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Assessment of Knowledge Regarding Burn Management Among Undergraduate Nursing Students in Selected Nursing Institutes of Karachi

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Abstract

Background: Burns are regarded as a serious condition in medical history affecting every individual. Nursing students' knowledge and practical abilities are crucial to the quality of burn care. **Objective:** The objective of the study was to assess knowledge of the undergraduate nursing students regarding burn management. **Methods:** Descriptive cross sectional study was conducted at nursing institutes of Karachi after approval from the RC, and IRB. The calculated sample size was 231, calculated while using an OpenEpi version 3.0. An adopted validated questionnaire was used. Non –probability convenience sampling technique was used to conduct the data from undergraduate nursing students (studying in 2nd year, 3rd year and 4th year) of Generic BSN Program while all post RN and 1st year generic BS nursing students were excluded. **Results:** Among all participants, most were male (84.4%), aged 21–25 years (64.5%), and third-year students (71.4%). Overall, 39.0% had good knowledge, while 31.1% and 29.9% demonstrated average and poor knowledge, respectively. Although knowledge was high for several burn first-aid practices, notable gaps remained in immediate burn management and home first-aid measures. **Conclusion:** The study showed that most participants had moderate to good knowledge of burn management, with a considerable proportion still demonstrating average to poor understanding. Important gaps were identified in immediate burn care and first-aid practices, indicating the need for targeted training and educational programs.

INTRODUCTION

Burns are regarded as a serious condition in medical history. This affects people of all ages, from young children to elderly adults. Everybody has experienced excruciating pain from a minor burn. However, the pain and discomfort brought on by a severe burn are not limited to sudden events. (Ali et al., 2025). In order to improve outcomes, managing burn injuries—especially in mass-burn situations requires prompt first aid and early care. Nursing students' knowledge and practical abilities are crucial to the quality of burn care, especially for those allocated to burn units (Kareem, A. F. (2024).The World Health Organization (WHO) estimates that 180,000 people die each year from burn-related complications, and millions more experience serious physical and psychological effects. The majority of burn injuries typically happen at home or at work (Munir, 2024).

Burn injuries are a major public health concern that impact 11 million people worldwide and result in 2,65,000 fatalities each year. One in order to prevent tissue damage, stabilize the vasculature, lessen edema, and provide suitable analgesia, first aid is described as emergency care administered prior to receiving standard medical assistance (Bajracharya et al, 2023). Where the majority of burn injuries typically happen at home or at work. (Muhammad Shafiq bin munir 2024).

The knowledge and practices of nurses in burn centers play a vital role in offering burn patients top-notch care (Ali et al, 2025; Farhan et al., 2024; Hussain et al., 2025). The first steps for both mass damage from burns and rehabilitation of burns include assessment, early response, and providing first aid. Most burned patients receive early management care in the local emergency rooms of district hospitals rather than in specialized burn centers. Emergency rooms will give priority to situations involving large numbers of burn patients and provide emergency care to those who have been injured (Anwar, M. et al. 2023; Hamid et al., 2022). To guarantee the provision of the best treatment possible, it is crucial to evaluate nurses' level of expertise in managing burn patients (Ali Y. et al., 2025). This assessment covers a number of topics, such as knowledge of wound care procedures, skill in determining the severity of burns, familiarity with therapeutic approaches, and awareness of possible complications. HealthCare organizations can identify areas for improvement and undertake focused education and training programs to improve patient outcomes and overall quality of care by assessing nurses' knowledge base in this area.

Inadequate burn first aid can exacerbate the condition and promote tissue damage. Inappropriate treatments or the use of ice might delay healing and result in tissue necrosis (Riaz R, Riaz L, Khan J, et al, January 16, 2020). If burn injuries are not well treated, they may result in major consequences. Infection is a frequent issue, particularly when using dangerous DIY cures like toothpaste or oil. Improper or delayed first aid can hinder the healing process and exacerbate tissue damage.In addition to causing psychological distress, burns can be fatal in extreme circumstances (Alsharif et al., 2020). The aim of the study was to assess knowledge regarding burn management among undergraduate nursing students.

