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# ACUPRESSURE THERAPY IN HOLISTIC NURSING FOR THE RECOVERY OF CRITICALLY ILL PATIENTS IN THE INTENSIVE CARE UNIT

## *(Terapi Akupresur dalam Keperawatan Holistik untuk Pemulihan Pasien Kritis di Unit Perawatan Intensif)*

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**ABSTRACT**

*Pasien kritis menghadapi berbagai komplikasi dan gejala yang dapat mempengaruhi kualitas hidup mereka. Akupresur telah menarik minat sebagai metode tambahan non-farmakologis untuk mempercepat pemulihan pasien sakit kritis di ruang ICU. Penelitian ini menggunakan metode scoping review untuk mengeksplorasi dan merangkum literatur terkait penggunaan akupresur dalam perawatan pasien kritis. Penelusuran literatur dilakukan pada database medis terkemuka menggunakan Tinjauan Sistematis dan Meta-analisis (PRISMA). Hasil penelitian menunjukkan bahwa berbagai metode terapi akupresur yang digunakan pada pasien kritis dengan kondisi klinis seperti penyakit degeneratif dan penyakit kardiovaskular, mempunyai potensi antara lain mengurangi nyeri dan kecemasan, meningkatkan kualitas tidur, menurunkan tekanan darah, mengurangi mual dan muntah, dan meningkatkan fungsi sistem kekebalan tubuh untuk pasien ICU. Penelitian ini diharapkan dapat memberikan landasan untuk mengintegrasikan akupresur ke dalam asuhan keperawatan holistik untuk pasien kritis dan meningkatkan kualitas hidup dan pemulihan pasien.*

Critically ill patients with various complications and symptoms that can affect their quality of life. Acupressure has garnered interest as a potential non-pharmacological adjunctive therapy to accelerate the recovery of critically ill patients in the ICU, a technique that nurses can perform. This study employed a scoping review methodology. Literature searches were conducted across leading medical databases, including PubMed, Science Direct, and ProQuest. Inclusion criteria comprised original studies, systematic reviews, and case reports published within the last five years. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The results show that various acupressure therapy methods used for critically ill patients with clinical conditions such as degenerative diseases and cardiovascular diseases, have the potential to reduce pain and anxiety, improve sleep quality, lower blood pressure, reduce nausea and vomiting, and enhance immune system function for ICU patients. This research aims to provide a foundation for integrating acupressure into holistic nursing care for critically ill patients, thereby improving both their quality of life and recovery.



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## Introduction

Critically ill patients are individuals requiring intensive care in various Intensive Care Units (ICUs) worldwide. The treatment of critically ill patients typically involves a range of conventional medical interventions. However, recent years have seen increasing interest in understanding the role of acupressure as a complementary therapy in the care of critically ill patients (Kia et al., 2021; Lahati, Safira Nurul; Sohilait, 2024). The Intensive Care Room (ICU) is one of the most critical medical care units in the hospital, specifically designed to treat patients with life-threatening medical conditions. Patients admitted to the ICU often face various complications and symptoms that can affect their quality of life as well as survival rates. Over the past few decades, ICU care has undergone significant developments aimed at improving outcomes for critically ill patients (Sohilait et al., 2024; Wubben et al., 2022). One approach that has attracted attention in treating ICU patients is the use of acupressure.

Acupressure, a form of alternative therapy originating from ancient Chinese medical tradition, involves applying pressure to specific points (acupoints) on the body to stimulate a biological response. Although this therapy has been used for thousands of years to treat a variety of medical conditions, the use of acupressure in ICU settings is still a relatively new area of research (Beswick et al., 2023; Browning et al., 2020; Ibitoye et al., 2019). Early studies have proposed that acupressure may provide significant benefits for ICU patients. These include reduction of symptoms such as pain, anxiety, and insomnia, as well as the potential to improve blood circulation, immune system function, and autonomic balance. However, a deeper understanding of the potential benefits, most effective methods, and safety of acupressure use in critical patient contexts still needs further investigation (Suaib Wahyuni Ramadhani & Kurniawan Shahdevi Nandar, 2022; Zheng et al., 2014).

