety, physical restraint represents for the individual a distressing discovery regarding their freedom: *"It made one of my arms very itchy, and I tried to scratch, but I couldn't because I was tied up, and that's how I woke up. I had an arterial line, and it must have been causing the itching, and I wanted to scratch but couldn't, and that's when I also realised I was intubated."* (P3).

Psychospiritual context

This context pertains to the internal consciousness of the self, which includes self-esteem, self-concept, sexuality and its significance, as well as the individual's relationship with a higher order or being (Kolcaba & Wykle, 1997). Participants reported cognitive disturbances such as hallucinations, spatiotemporal disorientation, and amnesia: *"It seemed as though the beds were being moved around, that there was a party, something like that."* (P4); *"I didn't really know where I was… which city, which hospital, I didn't really know why I was there… I didn't know when I would leave… I didn't know what time it was."* (P2).

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Through their relationship with a Higher Being or Divine Entity, critically ill patients under invasive mechanical ventilation develop internal mechanisms to endure difficulties, accept, and resolve problems: *"I asked God for help, I thought of Our Lady to try to get through it."* (P6).

Hope emerges as a fundamental human need to find meaning in life during times of crisis and was a process that enabled participants to endure suffering: *"On the first day my son was admitted to intensive care, he saw me there… and… he clung to me crying… it was difficult. My mother almost hit me because she saw the worst and became worried […] My son just kept crying and asking not to go through the same."* (P5).

Likewise, fear was mentioned in participants' narratives, linked to ventilator weaning, uncertainty about prognosis, and the possibility of death: *"I panicked at the time [of extubation] and was scared."* (P3).

Environmental context

The environmental context encompasses both natural and artificial elements of the surroundings, external conditions and influences, and their impact on the individual (Kolcaba, 2025). Participants described the ICU environment as an unfamiliar atmosphere dominated by the noise of alarms, which acted as a source of discomfort: *"the noise of the machines working… constantly day and night, and it wasn't just one, there were several. So, I reached a point where it was exhausting and irritating and everything else… because one makes a noise, another makes a different one. Conclusion: it is impossible to have silence in the room. […] those machines have to be switched on."* (P8).

One participant referred to the size of the bed as a cause of discomfort, and another recalled lighting as a striking aspect of their ICU stay: *"[…] I remember the lights… you only see the focus of the light […]"* (P3).

An appropriate temperature, which is essential to maintain normothermia and consequently the patient's comfort, was valued by participants who reported: *"[…] I was warm"* (P3); *"[…] I felt hot, I was never cold, always hot."* (P7).

Sociocultural context

The sociocultural context is understood as inherent to the realm of interpersonal, familial, and social relationships (e.g., finances, education, healthcare), as well as the need for information, and also encompassing family traditions, rituals, and religious practices (Kolcaba, 1997). Participants expressed concerns during the period they were subjected to invasive mechanical ventilation: "[…] *I was worried about work and all the obligations*." (P2).

They also reported being unable to fulfil their parental roles during their hospitalisation: "[…] *failure in the role of mother*." (P5); "*I wasn't there for them* [my children]." (P7).

Interpersonal relationships with the healthcare team proved crucial for identifying altered needs and implementing appropriate interventions, materialised in the trust participants placed in the healthcare professionals: "[…] *the assertiveness and kindness of the healthcare professionals* […] *in terms of human relations it was excellent*." (P2); "*I remember they were super friendly. They treated me very well* […] *they have a different kind of care for patients, at least that's how I felt*." (P3).

Participants described difficulties in achieving effective communication to support their situation, even reporting an inability to communicate verbally at times, including after extubation. Consequently, non-verbal communication techniques, such as mime, were frequently employed: "*Communicating… yes, they always tried to communicate, sometimes it was a bit irritating because I couldn't speak. I understood everything perfectly… I couldn't speak* […] *it was practically all mime because it was impossible to talk, even after they extubated me I had several days when no sound came out*." (P8).

In this study, family and friends emerged as fundamental in helping the person under invasive mechanical ventilation to face their hospitalisation less hostilely and assist in their rehabilitation: "*My son came to visit me and sat on my right side, so isn't it a joy to receive visitors?*" (P4); "*Visits were a support, having colleagues who came to visit me in intensive care*." (P7).