MATERIAL AND METHODS

Descriptive cross sectional study design was used. The study was conducted in nursing institutes. The study was completed within 6 months after approval of synopsis from the RC, and IRB of Peace institute of nursing and Midwifery, Karachi. The minimum required calculated sample size for the current study was 231, calculated while using an OpenEpi version 3.0 using parameters, finite population size was 580 participants. According to a previous study, using a reference entitled "Nurses Knowledge of First Aid Management of Burn Patients at the Peshawar Burn and Plastic Surgery Center" (Anwar M et al., 2023), 56% was considered as the anticipated outcome, corresponding to the design effect of 1.0 were used for the

calculation. Assuming 95% level of confidence and 5% margin of error. The validated and adopted questionnaire was used. Permission was granted from the author (Anwar M et al., 2023)

Variables	Frequency (%)
Gender	
Male	195 (84.4)
Female	36 (15.6)
Age	
16-20	64 (27.7)
21-25	149 (64.5)
26-30	18 (7.8)
Marital Status	
Married	54 (23.4)
Unmarried	177 (76.6)
Year of the Study	
Second Year	32 (13.9)
Third Year	165 (71.4)
Fourth Year	34 (14.7)
Participation in Burn Management Training Course	
Yes	126 (54.5)
No	105 (45.5)

Reliability and Validity

A pilot study was conducted on 10% of the total study participants to assess the reliability and validity of the questionnaire. The reliability analysis showed a Cronbach's alpha value of 0.87, indicating good internal consistency of the tool. Furthermore, the questionnaire was reviewed and approved by the Ethics Review Board (ERB) of a Tertiary Hospital to ensure content validity and ethical compliance

Non –probability convenience sampling technique was used. The sample selection was based on the following inclusion and exclusion criteria. The eligible students included Undergraduate nursing students enrolled in Bachelor of Science in Nursing (BSN) program. Students studying in 2nd year, 3rd year and 4th year of Generic BSN Program. Those students who were willing to participate and signed inform consent were included in the study while Internship, graduate, postgraduate nursing students and those students who are not willing to participate and those who are absent at the time were excluded. Moreover, First year generic BS nursing students were also excluded.

RESULTS

Table 1 presents the demographic characteristics of the study participants (n = 231). The majority of the participants were male, 195 (84.4%), while females constituted 36 (15.6%). Regarding age, most participants were between 21 and 25 years old, representing 149 (64.5%) of the respondents whereas only 18 (7.8%) were aged 26–30 years. In terms of marital status, the majority of participants were unmarried, comprising 177 (76.6%) of the sample, while 54 (23.4%) were married. Concerning the year of study, most participants were enrolled in the third year, accounting for 165 (71.4%). Participants in the fourth year represented 34 (14.7%), while second-year students constituted 32 (13.9%). Regarding burn management training courses, more than half of the participants, 126 (54.5%), reported having attended a burn management training course, whereas 105 (45.5%) had not received such training.

Table 1. Demographic characteristics of the participants

Table 2 presents the knowledge of nurses regarding first aid management of burns. The highest correct response was observed for covering a burn before hospital presentation to reduce infection risk (86.6%), followed by appropriate use of antibiotics after burns (78.8%) and use of cool fresh water as initial first aid (78.4%). A considerable proportion of participants also correctly identified blister management (73.2%) and traditional medication practices (70.6%). However, lower correct responses were noted for immediate actions after burn injury (49.8%) and use of first-aid medicine at home (47.6%). Overall, the findings indicate moderate to good knowledge with noticeable gaps in some critical first-aid practices.

Table No. 2 Knowledge of nurses regarding first aid management

Code	Knowledge of Burns Management	Correct Answer F (%)	Incorrect Answer F (%)
K-01	Using cool fresh water apply the best first measure for thermal injury?	181 (78.4)	50 (21.6)
K-02	Burns can lead to permanent injuries	155 (67.1)	76 (32.9)
K-03	Covering a burn before going to the hospital decreases infection risk	200 (86.6)	31 (13.4)
K-04	Picking blisters after a burn is incorrect	169 (73.2)	62 (26.8)
K-05	Applying first-aid medicine at home improves burn outcome	110 (47.6)	121 (52.4)
K-06	Using antibiotics after a burn is beneficial	182 (78.8)	49 (21.2)
K-07	What should apply right after injury, apply to burn?	115 (49.8)	116 (50.2)
K-12	Cooking time:	135 (58.4)	96 (41.6)
K-13	Traditional medication you would apply:	163 (70.6)	68 (29.4)
K-14	Eye burn first aid:	145 (62.8)	86 (37.2)