The primary aim of this scoping review is to investigate and synthesize the current body of literature concerning the application of acupressure in the care of critically ill patients. By conducting this review, it is anticipated that a comprehensive overview will be achieved regarding the role of acupressure as an adjunctive therapy within critical care settings. This study seeks to explore the available scientific evidence, delineate the potential benefits of acupressure, and identify key factors that may influence its effectiveness in enhancing both the quality of care and the recovery process for critically ill patients. Through a systematic examination of relevant literature, this review intends to offer valuable insights for healthcare practitioners, researchers, and policymakers. The findings are expected to establish a robust knowledge base to inform decision-making regarding the integration of acupressure into holistic patient care. Ultimately, this review aspires to support efforts aimed at improving the effectiveness of treatment and the overall quality of life for patients receiving critical care.

## Research Methodology

A scoping review methodology was employed to systematically explore and synthesize evidence from diverse literature sources regarding the wide-ranging applications of acupressure in critical care settings. To ensure a comprehensive review, extensive literature searches were conducted across prominent medical databases, including PubMed, ScienceDirect, Scopus, and ProQuest. The search strategy utilized keywords such as “acupressure,” “critically ill patient,” “intensive care unit,” and related terms. Relevant articles published between 2018 and 2023 were considered for inclusion.

This review adhered to the methodological framework proposed by Arksey and O’Malley, which encompasses the following steps: formulating research questions, identifying relevant literature, selecting studies, charting the data, and collating, summarizing, and reporting the results. The initial selection of articles was performed by screening titles and abstracts to determine relevance to the research objectives.

The final pool of articles comprised original research studies, systematic reviews, and case reports that addressed the use of acupressure in the care of critically ill patients. During the review process, the author

collaborated with a certified critical care nurse specializing in Complementary and Alternative Therapy in Holistic Nursing, thereby ensuring the relevance and clinical applicability of the findings.

Inclusion criteria for this review were as follows: publication date between 2018 and 2023, articles written in either Indonesian or English, availability of the full text, and open access status. Exclusion criteria included books and articles deemed not directly relevant to the research questions upon full-text review.