3. DISCUSSION

Throughout life, comfort is a fundamental need and constitutes a challenge for nursing practice. The concept of comfort goes beyond the mere absence of discomfort, being multidimensional, idiosyncratic, dynamic, and dependent on the context in which the individual is situated (Bland, 2007).

Participants mentioned a high degree of dependence on others for self-care during the period they were subjected to invasive mechanical ventilation (IMV). These findings are corroborated by various authors (Baumgarten & Poulsen, 2015), who affirm that patients under IMV experienced total dependence on others, feeling as weak and helpless as a child. Due to this significant dependence, patients are obliged to tolerate hygiene care performed in bed, as they are unable to get out of bed themselves. Other authors also point out that even the simple act of changing bed linens can be a source of distress due to the patient's inability to move, with this experience described as difficult to tolerate and as exhausting as "swimming against the current" (Hajiabadi et al., 2018).

Some participants mentioned physical discomfort caused by embarrassment related to bowel and bladder elimination, due to their inability to use the bathroom and the need to wear diapers. This discomfort has also been analysed in other studies

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(Baumgarten & Poulsen, 2015), which highlighted that such embarrassing situations constitute a source of shame for critically ill patients under IMV, making them feel like a burden to healthcare professionals. Although, in many cases, patients felt the need to evacuate due to their alertness level, their inability to communicate verbally prevented them from expressing this to the team and requesting assistance, thus becoming a further source of discomfort (Hajiabadi et al., 2018).

Thirst is one of the most common symptoms among patients admitted to intensive care units (ICUs) (Stotts et al., 2015), and is the least frequently identified by healthcare professionals due to communication barriers inherent in the IMV process (Takashima et al., 2019). The unmet need for thirst relief may generate feelings of stress and deprivation (Holm & Dreyer, 2015), which can endure over time, causing a bitter and unforgettable memory of hospitalisation (Hajiabadi et al., 2018).

Pain causes ongoing suffering and is one of the needs patients most desire to have relieved, as it leads to severe asthenia and interferes with sleep quality. Clinical practice shows that pain is among the most feared and commonly experienced phenomena by critically ill patients. Pain, being a universal phenomenon, is influenced by social, psychological, and cultural factors, making it a challenge for nurses. It manifests as an unpleasant sensation consequent to illness, a transversal element to all patients under IMV (Hajiabadi et al., 2018; Kisorio & Langley, 2019).

ICU technology creates a sensation of physical and mental dependence in the patient, requiring the implementation of uncomfortable procedures, which lead the patient to feel trapped in a "body-object," as they lack the autonomy to ensure their own survival and become reliant on mechanical devices and caregivers. This dehumanising aspect of the experience can be likened to torture (18,24). The inability to reposition oneself due to fatigue or restrictions imposed by tubes or arterial lines can become a source of discomfort, causing patients under IMV to experience loss of control and function of their own bodies. This loss of bodily function is frequently accompanied by loss of integrity in terms of dependence and dignity (Berntzen et al., 2020).

Being a patient in the ICU sometimes meant a constant struggle to maintain consciousness and connection to the real world. Dreams and hallucinations blurred the boundary between reality and imagination, making delirium a common and distressing experience (Berntzen et al., 2020). The factors most contributing to ICU delirium included fear, difficulties with temporal orientation and human interaction, as well as unreal thoughts involving the patient in a fictitious reality (Ortega et al., 2020). This state of confusion confronted patients with existential questions about uncertainty, helplessness, and mortality. Support from healthcare professionals is essential to help patients cope with delirium memories.

In critical illness, religious beliefs influence how individuals cope with stress and suffering (Kisorio & Langley, 2019). Patients under IMV are aware of the possibility of death and reflect on it based on their religious or spiritual beliefs (Carruthers et al., 2018). To face fear and anxiety, they turn to a higher being (Baumgarten & Poulsen, 2015), which leads them to a state of well-being and personal growth. The suffering and wear caused by illness, as well as belief in a miracle cure, can serve as a source of support to face the disease and its treatment (Alves et al., 2016). Thus, the patient's need to mobilise resources to feel comfortable, enabling a process of strengthening and self-determination, gives rise to hope as a human need to find meaning in life during moments of crisis, a process that enables them to endure suffering.