Table 3 presents the knowledge of nurses regarding advanced burn management and clinical care. The highest correct response was observed for fluid resuscitation in mass burns (76.2%), followed by intubation before transfer in suspected inhalation injury (70.6%) and transfer priority based on severity (67.5%). More than half of the participants correctly identified signs of inhalation injury (58.4%) and TBSA calculation for adults (55.8%). However, moderate knowledge was observed for pediatric and adult urine output targets (59.3% and 51.1% respectively). The lowest level of correct responses was recorded for the Parkland formula (42.9%), indicating a significant knowledge gap in burn fluid calculation among participants. Overall, the findings show moderate knowledge in advanced burn care with specific deficiencies in critical calculation-based areas.

Table No. 3 Knowledge Regarding Advanced Burn Management and Clinical Care

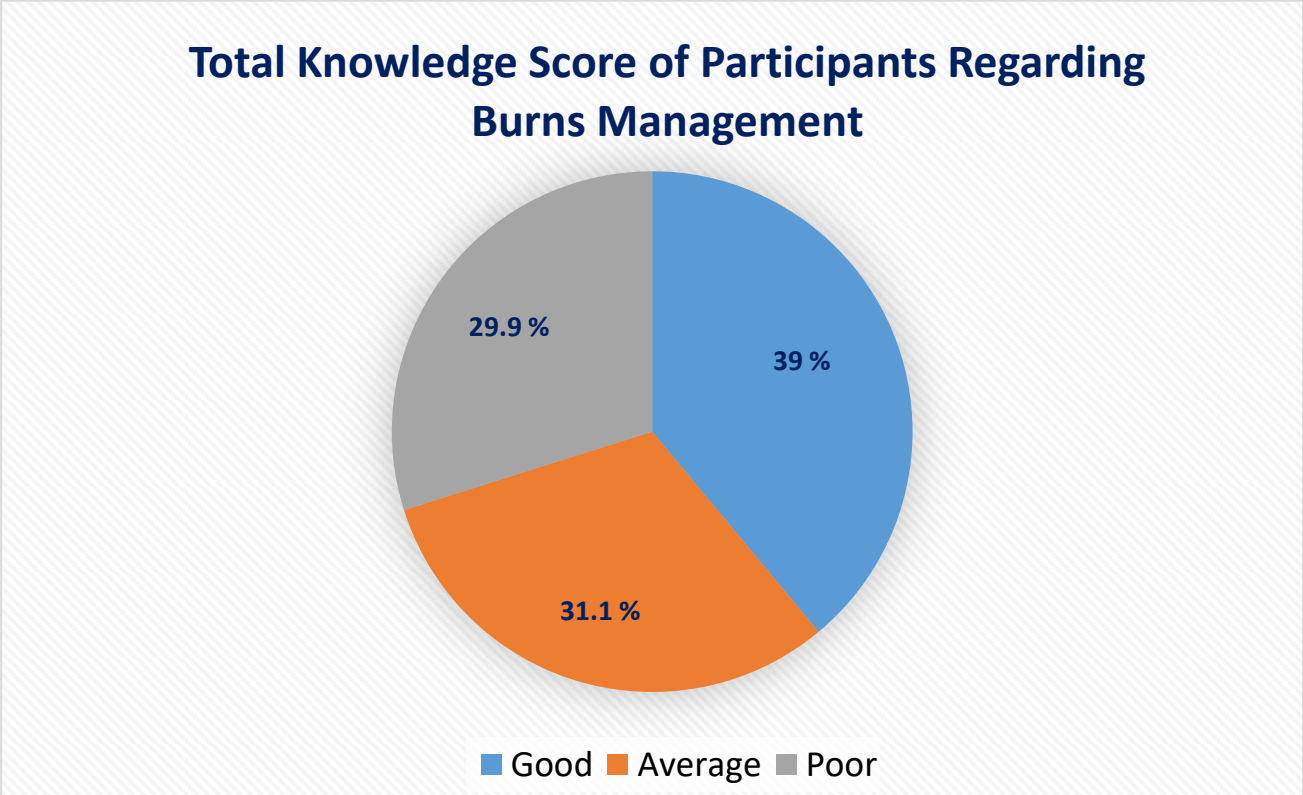
Code	Knowledge of Burns Management	Correct Answer F (%)	Incorrect Answer F (%)
K-08	%TBSA adult: head/neck + both arms + front torso	129 (55.8)	102 (44.2)
K-09	Pediatric target urine output:	137 (59.3)	94 (40.7)
K-10	Adult target urine output:	118 (51.1)	113 (48.9)
K-11	Parkland formula	99 (42.9)	132 (57.1)
K-15	Signs of inhalation injury:	135 (58.4)	96 (41.6)