## Result

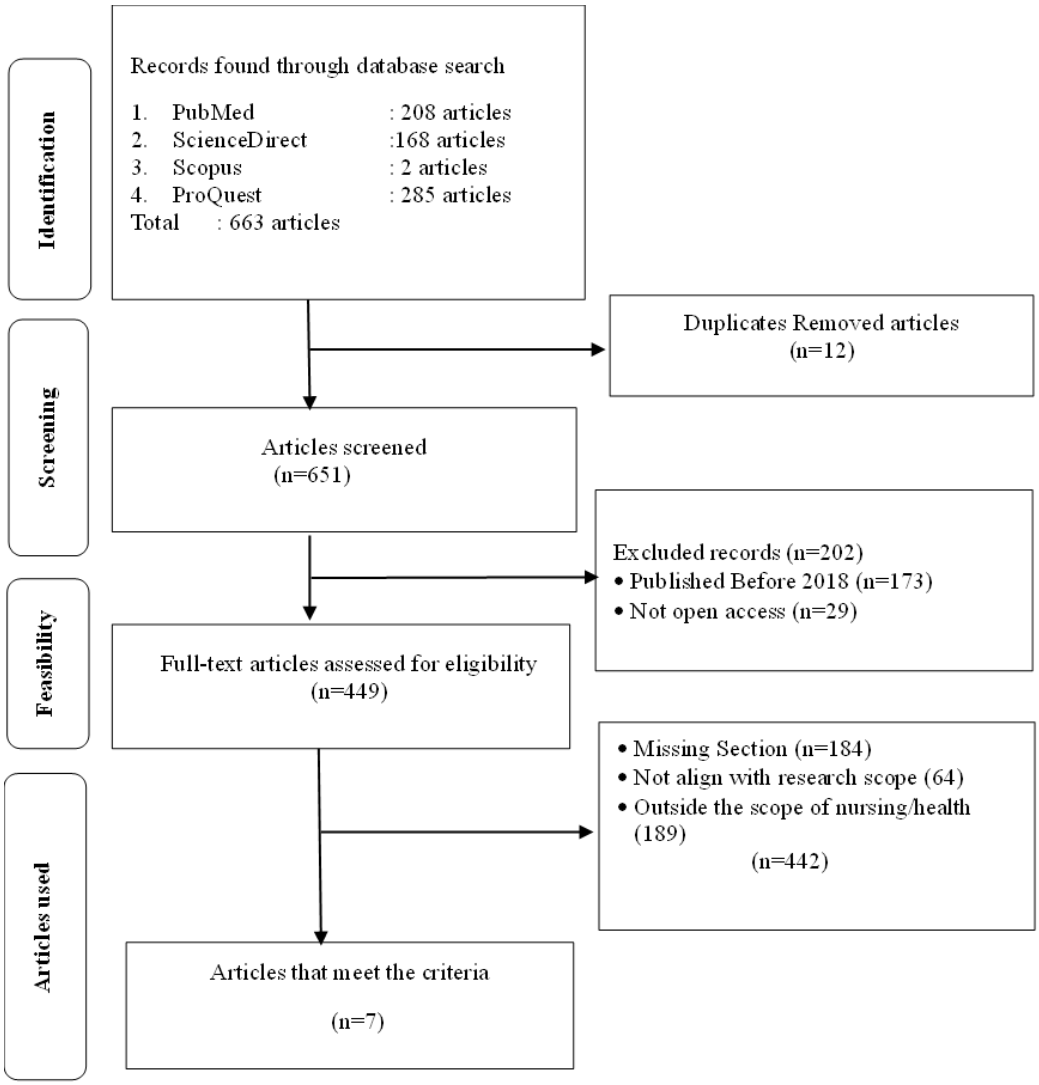


**Figure 1. PRISMA-ScR Diagram Article Selection**

**Table 1. Details of Research Results**

| NO | Article | Research Design | Respondents | Result |
|---|---|---|---|---|
| **1.** | *Effectiveness of Acupressure in the Reduction of Pain and Anxiety among Patients with Open Thoracotomy*(Hassan et al., 2020) | The study used pre- and post-test quasi-experimental designs | The sample consisted of 136 patients, with 68 in the experimental group and 68 in the control group. Participant selection is based on inclusion and exclusion criteria | There was a statistically significant difference between the control group and the acupressure group in terms of pain and anxiety levels. Acupressure was found to be effective in reducing pain and anxiety among patients with open thoracotomy. |
| **2.** | *Acupressure on Anxiety and Sleep Quality After Cardiac Surgery: A Randomized Controlled Trials*(Aygin &; Şen, 2019) | The study used a randomized pre-post test control group design.<br>- The study sample was randomized into two groups using a simple random sampling method.<br>The intervention group received acupressure at four different acupoints plus standard care, while the control group received only standard care. | The study was conducted on patients after heart surgery at a university hospital in Istanbul, Turkey.<br>- The inclusion criteria for the study were: no conditions of the wrist or forearm that avoided massage application, first-time heart surgery, age over 18 years, no neurological diseases, no problems that could lead to misunderstandings, and ability to communicate in Turkish. | Acupressure lowered anxiety levels and improved sleep quality significantly compared to the control group.<br>- Application of acupressure on specific acupoints lowers anxiety levels and improves quality of life among heart surgery patients.<br>- The study found a homogeneous distribution between groups regarding sociodemographic characteristics and baseline anxiety scores and sleep questionnaire scales. Anxiety levels and sleep quality after the acupressure. |
| **3.** | *Effect of Acupressure at ShenMen Acupoint on the Sleep Quality of Nurses in Emergency Departments and Intensive Care Unit*(Abbasi Tadi et al., 2021) | randomized controlled clinical trialss with pre-test-post-test design | The study population consisted of nurses working in emergency departments and Intensive Care Units (ICUs).<br>- Participants were 80 nurses working in the emergency department and ICU of a hospital in Kashan, Iran. | - Pre-test results showed no statistically significant difference in sleep quality scores between the intervention and control groups. However, post-test results showed a significant improvement in sleep quality scores in the intervention group compared to the control group.<br>- The use of acupressure at Shenmen acupoint (HT7) for 4 weeks was effective in reducing sleep disturbances in nurses working in emergencies and ICUs. Acupressure can be suggested as a non-pharmacological treatment for nurses' sleep disorders and may improve their quality of life. |
| **4.** | *Nurses' use of non-pharmacological pain management methods in intensive care units: A descriptive* | The study used a descriptive cross-sectional design. | The study involved convenience samples from 224 nurses working in 16 intensive care units across northern Iran. | 55.8% of ICU nurses use non-pharmacological pain management methods.<br>- The most common methods used by nurses are repositioning, using |

