

# Implementation of nursing care for comfort in children's burns

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**Abstract:** Burns in children are an emergency condition that can lead to shock, infection, functional limitations, and both physical and psychological discomfort. Comprehensive management involves pharmacological approaches, including the use of analgesics to reduce pain and antibiotics to prevent or treat infections and related complications. This condition is a concern for nurses because comprehensive and holistic nursing care can reduce complications and prevent mortality. This study aims to examine the effectiveness of evidence-based nursing care in improving comfort among children with burn injuries. This research uses a literature review method analyzing scientific articles from Google Scholar published from 2020 to 2025. The results indicate that children's comfort improves through optimal pain management, early infection detection, exudate removal, and family education, as well as through therapeutic interventions such as honey therapy, Negative Pressure Wound Therapy (NPWT), physiotherapy, and wound care to support functional recovery. In addition, multidisciplinary collaboration among nurses, surgeons, nutritionists, and rehabilitation specialists has been shown to accelerate healing and reduce stress in children. These findings confirm that structured, responsive, and collaborative nursing care plays a significant role in enhancing comfort and accelerating the recovery process of pediatric burn patients. Overall, strengthening the implementation of essential nursing care can speed up the healing process and reduce both the physical and emotional burden experienced by children with burn injuries.

**Keywords:** Child Burns, Nursing Implementation, Comfort, Burn Care.

## 1. Introduction

Burns, also known as combustio, are acute trauma resulting from thermal exposure such as fire, hot water, or chemicals, which cause extensive damage to skin tissue, impair tissue integrity, and lead to dysfunction of organ systems (Saputra, 2023). Global data show approximately 180,000 deaths from burns among children (Jordan et al., 2022). In developed countries such as the Netherlands, the mortality rate due to burns in children is relatively low, at 0.5%. In contrast, in developing countries, particularly Bangladesh, around 173,000 children experience burn injuries each year, with those under 5 years of age being

the most vulnerable (Tusiime et al., 2022). In Indonesia, burns are more frequently reported in boys aged 1–5 years and in densely populated environments (Kasturi & Husain, 2024). Thus, burns in children represent a life-threatening emergency condition if not treated promptly (Ferdianty & Devina, 2024).

Burns are classified into several degrees: degree 1 (superficial), which involves only the epidermis (characterized by redness and healing within 1 week); degree 2 (2a and 2b), which involves the dermis (blistering, varying pain intensity, and healing within 2–8 weeks); degree 3, which damages the entire skin layer (appearing white or black, with no pain sensation); and degree 4, which extends damage to deeper tissues including muscles and bones (Suman & Owen, 2020). The assessment of burn extent in children commonly uses the Lund and Browder method because it accurately adjusts the Total Body Surface Area (TBSA) percentages for children—for example: 10% for the head, 13% for the torso, 5% for the arms, 3% for the thighs, 2% for the legs, and 1% for the genital area (calculated for front/back, left/right, and total, respectively (Kalkan & Yazici, 2022).

Various pharmacological therapies—such as silver sulfadiazine (3–5 days, slower healing), fluid resuscitation with lactated Ringer’s solution (8–10 days), and astaxanthin as an adjuvant therapy (16 days, accelerating healing)—have been proven effective in managing pediatric burns, but they may also lead to side effects such as infection (Moniruzzaman et al., 2022; Prayogo & Anggraini, 2024; Rafika Surya Putra & Catur Widayat, 2024). To minimize infection risk, effective nursing care is needed to ensure children remain comfortable during hospitalization, particularly through non-pharmacological interventions. These include honey therapy, which accelerates exudate elimination (Moniruzzaman et al., 2022); Negative Pressure Wound Therapy (NPWT), which reduces the risk of scarring (Frear et al., 2020); physiotherapy, which improves joint mobility (Vitasari et al., 2024); and surgical interventions such as debridement or skin grafting to prevent complications such as contractures and severe scarring (Haikal & Susilo, 2021).

