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**ORIGINAL ARTICLE**

# Evaluation of Nurses Practices about Pain Related Management for Children with Burns Injuries

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## ABSTRACT

**Background:** Burn injury occurs to the skin or other organic tissue primarily result in from exposure or direct contact to any type of chemical, thermal, electrical, or radiation**.**

**Material and Method:** The study selected quantitative research " a pre-experimental design" to carry out at Specialized Burn Center at Al-Fayhaa Teaching Hospital in Basra City to evaluate the practice of nurses about pain-related management for children with burns Injuries, the study started from (3th of December 2021 to 20th of March 2022). The Sample of the Study choosing the study sample, the total population was taken into consideration and the excluded sample was determined. A non-probability (Purposive) sample is used to obtain accurate data and are presentative sample was selected for the current study.

**Results:** The results showed that the nurses sample in the study, that 40.0% (12) of the sample at age (21-30) years with mean (1.90) and standard deviation (0.845), the sample gender was equal in number between male and female with mean (1.50) and standard deviation (0.509), 63.3% (19) of them was nursing institute of educational level with mean (1.63) and standard deviation (0.490), 40.0% (12) of the sample at (1-5) years of experience in nursing with mean (2.27) and standard deviation (1.258),

**Conclusion:** The study concluded that the nurses' practices about pain related management for children with burns injuries was acceptance.

**Keywords:** Evaluation, nurse, burn, pain management

## INTRODUCTION

Burn injury occurs to the skin or other organic tissue primarily result in from exposure or direct contact to any type of chemical, thermal, electrical, or radiation (WHO, 2021).

Burns are the fourth most common type of trauma in the world, after car accidents, falls, and interpersonal abuse. Burns are becoming more common as people's socioeconomic status declines, especially in low- and middle-income countries (David & Greenhalgh, 2019), and the results of treatment over time are improving as a result of the scientific revolution. Every year all over the world are affected by burn injuries. Although the majority of these burns are mild, some require long-term care and recovery (Garcia-Espinoza et al., 2017).

Burn injuries are a common type of childhood trauma caused by scalds and contact heat, but they can also be caused by flames, friction, electricity, or chemicals (Gill et al., 2017).

The degree of a burn injury can be divided into four categories, the first or superficial burn affects the partial surface of the skin, the epidermis and a part of the dermis are both affected by a burn. Partial thickness burns are categorized into superficial and deep partial thickness based on the depth of skin injury. Pink, moist, and painful to the touch, superficial partial thickness burns are the most common type. Deep partial thickness burns are usually dry, speckled pink and white. complete thickness burns affect the epidermis and the entire dermis, and they are brown-black, leathery, and cause no or little pain (Klein et al., 2014).

The extent or depth of the burn injury determines the degree or severity of pain in burn injury, so the initial or surface burn injury is the most painful, followed by the second or part thickness burn injury. Burns to the third or full thickness are characterized with little or no sensation. (Jaya, et al., 2018).

Standard care for children with burns includes wound cleaning and removal of dead tissue, followed by daily dressing change. Fluid therapy, healthy nutrition, minimizing infection, surgical treatment, assessment and management of associated pain during wound care and after surgical treatment (Morgan et al., 2018) and long-term care, which can have serious physiological and psychological consequences in the long run, Unfortunately, children's burn pain is frequently underestimated and untreated. (Bayat et al.,2014) .

## MATERIAL AND METHOD

The study selected quantitative research " a pre-experimental design" to carry out at Specialized Burn Center at Al-Fayhaa Teaching Hospital in Basra City to determining the effectiveness of an nurses practice about pain-related management for children with burns Injuries, the study started from (3th of December 2021 to 20th of March 2022). The Sample of the Study choosing the study sample, the total population was taken into consideration and the excluded sample was determined. A non-probability (Purposive) sample is used to obtain accurate data and are presentative sample was selected for the current study. The sample consists of (30) nurses was participating and applied in the study related to pain management for child with burns injuries at Al-Fayhaa Teaching Hospital / Specialized Burn Center in Basra City. The current study was carried out Specialized Burn Center in Al-Fayha Teaching Hospital in Basra City, the hospital was established in the year 1962 A.D., and it was a military hospital called (Basra Military Hospital). After 2003, it was turned into a civilian hospital. It includes many departments and specialized medical centers, including the Burns Specialized Center.

## RESULTS:

Table 1: The Demographic Characteristics of the Nurses Sample in the Study

| | Demographic Variables | Items | Freq. | % | Mean | St. D. |
|---|---|---|---|---|---|---|
| 1. | Age | (21-30) | 12 | 40.0 | 1.90 | 0.845 |
| | | (31-40) | 9 | 30.0 | | |
| | | (41-50) | 9 | 30.0 | | |
| 2. | Gender | Male | 15 | 50.0 | 1.50 | 0.509 |
| | | Female | 15 | 50.0 | | |
| 3. | Level of Education | Nursing School | 11 | 36.7 | 1.63 | 0.490 |
| | | Nursing Institute | 19 | 63.3 | | |
| 4. | Years of Experience in nursing | (1-5) | 12 | 40.0 | 2.27 | 1.258 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | (6-10) | 6 | 20.0 | | |
| | | (11-15) | 4 | 13.3 | | |
| | | (16-20) | 8 | 26.7 | | |
| 5. | Years of practice in burn unit | (1-5) | 15 | 50.0 | 1.67 | 0.758 |
| | | (6-10) | 10 | 33.3 | | |
| | | (11-15) | 5 | 16.7 | | |
| 6. | training courses | Inside Iraq | 2 | 6.7 | 2.87 | 0.507 |
| | | NO | 28 | 93.3 | | |
| 7. | Number of training courses | Never | 28 | 93.3 | 0.07 | 0.254 |
| | | One Time | 2 | 6.7 | | |
| 8. | Reading Sources | Yes | 14 | 46.7 | 1.53 | 0.507 |
| | | No | 16 | 53.3 | | |
| | Total | | 30 | 100.0 | 30 | 100.0 |