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| | *cross-sectional study*(Kia et al., 2021) | | - The majority of participants were married, between the ages of 26 and 36, had a bachelor's degree in nursing, and had an average duration of 7.6 years of experience working in the ICU. | equipment that facilitates patient comfort, and providing patients with a calm and comfortable environment.<br>- The most common barriers to the use of non-pharmacological pain management methods are nurse fatigue, dual responsibility, heavy workload, and insufficient number of nurses per shift.<br>Demographic variables such as age, gender, education level, and work experience were not significantly associated with the use of non-pharmacological pain management methods. |
| **5.** | *Effect of qigong exercise and acupressure rehabilitation program on pulmonary function*(Liu et al., 2021) | This study is a clinical trials that aims to evaluate the efficacy and superiority of qigong exercises and acupressure rehabilitation programs (QARP) for treating patients with severe COVID-19. | A total of 128 patients with COVID-19 aged 20 to 80 were recruited for the study. | The QARP group showed more significant improvements in the modified Medical Research Council (mMRC) dyspnea scale and the modified Borg dyspnea scale.<br>Duration of cough and length of hospital stay were significantly reduced in the QARP group compared to the standard therapy group.<br>- QARP plus standard therapy improves lung function and symptoms such as dyspnea and cough in patients with severe COVID-19.<br>- |
| **6.** | *Effect of acupressure on sleep quality of middle-aged and elderly patients with hypertension*(Zheng et al., 2014) | The study was a randomized controlled trials with two groups: an experimental group and a control group. Both groups received conventional treatment and health guidance, while the experimental group also received acupressure treatment.<br>- Acupressure treatment involves pressing on certain acupoints, including Shenmen (Heart 7) and Taixi (Kidney 3), for 5 minutes | The study involved a total of 75 elderly hypertensive patients with sleep disorders. These patients were randomly divided into an experimental group (n = 38) and a control group (n = 37). | - The total Pittsburgh Sleep Quality Index (PSQI) scores in the experimental group were significantly lower compared to the control group after four weeks of the intervention, indicating improved sleep quality.<br>- Acupressure treatment was found to be non-invasive, economical, effective, painless, and easily accepted by most patients and family members.<br>- This study considered a safe and effective therapy for improving sleep quality in patients with hypertension. |

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| | | per point once or twice per day for a total of 40 minutes per day, for four weeks. | | |
| **7.** | Effects of Acupressure on Decreasing the Incidence of Nausea Postoperative Vomiting in Anesthesiologist-Treated Patients General Inhalation: Randomized Controlled Trials(Madjid et al., 2022) | The study was a randomized controlled trials. | The study included 88 patients undergoing high-risk surgery under general anesthesia. | - In the 0-2 hour period, the incidence of nausea was 9.75% in the acupressure group and 25% in the placebo group, while the incidence of vomiting was 4.87% in the acupressure group and 17.5% in the placebo group.<br>- In a period of 2-24 hours, the incidence of nausea was 2.43% in the acupressure group and 20% in the placebo group, while the incidence of vomiting was 0% in the acupressure group and 7.5% in the placebo group.<br>- 90.2% of participants reported being satisfied with the use of acupressure and ondansetron, with 4.9% reporting very satisfied. |

## Discussion

Acupressure is believed to help reduce stress, improve sleep quality, and relieve pain (Abasi et al., 2022; Waits et al., 2018). The use of acupressure in critical patient care shows potential as a complementary therapy that can improve the quality of care. However, more research is needed to understand more deeply the mechanism of action of acupressure in this population as well as to develop appropriate practice guidelines (Roza et al., 2019). The findings cover various aspects, including the acupressure method used, the patient population that was the subject of the study, as well as the measured benefits of acupressure applications.

### 1. Study Characteristics

The studies included in this review featured patient sample sizes ranging from 75 to 136 participants. Additionally, studies involving nurses as participants included one with 80 nurses and another with 224 nurses from 16 intensive care units in Iran (Kia et al., 2021). Patients treated with acupressure therapy ranged in age from 18 to 80 years and presented with issues such as anxiety and sleep disorders (Aygin &; Şen, 2019) as well as nausea and vomiting in postoperative settings (Madjid et al., 2022).