Optimal nursing care for children with burns is essential to prevent fatal complications such as shock and infection, and to reduce healthcare costs, thereby alleviating the burden on families (Smaropoulos & Cremers, 2020). Pediatric nurses are responsible for providing comprehensive care, as their role is crucial in wound assessment, appropriate dressing selection, early interventions such as medication administration, and continuous condition monitoring. These actions strengthen nurses’ competencies in delivering comprehensive and evidence-based care to achieve optimal clinical outcomes. Consequently, nurses become more capable of preventing early complications, managing wound care effectively, and providing adequate education to patients and families (Alshalan et al., 2024; Ariyo & Olorunfemi, 2024).

## **2. Materials and Methods**

This research was conducted using a literature review method with the “Google Scholar” database, which included formulating research questions, conducting a literature search, analyzing the selected articles, and presenting the results.

### **2.1 Research Question**

The search strategy for this review aimed to classify articles related to the implementation of nursing care in pediatric burns. The research strategy was developed based on established guidelines. The components included: Population (P): children with combustio; Exposure (E): implementation of nursing care; and Outcome (O): comfort, which is later presented in Table 1. (Frandsen et al., 2020; Nurhasanah & Permaida, 2025).

## 2.2 Literature Search

This study used the Google Scholar database. Prior to the search process, the research team determined specific inclusion criteria: articles published between 2020–2025, case study research designs, and manuscripts in either Indonesian or English that discuss the implementation of nursing care for pediatric burn patients. Exclusion criteria included non-nursing papers, literature reviews, conference proceedings, symposium publications, and systematic reviews.

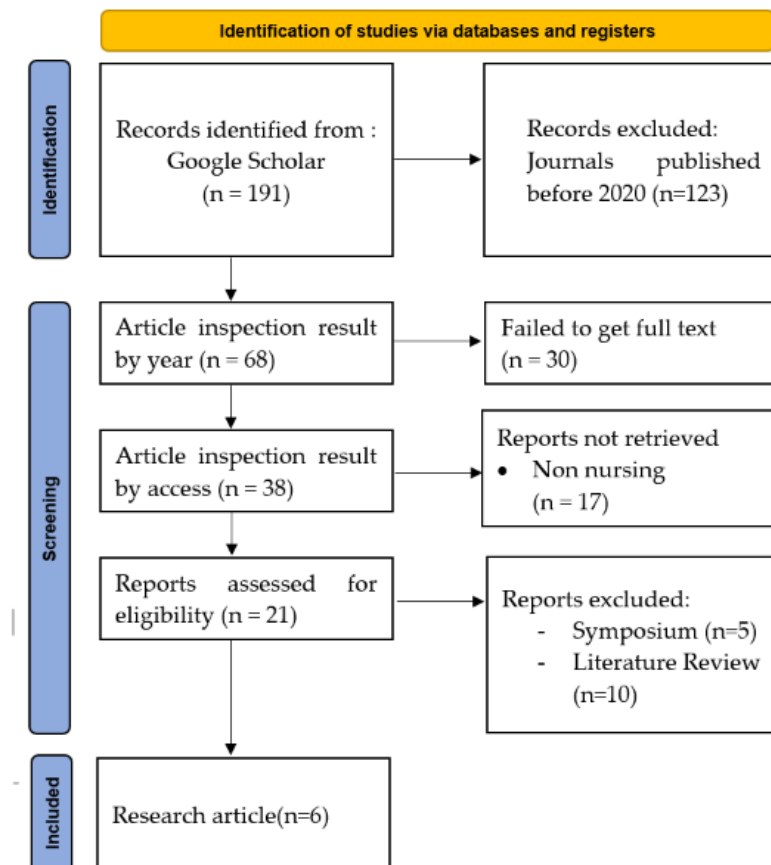
## 2.3 Literature Analysis

After the identification phase, the researchers proceeded with screening and selection following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flowchart. The filtering process is illustrated in Flowchart 1. All retrieved articles were catalogued using bibliographic management software (Mendeley 2.80.1) and reviewed accordingly.

## 3. Results and Discussion

This literature review is presented chronologically based on the year of publication, study objectives, and the nursing care interventions provided to children with burns receiving hospital treatment.