Freq.= Frequency, %= percentage, St. D.= Standard deviation

Table 2: Statistical Differences Result for Nurses' Practice regarding Management for children with Burn Injuries

| Practice Items | Estimate | Freq. | % |
|---|---|---|---|
| Use pain assessment methods before giving pain relief therapy | Always | 17 | 56.7 |
| | Sometime | 10 | 33.3 |
| | Never | 3 | 10.0 |
| Use of Fluid & Nutritional Management in burns as order | Always | 18 | 60.0 |
| | Sometime | 4 | 13.3 |
| | Never | 8 | 26.7 |
| Wound care dressing of face | Always | 5 | 16.7 |
| | Sometime | 18 | 60.0 |
| | Never | 7 | 23.3 |
| Wound care dressing of Neck | Always | 13 | 43.3 |
| | Sometime | 17 | 56.7 |
| | Never | 0 | 0.0 |
| Wound care dressing of Axilla | Always | 18 | 60.0 |
| | Sometime | 10 | 33.3 |
| | Never | 2 | 6.7 |
| Wound care dressing of Hand | Always | 13 | 43.3 |
| | Sometime | 14 | 46.7 |
| | Never | 3 | 10.0 |
| Use of surgical treatment for burns | Always | 12 | 40.0 |
| | Sometime | 14 | 46.7 |
| | Never | 4 | 13.3 |
| Giving analgesics for pain | Always | 20 | 66.7 |
| | Sometime | 10 | 33.3 |
| | Never | 0 | 0.0 |
| Use of Virtual reality (VR) | Always | 0 | 0.0 |
| | Sometime | 14 | 46.7 |
| | Never | 16 | 53.3 |
| Use of Multimodal Distraction | Always | 2 | 6.7 |
| | Sometime | 24 | 80.0 |
| | Never | 4 | 13.3 |
| Use of Deep breathing & Relaxation | Always | 3 | 10.0 |
| | Sometime | 6 | 20.0 |
| | Never | 21 | 70.0 |
| Use of Massage | Always | 0 | 0.0 |
| | Sometime | 0 | 0.0 |
| | Never | 30 | 100.0 |

Freq.= Frequency, %= percentage

Table 3: The Statistical Correlations between Nurses' Practice results with the Demographic Variables

| Nurses' Practice | Age | Gender Gender | Level of Education | Years of Experience | Practice in Burn Unit | Training Courses |
|---|---|---|---|---|---|---|
| Use pain assessment methods | 0.778 | 0.638 | 0.414 | 0.899 | 0.834 | 0.529 |
| Fluid & Nutritional Management | 0.286 | 0.326 | 0.194 | 0.314 | 0.380 | 0.795 |
| Wound care dressing of face | 0.200 | 0.072 | 0.094 | 0.571 | 0.556 | 0.481 |
| Wound care dressing of Neck | 0.200 | 0.379 | 0.094 | 0.196 | 0.070 | 0.481 |
| Wound care dressing of Axilla | 0.227 | 0.559 | 0.904 | 0.393 | 1.000 | 0.640 |
| Wound care dressing of Hand | 0.394 | 0.152 | 0.871 | 0.373 | 0.398 | 0.529 |
| Use of surgical treatment for burns | 0.005 | 0.208 | 0.212 | 0.001 | 0.006 | 0.437 |
| Giving analgesics for pain | 0.150 | 0.013 | 0.871 | 0.199 | 0.029 | 0.529 |
| Use of Virtual reality (VR) | 0.437 | 0.473 | 0.656 | 0.954 | 1.000 | 0.775 |
| Use of Multimodal Distraction | 0.731 | 0.146 | 0.656 | 0.352 | 1.000 | 0.247 |
| Deep breathing & Relaxation | 0.173 | 0.456 | 0.300 | 0.421 | 0.404 | 0.317 |
| Use of Massage | 0.288 | 0.289 | 0.716 | 0.571 | 0.638 | 0.153 |

## DISCUSSION

The table (1) shows the demographic characteristics of the nurses sample in the study, that 40.0% (12) of the sample at age (21-30) years with mean (1.90) and standard deviation (0.845), the sample gender was equal in number between male and female with mean (1.50) and standard deviation (0.509), 63.3% (19) of them was nursing institute of educational level with mean (1.63) and standard deviation (0.490), 40.0% (12) of the sample at (1-5) years of

experience in nursing with mean (2.27) and standard deviation (1.258), 50.0% (15) of the sample at (1-5) years of experience in nursing with mean (1.67) and standard deviation (0.758), 93.3% (28) of the sample not having training courses with mean (2.87) and standard deviation (0.507), also 93.3% (28) of the sample not having number of training courses with mean (0.07) and standard deviation (0.254), finally 40.0% (12) of the sample not reading sources with mean (1.53) and standard deviation (0.507).The table (2) shows the statistical differences result for total nurses' practice regarding management for children with burn injuries. That most of the sample practice at some time level and never level. The table (3) presents the statistical correlations between nurses' practice results with the demographic variables, there was non- significant correlations between the most demographic variables with most parts of nurses practice at p. value ≤ 0.05.

## CONCLUSION

The study concluded that the nurse's practices about pain related management for children with burns injuries was acceptance

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