Experiencing a life-threatening situation is unique both for the patient and their family, as the patient often only comprehends the severity of their condition later during recovery. The family, in most cases, experiences intensely and emotionally every moment and subtle change in the patient's clinical condition, which generates stress (Sá et al., 2015). For families, the initial days of ICU admission are characterised by uncertainty, evoking feelings of fear and anguish over the possibility that the patient's clinical state could signify the beginning of the end (Valle & Lohne, 2021). The family serves as the patient's refuge, support, link to the outside world, and affective reference in a moment of great human vulnerability and fragility. Their presence helps the patient forget illness and fear, providing security (Castro & Botelho, 2017), and is associated with feelings of comfort and tranquillity during moments of great uncertainty and fear (Hajiabadi et al., 2018).

Participants reported the peculiar and strange ICU environment and its impact on comfort. The use of multiple devices with alarms, mechanical ventilation, and the presence of healthcare professionals create a noisy and uncomfortable atmosphere, triggering feelings of anger, disorder, suffering, psychological stress, malaise, and insomnia (Hajiabadi et al., 2018; Kisorio & Langley, 2019). Consequently, participants appreciated when nurses provided a calmer and quieter atmosphere, which mitigated the effects of ambient noise (Baumgarten, 2015).

To maintain the quality standards of care, ICUs maintain artificial lighting 24 hours a day, which disrupts patients' day/night orientation and circadian rhythms, potentially causing devastating effects such as sleep deprivation (Beltrami et al., 2015). Maintaining an adequate body temperature is essential to minimise physiological and biochemical effects caused by harmful temperature extremes, preventing dysregulation of bodily homeostasis and consequent organ failure or dysfunction (Chacko & Peter, 2018). Thus, being a patient in the ICU meant finding oneself in a strange and unreal environment, with the ICU being a place that restores life but also a hostile environment with excessive light and constant noise, which increased patients' confusion (Escudero et al., 2014).

Economic and social responsibility, interpersonal relationships with the healthcare team, communication, social support, and social life stood out in participants' reports concerning the sociocultural context. Participants expressed concerns during the period of IMV, notably regarding work and children. Illness can be considered destructive as it interferes with family or professional roles, resulting in loss of status and social isolation.

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The professional practice of nursing centres on the interpersonal relationship between nurse and patient or group of patients. The therapeutic relationship promoted within nursing practice is characterised by a partnership established with the person, respecting their capabilities and valuing their role. This relationship develops and strengthens over a dynamic process aimed at helping the cared-for person become proactive in achieving their health goals (Regulation No. 190/2015, 2015). The interpersonal relationship with the healthcare team is crucial for identifying altered needs and implementing appropriate interventions, embodied in the trust participants placed in the team. Immediate attention from nurses alleviated loneliness, reduced anxiety, and provided a sense of security and comfort (Castro & Botelho, 2017; Kisorio & Langley, 2019).

Communication difficulties arising from the IMV process generate worry, frustration, feelings of isolation, loneliness, and anger. These situations can be explained by patients' weakness, lethargy, dizziness, and drowsiness associated with mechanical ventilation (Baumgarten & Poulsen, 2015; Carruthers et al., 2018).

The presence of family seemed to anchor patients to reality and helped ease the unknown and sometimes frightening environment (Berntzen et al., 2020), also functioning as a form of social support. ICU admission and the use of invasive therapies such as IMV result in deprivation of an active social life (Baumgarten & Poulsen, 2015), with patients at some point wishing to leave the bed and return home, aspiring to a normal life.

CONCLUSION

The results, consistent with both international and national studies, demonstrate that participants experienced multiple comfort needs at physical, psycho-spiritual, environmental, and sociocultural levels during the process of invasive mechanical ventilation (IMV). Due to the levels of sedation to which the patients were subjected, these needs are not easily identifiable by nurses. Promoting comfort for critically ill patients under IMV is not a straightforward task, as these patients are often unable to express themselves and frequently exhibit fluctuations in their level of consciousness. In this context, comfort translates into strength, encouragement, and empowerment, aiming for a state in which basic needs related to relief, tranquillity, and transcendence across the four contexts of human experience are satisfied. Similarly, comfort is a dynamic outcome that nurses must strive to achieve through their interventions and, as such, should be regarded as a fundamental aspect of humanised and holistic care to ensure that comforting care is attained.