**Figure 1.**  
Flowchart of PRISMA's steps in selecting an article for review



### 3.1. Result

The characteristic analysis of the six articles (n=6) studied thoroughly described the implementation of nursing care. The results revealed that the majority of articles, namely 83.3% (n=5), focused on the implementation of nursing that is crucial to repeat the problem of infection risk and maintain the child's fluid balance, while 16.7% (n=1) of the article highlighted the handling of the issue of limited movement due to burns. Furthermore, it was revealed that 66.7% (n=4) of the article emphasized the importance of comprehensive implementation of nursing to solve the problem of pain management and the prevention of long-term complications. Comparatively, 33.3% (n=2) articles specifically showed that the implementation of the complete evidence was effective in achieving the psychological comfort of children during the treatment process. The first implementation focuses on observation activities which include monitoring the patient's physiological condition as well as assessing his psychological response. The second implementation includes all forms of education provided to patients and patients' families as part of efforts to improve understanding and prevention of burn complications in children. The third implementation relates to therapeutic interventions, including various necessary procedures such as wound care measures. Meanwhile, the fourth implementation is regarding the practice of collaboration with other health workers in the context of multidisciplinary work to ensure the continuity and effectiveness of the care provided.

#### Implementation of observation

Of all the articles, there were 100% (n = 6) describing the identification of physiological dimension observations 100% (n = 6) the article included monitoring of exudate elimination especially on the 4th and 5th days, and re-epithelialization as evidence of the success of honey therapy. Psychological dimension of 66.7% (n = 4) of articles focused on acute pain assessment using the Face, Legs, Activity, Cry, Consolability (FLACC) Scale, itching assessment using the 5-D Pruritus Scale, and anxiety during therapy to ensure adequate pain management and reduce trauma.

#### Implementation of education

It is known that 83.3% (n = 5). There are 33.3% (n = 2) of articles focused on providing the implementation of early treatment education that focuses on the prohibition of the use of irritants (toothpaste/butter) and the recommendation to cool the wound with running water (10-20 minutes) to prevent infection and worsening of the wound. In addition, 50% (n = 3) of the article emphasized the importance of education on continuity of care at home, including adequate wound dressing to avoid the risk of scarring.

#### Therapeutic implementation

Of the total articles, there were 83.3% (n = 5) that described various therapeutic implementations for children with burns. Specifically, 50% (n = 3) of articles focused on the implementation of the use of honey therapy for faster wound healing, Negative Pressure Wound Therapy (NPWT) shown to reduce the risk of scars, and physiotherapy to improve joint movement. Then as many as 33.3% (n = 2) of the article emphasized the importance of proper resuscitation of lactate ringer fluid in the first 8 hours to overcome hypovolemic shock and maintain organ function

#### Collaboration implementation

It is known that 83.3 (n = 5) articles performed collaborative therapy that was interrupted by physicians, especially for optimal pain management with analgesics (Paracetamol IV) and the use of antibiotics (Ampicilin IV). A total of 66.7% (n = 4) of the articles focused on collaboration with surgical teams for recurrent surgical debridement and skin graft to avoid complications such as skin contractures and scars. Furthermore, 33.3% (n = 2) of the article specifically listed the importance of

collaboration with nutritionists to initiate early nutritional support (enternal, protein, or calorie) for the healing process of burns in children.

Table 1. Literature search with PEO.

Search Title	: Implementation of nursing care for comfort in children's burns				
Research Questions	: Does the implementation of nursing care provide a comfort effect on children with burns?				
Component Topic	P		E		O
Research	(Population)		(Exposure)		(Results)
Key terms	Children with combustio	AND	Nursing implementation	AND	Comfortable
Alternative terms	Burns in children	OR	Nursing management	OR	Calm
Alternative terms	Child patient with burn pain	OR	Implementation of nursing measures	OR	No inflammation
Alternative terms	-	OR	Nursing practice	OR	No pain