K-16	Fluid resuscitation in mass burns	176 (76.2)	55 (23.8)
K-17	Transfer priority in mass burns	156 (67.5)	75 (32.5)
K-18	Intubation before transfer for suspected inhalation injury	163 (70.6)	68 (29.4)

Figure I Total Knowledge Score of Participants Regarding Burns Management

Figure I presents the distribution of respondents according to their level of knowledge. Out of the total 231 respondents, 90 (39.0%) demonstrated a good level of knowledge, representing the largest proportion of the sample. Meanwhile, 72 respondents (31.1%) had an average level of knowledge, while 69 respondents (29.9%) were categorized as having poor knowledge. These findings indicate that although a considerable proportion of respondents possessed good knowledge, a substantial number exhibited average to poor knowledge levels, highlighting the need for further educational and awareness initiatives

Figure I Total Knowledge Score of Participants Regarding Burns Management



DISCUSSION

The current study results indicates that most of the participants had moderate to good level of knowledge regarding burns first aid, especially in infection prevention and burn coverage. The findings of the study is similar to most recent studies that found satisfactory level of knowledge among nurses and health care professionals. However, notable deficiencies were identified in immediate burn management and home-based first-aid practices, which is also supported by previous literature. The comparatively higher knowledge scores observed in this study may be attributed to prior participation in burn management training courses, emphasized on the need of continuing education and professional development programs in enhancing burn-care competencies among nurses**.** The current study found that 78.4% of participants correctly identified the use of cool fresh water as the initial first-aid treatment for burns. Another research conducted by Alanazi et al. (2022) found that most healthcare

professionals identified cooling as burn running water as the recommended first-aid intervention. The authors concluded that nurses generally possessed adequate knowledge regarding basic burn first aid, which is consistent with the findings of the present study (A et al. 2022). Only 49.8% of participants in this study correctly identified the initial steps that must be taken following a burn injury, revealing gaps in key first-aid knowledge. However, Haberal et al. (2021) discovered that while nurses showed adequate general knowledge, there were notable shortcomings with relation to emergency burn care and early interventions. This confirms the current findings that sufficient broad knowledge does not always equate to proficiency in every facet of burn first aid (Haberal, M. et al. 2021). The current study revealed comparatively high correct responses for using antibiotics appropriately (78.8%) and covering burns to prevent infection (86.6%).In contrast, less than 60% of Egyptian nurses in a research by Khalil et al. (2023) properly answered questions about infection prevention and post-burn wound care. The fact that over half of the participants had taken burn management training courses may be the reason for the higher scores found in this study.

The study's participants' generally moderate-to-good knowledge levels may be explained by the fact that more than half of them (54.5%) had taken burn management training courses. This result is consistent with a study by Abd El-Hay et al. (2024) that showed nurses with formal burn-care training scored far higher on knowledge tests than those without. The authors highlighted ongoing professional development as a crucial tactic for enhancing burn first-aid proficiency. According to the current study, 39.0% of individuals had strong knowledge, and the remainder participants had moderate or low knowledge. This result is in line with the study by Alotaibi et al. (2023), which found that while a significant percentage of healthcare professionals had sufficient knowledge of burn first aid, many participants showed only moderate comprehension and needed additional training. The authors stressed the value of ongoing training initiatives to advance understanding and enhance burn treatment results. A study by Abdullah et al. (2024) found that the majority of nurses (over 70%) showed good knowledge regarding burn first aid and emergency burn management following regular institutional training programs, in contrast to the current findings, where only 39.0% of respondents achieved a good knowledge level. The greater knowledge levels revealed in their study may be related to structured continuing education and mandated burn-care training sessions, which were more widely implemented than in the current study.