### 2. Acupressure methods in critical care patient populations

Several studies report on various acupressure methods used, including manual acupressure and the use of electronic devices that stimulate certain acupressure points. Acupressure is a therapeutic technique derived from ancient Chinese medicine traditions, which involves pressing on specific acupressure points on the body to stimulate physiological responses. In the care of critical patients, acupressure methods can be performed through a variety of approaches (Cooke et al., 2020) :

a. Manual Acupressure: It involves gently pressing with fingers on the exact acupressure points on the patient's body. The manual acupressure process involves identifying acupressure points located along energy pathways called meridians to stimulate vital energy or qi (Cooke et al., 2020).
b. Use of electronic devices; Manual acupressure with electronic tools involves the use of electronic devices, such as electronic acupressure pens or electronic massagers. The use of electronic devices can provide advantages such as comfort, speed, and consistency of pressure, which can improve the user experience and possibly increase the effectiveness of therapy is a potential advantage of using electronic devices in acupressure (Cooke et al., 2020).
c. Use of Acupressure Thread: This method involves using threads placed on specific acupressure points to stimulate them. It is a unique application in the way that threads can be tied or placed on acupressure points with certain techniques. The use of threads brings an additional dimension to the acupressure point stimulation process, which can provide a relaxing effect and release tension (Cooke et al., 2020).

The implications of these differences in acupressure methods may affect the effectiveness and safety of acupressure use in ICU settings. For example, the use of electronic devices can provide more measurable and consistent stimulation compared to manual acupressure, but it is necessary to consider the potential risks associated with electronic devices. Therefore, the selection of acupressure methods must consider the benefits and risks of each method as well as the individual needs of the patient (Aygin & Şen, 2019). The patient populations in the reviewed studies included critically ill individuals with various clinical conditions, such as postoperative states, cardiovascular disease, and trauma (Hadjibalassi et al., 2018; Karimi et al., 2020). Understanding the applicability of acupressure to these diverse clinical conditions is important in evaluating their potential benefits.

Gently massage for sepsis patients certain points on the body can stimulate the release of endorphins and increase blood flow, which can help reduce strain on the immune system (Lat et al., 2021). Acupressure can help reduce muscle tension, improve blood circulation, and relieve pain for trauma patients. Cardiovascular patients such as hypertension with sleep disorders, it is necessary to be careful in using acupressure. Gentle massage at certain points may help reduce stress and promote relaxation, but should be avoided in areas directly related to the heart or major blood vessels without careful medical supervision It is crucial to note that acupressure should not replace medical treatment advised by a physician. Prior to applying acupressure, approval from a health professional and a thorough understanding of the patient's health condition are essential (Zheng et al., 2014).(Ismail et al., 2024)

Through a deeper understanding of the various aspects of acupressure use in critical patient care, we can identify the potential benefits and challenges associated with these interventions. Further elucidation of these methods, populations, and benefits will help guide further research development and enable health practitioners to make evidence-based decisions in caring for critical patients in the ICU.

The introduction of acupressure as a complementary therapy in critical patient care is a reflection of the growing interest in seeking a holistic approach to caring for ICU patients. The Intensive Care Unit (ICU) is a critical and specialized medical care environment, reserved for patients with life-threatening medical conditions. Developments in ICU care over the decades have recognized the importance of integrating non-conventional methods such as acupressure in achieving better quality of care (Sohilait, 2024).

Results from several studies show the effectiveness of acupressure in treating pain, anxiety, insomnia, and postoperative vomiting. The first study emphasized acupressure's effectiveness in reducing pain and anxiety in open thoracotomy patients, providing encouraging preliminary evidence for the integration of acupressure in postoperative pain management. The second and third studies focused on acupressure in postoperative cardiac patients as well as nurses working in the emergency department and ICU. The results of these studies underscore the benefits of acupressure in reducing anxiety and improving sleep quality in that population. The physiological mechanisms underlying acupressure are still being explored. The technique is thought to work by stimulating specific acupoints along the body’s meridians, which may activate the body’s natural painkillers, such as endorphins, and improve blood circulation (Butler et al., 2022; Hassan et al., 2020).

However, these studies also highlight the need for more research to understand in depth the potential benefits of acupressure, its most effective methods, and its safety in critical patient contexts. Differences in population characteristics such as age, sex, and health conditions may influence response to acupressure, and these need to be considered in the design of better interventions. The implementation of acupressure should be tailored to individual patient needs and preferences. Factors such as the patient's condition, response to previous treatments, and personal comfort with complementary therapies should guide its use. Personalized care plans that incorporate patient feedback can enhance the therapeutic benefits and acceptability of acupressure (Youn et al., 2022).