Table 2. Article Review

No	Author	Research Purpose	Length of treatment	Results
1.	Moniruzzaman et al., 2022	To determine the therapeutic potential of honey compared to 1% Silver Sulfadiazine (Ag-SD) in the treatment of superficial partial thickness burns in children.	14 days	Patients treated with honey showed better clinical outcomes: significantly earlier acceleration of exudate and slough elimination (Days 3 and 5) compared to Ag-SD, and better epithelialization at day 10
2.	Frear et al., 2020	Comparing standard dressings with a combination of standard dressings and <i>adjutant Negative Pressure Wound Therapy</i> (NPWT) to determine the effect of NPWT on re-epithelialization of small-area thermal burns in children.	10 days	Adjutant NPWT accelerated re-epithelialization (median 8 days vs 10 days at control) and reduced the risk of skar management referral by 60%. However, NPWT has a greater maintenance burden
3.	Vitasari et al., 2024	Obtain optimal functional recovery after burns in children through physiotherapy management.	1x a week in 4 weeks	Physiotherapy management (including active/passive exercises, <i>stretching</i> , and <i>scar massage</i> ) is necessary to improve functional abilities and prevent the worsening of complaints. There was an increase in the range of joint motion (dorsal flexion), a decrease in the scale of itching, but the change was less significant due to the short intervention period and the potential for psychological disorders
4.	Rafika Putra & Catur Widayat, 2024	Develop the management and treatment of 33% degree II-III burns in 4-year-old children in the emergency room using Ringer Lactate infusion fluid 900ml	The first 8 hours	Prompt and appropriate early treatment (resuscitation, antibiotics, wound care) results in a good prognosis as there is no sepsis or inhalation trauma
5.	Prayogo & Anggraini, 2024	Reported the success of <i>partial-thickness superficial</i> burn therapy with systemic and topical astaxanthin adjuvant	16 days	Combination of systemic and topical astaxanthin (ASX) provides rapid healing and without hypertrophic skar
6.	Haikal & Susilo, 2021	Report cases of boys with burns and highlight the importance of continuity of care and prevention of complications	7 days	Proper treatment (fluid resuscitation, pain management, <i>recurrent surgical debridement</i> , <i>skin graft</i> ) can prevent complications.

Table 3 Review of nursing implementation in children with burn

No	Author	Nursing Implementation			
		Observation	Education	Therapeutic	Collaboration Collaboration
1.	Moniruzzaman et al., 2022	Physiological observations: strict elimination of exudate and slough on Days 3 and 5. Examine epithelialization, especially on Day 10 (honey is better). Signs of local and systemic infection  Psychological observation :-	- Explain to parents/patients that rapid slough elimination is a positive sign of honey effectiveness.  Emphasizing the importance of adequate nutrition and the (cheaper) cost advantage of honey therapy.	- Apply pure, undiluted, and unprocessed honey with sterile techniques.  Provides adequate pain management during dressing replacement.	- Collaborate with your doctor for antibiotic adjustments if an infection is detected.  Refer to a nutritionist for dietary support (proteins, calories) to maximize epithelialization.
2.	Frear et al., 2020	Physiological observations: - Monitor re-epithelialization time (target 8 days vs. 10 days at control) - Closely observe maceration or blistering signs and NPWT technical issues (air leaks)  Psychological observation: the child feels itching and pain	- Educate families on risk reduction of skar management referrals  Teach tool troubleshooting and manage expectations about mobility/tool management difficulties at home.	- Using a continuous pressure of 80 mmHg (or 40 mmHg for the extremities of a child <12 months).  Use Niltac when removing the dressing and make sure the analgesia is effective	- Consultation for optimal pain management (analgesia)  Refer patients whose recovery exceeds 14 days to skar management
3.	Vitasari et al., 2024	Physiological observations: Monitor movement limitations (dorsal flexion), itch scale (5D Pruritus Scale), and hypertrophic signs (Vancouver Scar Scale).  Psychological observation: anxiety during therapy	Teach exercises and scar massage at home to parents and emphasize the importance of adherence outside of therapy sessions.	Perform Scar Massage (friction, petrissage, effleurage technique, 10 minutes/week) to soften the tissue and reduce itching, and provide active/active resisted exercise (ankle pumping, bicycle exercise) and passive assisted exercise to increase the range of joint motion.	Collaborate with plastic surgeons (referrals).
4.	Rafika Surya Putra & Catur Widayat, 2024	Physiological observations: Perform simultaneous initial management with the principle of <i>Advanced Pediatric Life Support</i> (ABCDE)	Educate the importance of cooling with running water for 10-20 minutes and prohibit the use of irritant ingredients (e.g., odol, butter).	- Giving ringer lactate 900 ml in the first 8 hours  - Cleaning wounds with NaCl	- Collaboration with doctors to administer Silver Sulfadiazin, Paracetamol IV 150 mg (analgesic) and