Conclusion

It has been concluded from the findings of the current study that nurses retain good level of knowledge regarding the management of first aid burns. However a noticeable percentage of the participants established adequate knowledge, a considerable number had an average or poor knowledge levels reporting the important gaps in burn first-aid management. Nurses revealed adequate knowledge of cooling burns, infection prevention and wound care while deficits were also recognized in first –aid burn management and home based first-aid management. These knowledge gaps may poorly affect the quality and timelines of care provided to burn patients. The findings highlights the need of continue nursing educational activates that regular burn management training programs for the nurses. Empowering educational activities can enhance nurses' competency and improve evidence based burn care practices. In results improving nurse's knowledge of burn first-aid may add to improved patient outcomes and decreased burn-related complications.

Recommendations

Regular training programs on the first-aid management of burns need to be conducted. Evidence –based burns care content should integrated in continue nursing education.

Ensure the availability of standardized burn management guidelines in health care settings.
Strengthen burn management content in nursing curriculum.
In future research with large sample size and interventions sessions to improve nurse's knowledge need to be conducted.

REFERENCES

Abd El-Hay, S., Mohammed, S. and Ali, H. (2024) 'Effect of educational training programs on nurses' knowledge and practices regarding burn management', *BMC Nursing*, 23(1), pp. 1–10.

Abdullah, R., Hassan, M. and Ahmed, S. (2024) 'Knowledge and competency of nurses regarding burn first aid and management in tertiary care hospitals', *BMC Nursing*, 23(1), pp. 412–420.

Ahmed, R., & Salim, H. (2023). Clinical exposure and burn care knowledge among undergraduate nursing students. Journal of Nursing Education Practice, 13(4), 55–62. https://doi.org/10.5430/jnep.v13n4p555

Alanazi, A. et al. (2022) 'Knowledge and practices of burn first aid among healthcare workers in Saudi Arabia', *Burns Open*, 6(4), pp. 185–191.

Ali, S., Khan, R., & Ahmed, N. (2025). Infection prevention knowledge among nurses in burn units. Biomedical and Clinical Sciences Research Journal, 5(1), 112–118. https://doi.org/10.1234/bcsrj.2025.051122

Ali, Y., Ali, N., Haider, A., Khan, S., Saba, I. and Wahab, F., 2025. EVALUATING THE LEVEL OF CONTENTMENT AMONG NURSING STUDENTS AT NURSING INSTITUTES, KARACHI, PAKISTAN. *Journal of Medical & Health Sciences Review*, *2*(2).

Ali, Y., Khan, S., Alamgir, A., Younas, M. and Qayyum, S., 2023. Prevalence of Workplace Violence against Female Nurses at Tertiary Care Hospital Karachi, Pakistan: Prevalence of Workplace Violence against Female Nurses. *Pakistan Journal of Health Sciences*, pp.296-300.

Ali, Y., Khan, S., Fatima, U., Ali, H., Ejaz, M., Zada, N.R. and Zareef, N., 2025. Evaluating Emotional Intelligence And Its Role In Academic Success Among Undergraduate Nursing Students. *Journal of Medical & Health Sciences Review*, *2*(2).

Ali, Y., Khan, S., Mustafa, G., Hussain, K. and Akhter, A., 2025. Mentoring Student Nurses–Are Nurses Prepared, Recognized, and Supported to Teach Nursing Students in Clinical Settings. *Indus Journal of Bioscience Research*, *3*(2), pp.111-115.