Acupressure to be effectively integrated into critical care, proper training for healthcare providers is crucial. Developing standardized protocols and guidelines can ensure consistent application and safety of acupressure in ICU settings. Training programs should focus on correct techniques, understanding patient responses, and recognizing when to complement acupressure with conventional treatments. Future research should focus on understanding the biological mechanisms underlying acupressure's effects and conducting larger, controlled clinical trialss to validate observed positive outcomes. The results of this scoping review provide a strong foundation for the integration of acupressure as an adjunct treatment method in addressing critical patients, with the potential to improve treatment effectiveness and quality of life for patients (Danielis et al., 2020). Further research is needed to address several gaps in the current understanding of acupressure. Additionally, research should explore the long-term impacts of acupressure on patient outcomes, including recovery times, hospital stay durations, and overall quality of life (Sohilait et al., 2024; Wickramasinghe et al., 2022).

## Study Limitations

The limitations of this study include the restricted access to paid journals or non-digitized sources, which may limit the comprehensiveness and depth of the literature reviewed. This restriction introduces a potential selection bias, as relevant high-quality studies may have been unintentionally excluded, particularly those published in less accessible databases or languages other than Indonesian & English. Furthermore, studies included in a scoping review often come from diverse methodologies, settings, and populations, making it challenging to synthesize the data in a consistent and meaningful way. This methodological heterogeneity can hinder the ability to draw strong, evidence-based conclusions or generalize findings across different clinical contexts.

## Conclusion

This scoping review demonstrates a growing recognition of acupressure as a valuable complementary therapy within the context of critical care. Emerging evidence suggests that acupressure may contribute to the alleviation of several prevalent and distressing symptoms among critically ill patients, including anxiety, pain, nausea, vomiting, and sleep disturbances. In this context, acupressure presents notable promise as an adjunctive intervention, potentially enhancing symptom management and improving overall quality of life for individuals receiving intensive care.

Despite these encouraging preliminary findings, it is essential to acknowledge the current limitations in the available body of evidence. Existing studies are constrained both by their limited number and by methodological shortcomings, such as insufficient standardization of procedures and a lack of clearly articulated clinical guidelines. The absence of well-established protocols and defined criteria for acupressure application in critical care settings further complicates its integration into routine practice. As a result, the adoption of acupressure in clinical care warrants a cautious and measured approach, underpinned by multidisciplinary collaboration and appropriate clinical supervision.

Given these considerations, several recommendations emerge to guide future research and clinical practice. First, there is an urgent need for large-scale, high-quality clinical trials to rigorously evaluate the efficacy and safety of acupressure specifically among critically ill patient populations, with particular attention to the

healthcare context in Indonesia. In tandem with this, the development of standardized guidelines and clinical protocols is paramount. These should clearly define indications, contraindications, and specific parameters for the use of acupressure, including frequency, duration, and targeted pressure points relevant to critical care settings.

Moreover, further research should be directed towards elucidating the physiological mechanisms underlying the effects of acupressure in critically ill patients, particularly in relation to symptom-specific outcomes. In parallel, it is vital to assess the feasibility of incorporating acupressure into routine nursing practice, which necessitates the establishment of comprehensive training programs and certification processes to ensure that nurses are adequately prepared to deliver acupressure safely and effectively.

Finally, fostering interprofessional collaboration among nurses, physicians, and specialists in complementary therapies will be essential to ensure the safe and patient-centered implementation of acupressure. Such cooperation will support the customization of care strategies to meet the unique clinical needs of each patient, thereby optimizing therapeutic outcomes in critical care environments.

## Conflict of Interest

The authors declare that they have no competing interests.

## Credit Author Statement

**Hana Priscilla Frudence Sohilait:** Conceptualization, writing-original draft, Writing-review, Editing and Validation**. Nurul Safira Lahati :** Writing-review, Editing and Validation

## References

Abasi, S., Akbari, H., & Sabery, M. (2022). The effects of acupressure on sleep quality and compassion fatigue among emergency and critical care nurses during the coronavirus disease 2019 pandemic: A clinical trial. *Nursing and Midwifery Studies*, *11*(2), 79–84. https://doi.org/10.4103/nms.nms_97_21

Abbasi Tadi, S., Saberi, M., & Akbari, H. (2021). Effect of Acupressure at ShenMen Acupoint on the Sleep Quality of Nurses in Emergency Departments and Intensive Care Units. *Complementary Medicine Journal*, *10*(4), 380–395. https://doi.org/10.32598/cmja.10.4.1025.1