	Monitor awareness, vital signs and pain. Examining leukocyte enhancement as an acute/infectious response		Applying Silver Sulfadiazine, Paracetamol IV 150 mg (analgesic) and Ampicillin IV 750 mg (broad-spectrum antibiotics)	Ampicillin IV 750 mg Collaboration with a nutritionist to initiate enteral nutrition early
	Psychological observations: The child feels pain			
5. Prayogo & Anggraini, 2024	Physiological observations: Monitor full re-epithelialization (10-day target) and erythema loss (Day 16)	Educating on prompt and comprehensive management (within 72 hours) is essential to prevent changes in the degree of injury and scar formation		Collaborate with physicians to determine the optimal oral ASX dosage.
6. Haikal & Susilo, 2021	Psychological observation :- Physiological observations: Conduct a primary survey (ABC). 30-minute post-emergency room stabilization monitor Assess pain with the FLACC Scale (initial score of 7), ensure a decrease in score after analgesia	- Educate the wound with running water (not ice water) for 10-20 minutes. Educate families on the importance of continuity of post-treatment care to prevent complications (contractures, scars)	- Give a lactate ringer (RL) in the first 8 hours. Provides analgesia and tetanus prophylaxis.	Collaborate with the surgical team to schedule recurrent surgical debridements and skin grafts
	Psychological observations: Feeling pain			

### 3.3. Discussion

From a review of six articles, it was found that observational interventions are the most frequently performed nursing actions in determining subsequent steps in the healing process of pediatric burn patients, compared to educational, therapeutic, and collaborative interventions. This finding indicates that continuous clinical observation serves as the primary foundation for nursing decision-making. However, variations in the depth and focus of observational practices across studies suggest that not all approaches fully integrate comprehensive assessment components.

Careful observation is crucial in developing an effective pediatric burn care plan. Key clinical indicators for healing progress and early detection of complications include physiological monitoring, such as continuous assessment of wound condition—including signs of infection, as well as the elimination of exudate and slough (Frear et al., 2020). In addition, the accurate assessment of Total Body Surface Area (TBSA) burned is essential, with the Lund and Browder method considered mandatory due to its age-specific adjustments

that improve precision in estimating a child's body surface involvement (Rafika Surya Putra & Catur Widayat, 2024). Beyond physical parameters, psychological assessment—including the evaluation of pain and anxiety—is equally important. The use of standardized tools, such as the Face, Legs, Activity, Cry, Consolability (FLACC) Scale, is recommended to assess pain levels before, during, and after clinical procedures. This component of psychological observation is vital, as appropriate pain management plays a significant role in minimizing trauma and supporting a child's holistic recovery process (Vitasari et al., 2024). However, not all studies consistently integrate both physiological and psychological assessments, indicating a gap in holistic nursing practice.

Implementing education is crucial to empower families and caregivers to ensure they are capable of performing follow-up wound care and preventing complications (Nyarko et al., 2025). Nurses are required to provide comprehensive information regarding the initial management of burns in children, emphasizing the importance of avoiding the use of irritants (such as toothpaste or butter) to prevent infection (Elsayed, 2023). This has been demonstrated by (Dolan et al., 2021) that education for severe burns can reduce mortality. Furthermore, education about home wound care, including dressing techniques, dressing changes, and identifying signs of infection, strengthens the success of treatment by increasing family understanding and compliance with follow-up care (Asefa et al., 2024; Rafika Surya Putra & Catur Widayat, 2024). Despite these benefits, variations in the scope and delivery of educational interventions across studies suggest a lack of standardization, particularly regarding long-term follow-up education.