Al-Khalidy, R. & Mohammed, H. (2024). Understanding burn management for nursing students at Basrah University. ACOPEN Journal of Medical Sciences, 3(2), 45–52. https://doi.org/10.21070/acopen.2024.3.2.102855

Alnjadat, R., Etoom, M., Alfarajat, L., Almomani, E., Alqudah, H. and Sayed, Z.A., 2026. Knowledge and Practice of Fluid Resuscitation in Acute Burn Management: A Survey of Nursing and Midwifery Students. *Nursing Open*, *13*(4), p.e70516.

Alotaibi, A., Alharbi, M., Alshammari, F. and colleagues (2023) 'Assessment of healthcare workers' knowledge regarding burn first aid management', *Burns Open*, 7(2), pp. 85–91.

Alsharif. F, Alassaf, B., Ba-ali, B., Siam, T., & Magboul, E. (2020). Knowledge and attitude regarding burn first aid among female campus students in King Abdul-Aziz University. IOSR Journal of Nursing and Health Science, 9(4), 01–06. https://doi.org/10.9790/1959- 0904100106

Anwar, M.., Ali Shah, B. ., Muhammad, D. ., Sultan, A.Tariq, M. Akhtar, N. ., & Hussain, S. . (2023). Nurses' Knowledge of First Aid Management of Burn Patientsat the Peshawar Burn and Plastic Surgery Center: Nurses' Knowledge of First Aid Management of Burn Patients. Pakistan Journal of Health Sciences, 4(01). https://doi.org/10.54393/pjhs.v4i01.5044

Bajracharya A, Mishra A. Burn first aid knowledge, attitude, and practice among medical interns of a tertiary care center: A descriptive cross-sectional study. 2023;16(2):95-9.

Brown, T., & Clark, E. (2024). Simulation training and self-efficacy in burn nursing education. Nurse Education Today, 128, 105789. https://doi.org/10.1016/j.nedt.2024.105789

Chen L, Wang Y, & Zhao H. (2023). Digital modules for burn management education in nursing students. BMC Nursing, 22, 340. https://doi.org/10.1186/s12912-023-01340-7
DOI: 10.3126/jgmcn. v16i2.59624.

FARHAN A, YASIR A, ANWAR AM, AMEER UK. Investigating The Level of State Anxiety Among Newly Enrolled Undergraduate Female Nursing Students in Karachi, Pakistan. INDUS JOURNAL OF BIOSCIENCE RESEARCH Учредители: Indus Publishers. 2024;2(2):1267-72.

Garcia M. Lopez P, & Rivera J. (2023). Effectiveness of burn simulation training in undergraduate nursing. Clinical Simulation in Nursing, 75, 22–29. https://doi.org/10.1016/j.ecns.2023.05.004

Haberal, M. et al. (2021) 'Assessment of nurses' knowledge regarding emergency burn care and first aid management', *Journal of Burn Care & Research*, 42(5), pp. 1002–1008.

Hamid, H.A.R.I.S., Khan, I.A., Huma, S.H.A.F.Q.A.T., Khan, M.N., Khan, M.I., Salman, M.U.H.A.M.M.A.D., Ali, Y.A.S.I.R. and Rahman, I.S.H.R.A.T., 2022. Frequency of cardiovascular problems in patients with benign prostate enlargement. *Pakistan Journal of Medical and Health Sciences*, *16*(6), pp.748-750.

Hassan M, Al-Zubaidi, L., & Kareem, A. (2024). Burn management by nursing students at Basrah University-Iraq. ACOPEN Journal of Medical Sciences, 3(3), 66–73. https://doi.org/10.21070/acopen.2024.3.3.10357

Hussain, S., Ali, Y., Khan, S.U., Khan, N., Ullah, A., Abas, S., ur Rehman, F. and Khan, S., 2025. Mental health issues: stress, anxiety, and depression in diploma and degree health care students. *Journal of Medical & Health Sciences Review*, *2*(1).