Aygin, D., & Şen, S. (2019). Acupressure on Anxiety and Sleep Quality After Cardiac Surgery: A Randomized Controlled Trial. *Journal of Perianesthesia Nursing*, *34*(6), 1222–1231. https://doi.org/10.1016/j.jopan.2019.03.014

Beswick, A. D., Wylde, V., Bertram, W., & Whale, K. (2023). The effectiveness of non-pharmacological sleep interventions for improving inpatient sleep in hospital: A systematic review and meta-analysis. *Sleep Medicine*, *107*, 243–267. https://doi.org/https://doi.org/10.1016/j.sleep.2023.05.004

Browning, S. G., Watters, R., & Thomson-Smith, C. (2020). Impact of Therapeutic Music Listening on Intensive Care Unit Patients: A Pilot Study. *Nursing Clinics of North America*, *55*(4), 557–569. https://doi.org/10.1016/j.cnur.2020.06.016

Butler, C. R., Appelbaum, P. S., Ascani, H., Aulisio, M., Campbell, C. E., de Boer, I. H., Dighe, A. L., Hall, D. E., Himmelfarb, J., Knight, R., Mehl, K., Murugan, R., Rosas, S. E., Sedor, J. R., O'Toole, J. F., Tuttle, K. R., Waikar, S. S., Freeman, M., Alexandrov, T., … Zhang, G. (2022). A Participant-Centered Approach to Understanding Risks and Benefits of Participation in Research Informed by the Kidney Precision Medicine Project. *American Journal of Kidney Diseases*, *80*(1), 132–138. https://doi.org/https://doi.org/10.1053/j.ajkd.2021.10.006

Cooke, M., Ritmala-Castrén, M., Dwan, T., & Mitchell, M. (2020). Effectiveness of complementary and alternative medicine interventions for sleep quality in adult intensive care patients: A systematic review.

*International Journal of Nursing Studies*, *107*, 103582. https://doi.org/10.1016/j.ijnurstu.2020.103582

Danielis, M., Palese, A., Terzoni, S., & Destrebecq, A. L. L. (2020). What nursing sensitive outcomes have been studied to-date among patients cared for in intensive care units? Findings from a scoping review. *International Journal of Nursing Studies*, *102*, 103491. https://doi.org/10.1016/j.ijnurstu.2019.103491

Hadjibalassi, M., Lambrinou, E., Papastavrou, E., & Papathanassoglou, E. (2018). The effect of guided imagery on physiological and psychological outcomes of adult ICU patients: A systematic literature review and methodological implications. *Australian Critical Care*, *31*(2), 73–86. https://doi.org/10.1016/j.aucc.2017.03.001

Hassan, R., Shady, A., Ibrahem, A., Seada, A., & Mostafa, M. F. (2020). *Effectiveness of Acupressure in the Reduction of Pain and Anxiety among Patients with Open Thoracotomy*. *8*(2), 182–191. https://doi.org/10.12691/ajnr-8-2-7

Ibitoye, B. M., Oyewale, T. M., Olubiyi, K. S., & Onasoga, O. A. (2019). The use of distraction as a pain management technique among nurses in a North-central city in Nigeria. *International Journal of Africa Nursing Sciences*, *11*, 100158. https://doi.org/https://doi.org/10.1016/j.ijans.2019.100158

Ismail, S., Sohilait, H., Priscilla Frudence, & Erawati, M. (2024). *The Holistic Nursing Competencies and Instruments for Critically III-Patients : A Scoping Review Nursing Department , Faculty of Medicine , Universitas Diponegoro , Semarang , Indonesia*. *18*(1), 52–68. https://doi.org/https://doi.org/10.33860/jik.v18i1.2617

Karimi, L., Mahdavian, M., & Makvandi, S. (2020). A systematic review and meta-analysis of the effect of acupressure on relieving the labor pain. In *Iranian Journal of Nursing and Midwifery Research* (Vol. 25, Issue 6, pp. 455–462). https://doi.org/10.4103/ijnmr.IJNMR_257_19

Kia, Z., Allahbakhshian, M., Ilkhani, M., Nasiri, M., & Allahbakhshian, A. (2021). Nurses' use of non-pharmacological pain management methods in intensive care units: A descriptive cross-sectional study. *Complementary Therapies in Medicine*, *58*, 102705. https://doi.org/https://doi.org/10.1016/j.ctim.2021.102705

Lahati, Safira Nurul; Sohilait, H. P. F. et al. (2024). *Fundamental Keperawatan Kritis* (S. Ismail (ed.); 1st ed.). Tata Mutiara Hidup Indonesia.