Therapeutic interventions are critical for maintaining physiological stability and accelerating healing in pediatric burn patients. Immediate fluid resuscitation using Ringer's lactate plays a vital role in the management of hypovolemic shock and the preservation of organ function, as demonstrated by (Haikal & Susilo, 2021). Moreover, wound management with Negative Pressure Wound Therapy (NPWT) has been shown to significantly accelerate re-epithelialization, with evidence reporting a median healing time of 8 days, although it requires intensive care support and close clinical supervision (Frear et al., 2020). Its therapeutic effectiveness can be further enhanced through topical agents such as honey, which has demonstrated superior clinical benefits—including faster elimination of exudate—when compared with silver sulfadiazine alone (Moniruzzaman et al., 2022). In addition to localized wound care, systemic treatment involves adequate analgesic administration, such as paracetamol or intravenous tramadol, which has been shown to be effective in managing moderate to severe burn-related pain (Gamal Badawy et al., 2023; Rafika Surya Putra & Catur Widayat, 2024). Long-term recovery also relies on rehabilitative strategies, including physiotherapy (Schiefflers et al., 2024; Setiawati et al., 2024) which has demonstrated a key role in preventing burn complications such as soft-tissue contractures and joint mobility restrictions. The integration of these interventions highlights differences in effectiveness across treatment modalities, although direct comparative studies remain limited, indicating a need for further research.

Burn nursing care prioritizes multidisciplinary collaboration to ensure effective treatment and prevent systemic and long-term complications (Moniruzzaman et al., 2022; Rafika Surya Putra & Catur Widayat, 2024). Close coordination among nurses, surgeons, and nutrition specialists enables the development of a holistic care plan. This collaborative approach includes working with nutrition professionals to maintain optimal caloric and nutritional status through enteral or parenteral support—an essential component of wound healing, as extensive burns commonly trigger Systemic Inflammatory Response Syndrome (SIRS) (Shiferaw et al., 2022). Additionally, collaboration with the plastic surgery team is necessary to support appropriate timing and execution of skin grafting and deep surgical interventions (Vitasari et al., 2024). This partnership also reinforces key preventive strategies aimed at reducing long-term sequelae, including contractures and hypertrophic scarring. Surgeons commonly rely on Negative Pressure Wound Therapy (NPWT) as part of advanced wound optimization prior to grafting. However, most studies describe collaboration in general terms without clearly measuring its direct impact on patient outcomes, suggesting an area for further evaluation.

Overall, the implementation of nursing care for pediatric burn patients must be grounded in a holistic, collaborative approach. The success of nursing care is largely determined by multidisciplinary coordination among nurses, surgeons, and nutrition specialists, as well as active family involvement to ensure continuity of care and long-term recovery, as emphasized by (Haikal & Susilo, 2021). The effectiveness of therapeutic interventions—including the use of Negative Pressure Wound Therapy (NPWT) and topical agents such as honey—must be supported by careful physiological and psychological assessment (Moniruzzaman et al.,

2022). Key priorities include complication prevention through adequate pain management, infection control using appropriate pharmacological therapy (antibiotics and analgesics), physiotherapy, and optimal nutritional (Rafika Surya Putra & Catur Widayat, 2024; Vitasari et al., 2024). However, most studies are limited by short-term observation periods and small sample sizes, which may affect the generalizability of findings. Therefore, nurses must integrate these elements systematically while adapting them to local healthcare contexts, particularly in Indonesia, to enhance quality of life and reduce morbidity among pediatric burn patients (Rockson et al., 2025):.

#### 4. Conclusions

The implementation of observation (physiological and psychological), education (early treatment and continuity of care), therapeutic interventions (NPWT, honey therapy, and fluid resuscitation), and multidisciplinary collaboration (nutritionists and surgeons) plays an essential role in improving comfort and preventing long-term complications in pediatric burn patients. In clinical practice, nurses are encouraged to apply standardized assessment tools, such as the Lund and Browder method and validated pain scales, to enhance the accuracy and consistency of care.