Given the findings, we suggest the need to reflect on Kolcaba's theoretical assumptions to effectively respond to the comfort needs of critically ill patients undergoing IMV. Likewise, educational institutions should incorporate the study of comfort into their curricula. Furthermore, there is a need to develop further research in this field using diverse methodologies and approaches to enhance understanding of this complex phenomenon, as well as to design and implement more appropriate interventions that promote comfort, thereby minimising the deleterious effects of a therapeutic process often considered lifesaving.

The comfort theory represents a theoretical framework that supports holistic care, with comfort being the outcome of nursing interventions.

AUTHOR'S CONTRIBUTION

Conceptualization, V.P., R.N. and M.F.M.; data curation, V.P., R.N. and M.F.M.; formal analysis, R.N. and M.F.M.; investigation, V.P.; methodology, V.P., R.N. and M.F.M.; project administration, V.P.; resources, V.P.; supervision, R.N. and M.F.M.; validation, V.P., R.N. and M.F.M.; visualization, V.P., R.N. and M.F.M.; writing – original draft, V.P.; writing – review & editing, R.N. and M.F.M.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

Almeida, L., & Freire, T. (2017). *Metodologia de investigação em psicologia e educação* (5ª ed.). Psiquilibrios.

Alves, D., Silva, L., Gyllyandeson, D., Lemos, I., Kerntopf, M., & Albuquerque, G. (2016). Cuidador de Criança com Câncer: Religiosidade e Espiritualidade como Mecanismos de Enfrentamento. *Revista Cuidarte*, *7*(2), 1318–1324. https://doi.org/10.15649/cuidarte.v7i2.336.

Apóstolo, J. L. A. (2009). O conforto nas teorias de enfermagem – análise do conceito e significados teóricos. *Revista de Enfermagem Referência, II* (9), 61–67. https://www.redalyc.org/pdf/3882/388239956007.pdf

Bardin, L. (2016). *Análise de Conteúdo*. Edições 70.

Baumgarten, M., & Poulsen, I. (2015). Patients' experiences of being mechanically ventilated in an ICU: A qualitative metasynthesis. *Scandinavian Journal of Caring Sciences, 29*(2), 205–214. https://doi.org/10.1111/scs.12177.

Berntzen, H., Bjørk, I. T., Storsveen, A. M., & Wøien, H. (2020). "Please mind the gap": A secondary analysis of discomfort and comfort in intensive care. *Journal of Clinical Nursing, 29*, 2441–2454. https://doi.org/10.1111/jocn.15260.

DOI: https://doi.org/10.29352/mill0227.40989

Beltrami, F. G., Nguyen, X. L., Pichereau, C., Maury, E., Fleury, B., & Fagondes, S. (2015). Sono na unidade de terapia intensiva. *Jornal Brasileiro de Pneumologia*, *41*(6), 539–546. https://doi.org/10.1590/S1806-37562015000000056.

Bland, M. (2007). Betwixt and between: A critical ethnography of comfort in New Zealand residential aged care. *Journal of Clinical Nursing, 16*(5), 937–944. https://doi.org/10.1111/j.1365-2702.2006.01756.x.

Carruthers, H., Gomersall, T., & Astin, F. (2018). The work undertaken by mechanically ventilated patients in Intensive Care: A qualitative meta-ethnography of survivors' experiences. *International Journal of Nursing Studies, 86*, 60–73. https://doi.org/10.1016/j.ijnurstu.2018.05.013.

Castro, C. M., & Botelho, M. A. (2017). A experiência vivida da pessoa em situação crítica em uma unidade de cuidados intensivos. *Revista de Enfermagem UFPE On Line*, *11*(9), 3386–3394. https://doi.org/10.5205/reuol.11088-99027-5-ED.11092017.

Chacko, B., & Peter, J. (2018). Temperature monitoring in the intensive care unit. *Indian Journal of Respiratory Care*, *7*(1), 28. https://doi.org/10.4103/ijrc.ijrc_13_17.

Coelho, A., Parola, V., Escobar-Bravo, M., & Apóstolo, J. (2016). Comfort experience in palliative care: a phenomenological study. *BMC Palliative Care*, *15*(71), 1-8. https://doi.org/10.1186/s12904-016-0145-0.