Ibrahim, A., & Hassan, S. (2025). Online simulation for improving burn assessment skills. Nurse Education in Practice, 72, 103458. https://doi.org/10.1016/j.nepr.2025.103458

Johnson, R., & Matthews, D. (2024). Narrative pedagogy in burn care nursing education.Journal of Professional Nursing, 45, 120–126. https://doi.org/10.1016/j.profnurs.2024.02.006

Kareem, A. F. (2024). Understanding burn management for nursing students. Academia Open, 9(2). https://doi.org/10.21070/acopen.9.2024.10285

Khalil, N., Ahmed, H. and Hassan, R. (2023) 'Nurses' knowledge and practice regarding burn injury management in tertiary hospitals', *Nurse Education in Practice*, 69, 103623.

Kim, S., & Lee, J. (2023). The effect of hybrid simulated burn care training on nursing students' knowledge, skills, and empathy: A randomized controlled trial. Nurse Education Today, 123, 105678. https://doi.org/10.1016/j.nedt.2023.105678

Martinez, P., Gomez, L., & Rivera, D. (2024). Effectiveness of game-based learning in undergraduate nursing education: A systematic review. Journal of Medical Internet Research, 26, e70737. https://doi.org/10.2196/70737

Mobayen, M., Pour-Abbas, S. E., Naghipour, M., Akhoundi, M., & Ashoobi, M. T. (2020). Evaluating the knowledge and attitudes of the members of the Medical Community Mobilization on first aid for burn injuries in Guilan, Iran. Journal of Mazandaran University of Medical Sciences, 30(186), 148–155.

Muhammad shafiq bin munir 2024) knowledge, attitude and practice in burnfirst aid among nursing student atschool of health sciences, universiti sains malaysia

Munir, M. S. B. (2024). Knowledge, attitude and practice in burn first aid among nursing student at School of Health Sciences, University Sains Malaysia (Bachelor's thesis). University Sains,Malaysia. http://eprints.usm.my/61420/1/THESIS%20%20%20MUHAMMAD%20SHAFIQ%20BIN20M UNIR%20%28154175-%20e.pdf

O'Connor, M., White, A., & Daly, K. (2025). Standardizing burn education in undergraduate nursing curricula. Nurse Education Today, 135, 106012. https://doi.org/10.1016/j.nedt.2025.106012

Park, H., Choi, Y., & Lim, S. (2025). Development and application of a storytelling-based burn care education program for nursing students. Nurse Education in Practice, 72, 103456. https://doi.org/10.1016/j.nepr.2025.103456

Rahimi, M., Karimi, A., & Hosseini, F. (2024). Comparison of the effects of burn assessment mission game with feedback lecture on nursing students' knowledge and skills: A randomized clinical trial. BMC Medical Informatics and Decision Making, 24, 158. https://doi.org/10.1186/s12911-024-02558-4

Rahman, F., Ali, Z., & Shah, S. (2023). Knowledge assessment of burn first aid among nursing students. Pakistan Journal of Nursing Research, 9(2), 33–40. https://doi.org/10.5430/pjnr.v9n2p33

Riaz R, Riaz L, Khan J, et al. (January 16, 2020) Survey on Knowledge of First Aid Management of Burns Amongst Medical and Non-Medical Students in Karachi, Pakistan: Need for an Educational Intervention? Cureus 12(1): e6674. DOI 10.7759/cureus.667

Shikweni, T., Amadhila, E., & Ndeutapo, S. (2025). Student nurses' knowledge, attitudes, and practices towards burn injury management. International Journal of Community Medicine and Public Health, 12(2), 980–985. https://doi.org/10.18203/2394-6040.ijcmph20250345

Singh, R., & Kaur, J. (2023). Clinical reasoning skills in burn assessment among nursing students. Asian Journal of Nursing Education and Research, 13(3), 210–215. https://doi.org/10.52711/2349-2996.2023.00045

Williams, P., Carter, J., & Evans, L. (2023). Enhancing burn management competence through structured clinical workshops. Nurse Education Today, 120, 105612. https://doi.org/10.1016/j.nedt.2023.105612

Yildiz, S., & Demir, G. (2024). Evaluation of burn care competency among nursing undergraduates. Nurse Education Today, 130, 105910. https://doi.org/10.1016/j.nedt.2024.105910

Zhou, X., Li, H., & Sun, Y. (2024). High-fidelity simulation in burn nursing education. BMC Nursing, 23, 411. https://doi.org/10.1186/s12912-024-01411-9