In the Indonesian context, adapting evidence-based interventions to available resources is necessary, including the use of cost-effective therapies such as medical-grade honey in settings with limited access to advanced technologies. Strengthening family-centered care through structured education and improving multidisciplinary coordination are also critical to ensure continuity of care and optimal recovery. Future research should focus on long-term outcomes, psychosocial recovery, and the development of standardized nursing protocols tailored to local healthcare systems. Overall, a holistic, collaborative, and context-sensitive nursing approach is required to improve the quality of care and reduce morbidity among children with burn injuries.

#### References

- Alshalan, A. M. T., Asiri, S. H., Alanazi, Y. F. S., Abdulsalam, S. A., Alshammari, S. A. S., Almutairi, M. Z. S., Alanazi, M. O. M., Alanazi, A. N. S., Albaqami, A. M., & Alanazi, K. Q. (2024). The role of emergency team in management and treatment of patients with severe burns. *Journal of International Crisis and Risk Communication Research*, 7(S6), 868–874. <https://www.proquest.com/scholarly-journals/role-emergency-team-management-treatment-patients/docview/3186337251/se-2?accountid=27212>
- Ariyo, D. A., & Olorunfemi, O. (2024). Infection control and prevention in burn victims: The role of nurses. *Journal of Integrative Nursing*, 6(2), 136–141. [https://doi.org/10.4103/jin.jin\\_139\\_23](https://doi.org/10.4103/jin.jin_139_23)
- Asefa, L., Abebe, M. W., & Negussie, A. G. (2024). Pattern's and outcomes of pediatric burn injuries in a hospital's burn unit. *Burns Open*, 8(2), 87–91. <https://doi.org/10.1016/j.burnso.2024.02.002>
- Dolan, K. J., Flint, J. L., Benton, T. C., Miller, M., & Miller, J. O. (2021). Implementation and Maintenance of a Pediatric Severe Burn Guidelines Quality Improvement Project. *Pediatric Quality and Safety*, 6(2). <https://doi.org/10.1097/pq9.0000000000000388>
- Elsayed, H. M. A. E. E. (2023). A health education program for mothers to prevent burn in early childhood. *The Egyptian Journal of Hospital Medicine*, 90(1), 957–964. <https://doi.org/10.21608/ejhm.2023.280190>
- Ferdianty, F. A., & Devina, S. (2024). Epidemiology of burns injury in dr. Iskak general hospital Tulungagung: Two years (2017-2018) retrospective study. *Jurnal Plastik Rekonstruksi*, 7(1), 28–34. <https://doi.org/10.14228/jpr.v7i1.280>