Damiani, L.F., Basoalto, R., Retamal, J., Bruhn, A., & Bugedo, G. (2023). Mechanical Power of Ventilation: From Computer to Clinical Implications. *Respiratory Care, 68*(12), 1748-1756. https://doi.org/10.4187/respcare.11462.

Escudero, D., Viña, L., & Calleja, C. (2014). Por una UCI de puertas abiertas, más confortable y humana. Es tiempo de cambio. *Medicina Intensiva*, *38*(6), 371–375. https://doi.org/http://dx.doi.org/10.1016/j.medin.2014.01.005.

Goldin, D., Maltseva, T., Scaccianoce, M., & Brenes, F. (2023). Holistic psychosocial approaches in the care of hispanic victims of trauma: An overview. *Journal of Holistic Nursing*, *41*(1), 7-16. https://doi.org/10.1177/08980101221083162.

Hajiabadi, F., Heydari, A., & Manzari, Z. S. (2018). Enclosed in the synergistic rings of suffering: The experience of conscious patients under mechanical ventilation in the intensive care unit of the causes of suffering. *Electronic Physician*, *10*(4), 6697–6706. https://doi.org/10.19082/6697.

Holm, A., & Dreyer, P. (2015). Intensive care unit patients' experience of being conscious during endotracheal intubation and mechanical ventilation. *Nursing in Critical Care*, *22*(2), 81–88. https://doi.org/10.1111/nicc.12200.

Kisorio, L. C., & Langley, G. C. (2019). Critically ill patients' experiences of nursing care in the intensive care unit. *Nursing in Critical Care*, *24*(6), 392–398. https://doi.org/10.1111/nicc.12409.

Kolcaba, K. (1992). The concept of comfort in an environmental framework. *Journal of Gerontological Nursing*, *18*(6), 33–40. https://doi.org/10.3928/0098-9134-19920601-07.

Kolcaba, K. (2025, march 18). *Welcome to the comfort line*! https://www.thecomfortline.com/

Kolcaba, K., & Wykle, M. (1997). Spreading comfort around the world. *Reflections, 23*(2), 12–13. https://pubmed.ncbi.nlm.nih.gov/9295726/

Oliveira, C. (2013). Conforto e bem-estar enquanto conceitos em uso em enfermagem. *Pensar Enfermagem*, *17*(2), 2–8. https://doi.org/10.56732/pensarenf.v17i2.79.

Ortega, D., Papathanassoglou, E., & Norris, C. M. (2020). The lived experience of delirium in intensive care unit patients: A meta-ethnography. *Australian Critical Care*, *33*(2), 193–202. https://doi.org/10.1016/j.aucc.2019.01.003.

Regulamento n.º 190/2015 da Ordem dos Enfermeiros. (2015). Diário da República: II Série, n.º 79. https://diariodarepublica.pt/dr/detalhe/regulamento/190-2015-67058782

Relvas, I. G. (2019). Conforto, o cuidar em enfermagem [Master's thesis, Universidade Católica Portuguesa]. Repositório Institucional da Universidade Católica Portuguesa. http://hdl.handle.net/10400.14/45756.

Sá, F., Botelho, M., & Henriques, M. (2015). Cuidar da Família da Pessoa em Situação Crítica: A Experiência do Enfermeiro. *Pensar Enfermagem*, *19*(1), 31–46. http://pensarenfermagem.esel.pt/files/PE_19_1sem2015_31_46.pdf

Stotts, N. A., Arai, S. R., Cooper, B. A., Nelson, J. E., & Puntillo, K. A. (2015). Predictors of thirst in intensive care unit patients. *Journal of Pain and Symptom Management, 49*(3), 530–538. https://doi.org/10.1016/j.jpainsymman.2014.07.001.

Streubert, H. J., & Carpenter, D. R. (2013). *Investigação Qualitativa em Enfermagem* (5ª ed.). Lusociência.

Takashima, N., Yosihno, Y., & Sakaki, K. (2019). Quantitative and qualitative investigation of the stress experiences of intensive care unit patients mechanically ventilated for more than 12 hr. *Japan Journal of Nursing Science*, *16*(4), 468–480. https://doi.org/10.1111/jjns.12253.

Valle, M., & Lohne, V. (2021). The significance of hope as experienced by the next of kin to critically ill patients in the intensive care unit. *Scandinavian Journal of Caring Sciences*, *35*(2), 521–529. https://doi.org/10.1111/scs.12864.