Lat, T. I., McGraw, M. K., & White, H. D. (2021). Gender Differences in Critical Illness and Critical Care Research. *Clinics in Chest Medicine*, *42*(3), 543–555. https://doi.org/10.1016/j.ccm.2021.04.012

Liu, S., Zhan, C., Ma, Y., Guo, C., Chen, W., Fang, X., & Fang, L. (2021). Effect of qigong exercise and acupressure rehabilitation program on pulmonary function and respiratory symptoms in patients hospitalized with severe COVID-19: A randomized controlled trial. *Integrative Medicine Research*, *10*, 100796. https://doi.org/https://doi.org/10.1016/j.imr.2021.100796

Madjid, A. S., Firdaus, R., & Fadli, M. A. (2022). Efek Akupresur (Sea-Band®) terhadap Penurunan Insiden Mual Muntah Pascaoperatif pada Pasien yang Dilakukan Anestesia Umum Inhalasi: Randomized Controlled Trial. *Majalah Anestesia & Critical Care*, *40*(1), 10–18. https://doi.org/10.55497/majanestcricar.v40i1.258

Roza, R., Mulyadi, B., Nurdin, Y., & Mahathir, M. (2019). Pengaruh Pemberian Akupresur oleh Anggota Keluarga terhadap Tingkat Nyeri Pasien Nyeri Kepala (Chephalgia) di Kota Padang Panjang. *Jurnal Ilmiah Universitas Batanghari Jambi*, *19*(3), 714. https://doi.org/10.33087/jiubj.v19i3.772

Sohilait, H. P. F. (2024). PENGGUNAAN TERAPI AKUPRESUR DALAM KEPERAWATAN HOLISTIK PADA PEMULIHAN PASIEN KRITIS DI UNIT PERAWATAN INTENSIF. *Book Of Abstract Trends and Issues in Healthcare*, *1*(2). https://bookofabstract.optimalbynfc.com/index.php/trend-and-issue-in-healthcare/article/view/162

Sohilait, H. P. F., Ismail, S., & Erawati, M. (2024). *Validity and Reliability of Holistic Nursing Competencies and The Patients ' s Holistic Needs : A Pilot Study*. *9*(1), 24–36. https://doi.org/https://doi.org/10.20956/icon.v9i1.34288

Suaib Wahyuni Ramadhani, & Kurniawan Shahdevi Nandar. (2022). Acupressure As Method For Reducing Head Pain In Tension Type Headache: Case Report. *Journal of Pain, Headache and Vertigo*, *3*, 12–17. https://doi.org/10.21776/ub.jphv.2022.003.01.3

Waits, A., Tang, Y. R., Cheng, H. M., Tai, C. J., & Chien, L. Y. (2018). Acupressure effect on sleep quality: A systematic review and meta-analysis. *Sleep Medicine Reviews*, *37*, 24–34. https://doi.org/10.1016/j.smrv.2016.12.004

Wickramasinghe, A., Gamage, M., Torabi, M. R., & Perera, B. (2022). Impact of perceived social support and

physical fitness on quality of life of institutionalized and non-institutionalized older adults in Sri Lanka. *Dialogues in Health*, *1*, 100079. https://doi.org/https://doi.org/10.1016/j.dialog.2022.100079

Wubben, N., Zegers, M., Bisschops, L. L. A., Frenzel, T., van der Hoeven, J. G., & van den Boogaard, M. (2022). Using long-term predicted Quality of Life in ICU clinical practice to prepare patients for life post-ICU: A feasibility study. *Journal of Critical Care*, *68*, 121–128. https://doi.org/10.1016/j.jcrc.2021.12.014

Youn, H., Lee, M., & Jang, S. J. (2022). Person-centred care among intensive care unit nurses: A cross-sectional study. *Intensive and Critical Care Nursing*, *73*, 103293. https://doi.org/https://doi.org/10.1016/j.iccn.2022.103293

Zheng, L. W., Chen, Y., Chen, F., Zhang, P., & Wu, L. F. (2014). Effect of acupressure on sleep quality of middle-aged and elderly patients with hypertension. *International Journal of Nursing Sciences*, *1*(4), 334–338. https://doi.org/10.1016/j.ijnss.2014.10.012