- Frear, C. C., Cuttle, L., McPhail, S. M., Chatfield, M. D., Kimble, R. M., & Griffin, B. R. (2020). Randomized clinical trial of negative pressure wound therapy as an adjunctive treatment for small-area thermal burns in children. *British Journal of Surgery*, 107(13), 1741–1750. <https://doi.org/10.1002/bjs.11993>
- Gamal Badawy, G., Attia Mohammed, B., R. El-Refaay, E., Rabie El-Etreby, R., & Gad Soliman, G. (2023). Effect of trauma-informed care educational program on nurses' knowledge and practices at pediatric burn unit. *Egyptian Journal of Health Care*, 14(2), 738–755. <https://doi.org/10.21608/ejhc.2023.303949>
- Haikal, S. M. S., & Susilo, A. P. (2021). Kontinuitas perawatan dan pencegahan komplikasi pada luka bakar. *Jurnal Kedokteran Mulawarman*, 8(1), 32. <https://doi.org/10.30872/j.ked.mulawarman.v8i1.5881>
- Jordan, K. C., Di Gennaro, J. L., von Saint André-von Arnim, A., & Stewart, B. T. (2022). Global trends in pediatric burn injuries and care capacity from the World Health Organization Global Burn Registry. *Frontiers in Pediatrics*, 10(Lmic). <https://doi.org/10.3389/fped.2022.954995>
- Kalkan, S. C., & Yazici, S. (2022). Evaluation of verniks kazeosa according to the lund and browder burn table. *International Journal of Caring Sciences*, 15(1), 344–351. <https://research.ebsco.com/linkprocessor/plink?id=26141ada-36d9-3ac4-9b0e-51e7b3b45c38>
- Kasturi, P. A., & Husain, F. (2024). Gambaran tingkat pengetahuan ibu tentang pertolongan pertama luka bakar anak usia toddler di Desa Bedoro. *Indonesia Journal of Public Health*, 2(4), 808–816. <https://jurnal.academiacenter.org/index.php/IJOH/article/view/602>
- Moniruzzaman, Md., Khan, A. R., Haq, Md. A., Naznin, R. A., & Haque, M. (2022). Pediatric first-degree burn management with honey and 1% silver sulfadiazine (Ag-SD): Comparison and contrast. *Cureus*, 14(12), 14–17. <https://doi.org/10.7759/cureus.32842>
- Nyarko, A. A., Benjamin-Damons, N., & Pilusa, S. (2025). Experiences of paediatric burn patients and their caregivers on burn management at Ghana's premier burns centre: A qualitative study. *Burns*, 51(7), 107620. <https://doi.org/10.1016/j.burns.2025.107620>
- Prayogo, K. P., & Anggraini, I. D. (2024). Media dermatovenereologica Indonesiana. *Media Dermato-Venereologica Indonesiana*, 51(3), 125–133. <https://doi.org/10.33820/mdvi.v51i3.389>
- Rafika Surya Putra, & Catur Widayat. (2024). Tatalaksana luka bakar derajat II-III 33% pada anak perempuan 4 tahun: Laporan kasus. *Faculty of Medicine Universitas Muhammadiyah Surakarta (CME FK UMS)*, 818–826. <https://proceedings.ums.ac.id/kedokteran/article/view/4487>
- Rockson, A. A., Benjamin-Damons, N., & Pilusa, S. I. (2025). Healthcare practitioners' perspectives on paediatric burns management at Korle Bu teaching hospital, Ghana. *Burns Open*, 9(October 2024), 100387. <https://doi.org/10.1016/j.burnso.2024.100387>
- Saputra, D. (2023). Tinjauan komprehensif tentang luka bakar dan penanganannya. *Journal Scientific Universitas Andalas Padang*, 207–218. <http://journal.scientific.id/index.php/sciena/issue/view/12%0ATinjauan>
- Schiefflers, D. R., Ru, T., Dai, H., Ye, Z., van Breda, E., Van Daele, U., Xie, W., & Wu, J. (2024). Effects of early exercise training following severe burn injury: A randomized controlled trial. *Burns and Trauma*, 12. <https://doi.org/10.1093/burnst/tkae005>
- Setiawati, A., Idu, C. J., & Hambali, A. (2024). Asuhan keperawatan pemenuhan kebutuhan aktifitas pada pasien luka bakar dengan intervensi manajemen fisioterapi di ruang anggrek RSUD kabupaten Tangerang. *Nusantara Hasana Journal*, 4(1), 1–11. <https://doi.org/10.59003/nhj.v4i1.1140>
- Shiferaw, A., Mola, S., Gashaw, A., & Sintayehu, A. (2022). Evidence-based practical guideline for procedural pain management and sedation for burn pediatrics patients undergoing wound

- care procedures. *Annals of Medicine and Surgery*, 83(September), 104756. <https://doi.org/10.1016/j.amsu.2022.104756>
- Smaropoulos, E., & Cremers, N. A. J. (2020). Treating severe wounds in pediatrics with medical grade honey: A case series. *Clinical Case Reports*, 8(3), 469–476. <https://doi.org/10.1002/ccr3.2691>
- Suman, A., & Owen, J. (2020). Update on the management of burns in paediatrics. *BJA Education*, 20(3), 103–110. <https://doi.org/10.1016/j.bjae.2019.12.002>
- Tusiime, M., Musoke, D., Muneza, F., Mutto, M., & Kobusingye, O. (2022). Prevalence, risk factors and perceptions of caregivers on burns among children under 5 years in Kisenyi slum, Kampala, Uganda. *Injury Epidemiology*, 9(1), 1–9. <https://doi.org/10.1186/s40621-022-00382-w>
- Vitasari, L., Komalasari, D. R., & Hamidah, N. N. (2024). *Manajemen fisioterapi bekas luka bakar grade 2 pada anak: Case reprt.* 93–102. <https://proceedings.ums.ac.id/apc/article/view/4279>