

## Assessment of Nurse's Knowledge Concerning Management of Patients with Burns at Al-Fayhaa General Hospital in Basra City

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### Abstract

**Introduction:** One of the most destructive injuries that resulting in major economic and physiological impacts is burns. The nursing staff has a vital role in the overall management of patient with burn injury. This study was conducted to explore level of nurse's knowledge concerning management of patients with burn.

**Objectives:** To assess level of nurse's knowledge concerning burns, to assess level of nurse's knowledge concerning management of patients with burns and to detect association between level of nurse's knowledge and socio-demographic characteristics.

**Methodology:** A cross-section study was conducted through the present study from 1st of December 2020 to 1st of April 2021. A non - probability purposive sample of total 20 nurses with various level of education who worked in burn center at AL-Fayhaa General Hospital in Basra City were involved. The researcher was prepared questionnaire and collect data through direct interview with nurses. Data were analyzing by descriptive and inferential statistical approaches using Statistical Package for Social Science Program( version 24).

**Results:** The study results showed that (5%) have poor level of knowledge, (50%) have moderate knowledge, and (45%) have good level of knowledge concerning burns.

**Recommendations:** Frequent educational programs for nursing staff to enhance nurse's knowledge concerning management of patients with burns.

**Keywords:** Burns, Management of Burns, Knowledge concerning burns.

### Introduction:

Burn injury occurs as a result of destruction or loss of body tissue resulting from exposure or direct contact to any type of chemical, thermal, electrical, or radiation<sup>(1)</sup>. Those injuries are one of the most common and debilitating types of trauma<sup>(2)</sup>.

The burn is considered a significant cause of mortality and morbidity worldwide based on the world health organization, accounting about 180.000 annual deaths <sup>(3)</sup>. In Iraq, burns are a common type of injury. According to the latest WHO report, about 6.000 fire-related deaths and 18.000 disability-related burns occurred in Iraq in 2015 <sup>(4)</sup>. A study was conducted in Baghdad City explained that the burns incidence increased in the period after the invasion, from 39 to 117 per 100.000 people, which may be linked to an growing number of cases of burns linked to violence <sup>(5)</sup>.

Moreover, another previous study in Basra showed that the death rate was 22%, which was lower than the rate reported in Sulaimaniyah and the city of Baghdad, but it is 8.9% higher than the rate recorded in neighboring countries like Iran <sup>(6)</sup>. Total number of burn patients in Iraq reached 92.734 patients annually, and one of the causes of death was related to side effects after burning such as bacterial and viral infections, ulcers and other diseases, which included about 37% of the total number of deaths <sup>(7)</sup>.

### **Objectives of the study:**

1. To assess level of nurse's knowledge concerning burns.
2. To assess level of nurse's knowledge concerning management of patients with burns.
3. To detect association between level of nurse's knowledge and socio-demographic characteristics.

### **Methodology**

#### **Design of Study and Sample**

Across-sectional study was conducted from 1st of December 2020 to 1st of April 2021. A non - probability purposive sample of nurses who care for patients with burn injury were involved in the study. Of the total (29) nurses working in the burn center, number of participants in the study was 20 and number of participants in pilot study was 2 while the other 7 nurses refused to share because they had not time to complete the questionnaire.

#### **Instrument of Study**

The researcher prepared a questionnaire concerning management of patient with burn injury. A panel of experts was determined the instrument validity, while the instrument's internal consistency was determined through calculation of the Cronbach's Alpha (0.919). The parts of the questionnaire involved:

**Part A:** This part focused on demographical characteristics of nurses who work in burn center. Which include age, gender, level of education and years of experience.

**Part B:** This part involves 15 items about burns definition, burns classification, signs and symptoms of burns, and how to determine total body surface area affected by burns.

**Part C:** This part involves involve 15 items of general information about management of burns.

#### **Ethical Considerations**

Official permission was obtained from the administrative of Basra Health Office. The nurses were assured that the current study has no harm to them in the time of dissemination and publication.

#### **Data collection**

Data collection was performed through the use of the study instrument and the information was taken direct interview.

### Statistical analysis

The data were analyzed by statistical package for social sciences. The information of the study was presented as frequency and percentage.

### Results

**Table (1): Distribution of the sample according to their socio-demographic characteristics**

Characteristic	Groups	F	%
Age	20 -29	9	45.0
	30-39	5	25.0
	40-49	3	15.0
	More than 50	3	15.0
	Total	20	100.0
<b>Mean ± SD 2.00 ± 1.124</b>			
Gender	Male	7	35.0
	Female	13	65.0
	Total	20	100.0
Education Level	Preparatory	8	40.0
	Diploma	12	60.0
	Total	20	100.0
Years of Experience	Less than 10 years	10	50.0
	10-19	5	25.0
	20-29	2	10.0
	More than 30 years	3	15.0
	Total	20	100.0
<b>Mean ± SD 1.90 ± 1.119</b>			

*F=Frequency, %= Percent*

The analysis of demographic data reveals that (45%) of nurses who working in burn center are young with age 20-29 years. More than half of nurses who working in burn center are female with percentage (65%). Regarding to educational level, the highest percentage of nurses who working in burn center is seen in diploma level of education (60%). Also the result show that (50%) of nurses who working in burn center have years of experience less than 10 years.

**Table (2) Overall assessment of level of nurse's knowledge regarding burns**

Level of Knowledge	F	%	M	S.D	Assess
Poor	1	5.0	17.40	4.988	Moderate
Moderate	10	50.0			
Good	9	45.0			
Total	20	100			

*F=Frequency, %= Percent, Ass: Assessment, M: Mean, S.D: standard deviation, Poor(<10), Moderate(10-19), Good(>20)*

The results showed that 5% of nurses have poor level, 50% have moderate level, and 45% have good level of knowledge.

**Table (3): Association between Socio-Demographic characteristic of nurses and Overall knowledge concerning burns.**

Socio-demographic Characteristics	Rating	Knowledge			Sig.
		Poor	Moderate	Good	
Age	20-29	1	3	5	P-value (0.493) d.f = 6 N.S
	30-39	0	2	3	
	40-49	0	3	0	
	More than 50	0	2	1	
	Total	1	10	9	
Gender	Male	0	5	2	P-value (0.337) d.f = 2 N.S
	Female	1	5	7	
	Total	1	10	9	
Education Level	Preparetory	1	7	0	P-value (0.004) d.f = 2 S
	Diploma	0	3	9	
	Total	1	10	9	
Years of Experience	Less than 10 years	1	3	6	P-value (0.598) d.f = 6 N.S
	10-19	0	3	2	
	20-29	0	2	0	
	More than 30 years	0	2	1	
	Total	1	10	9	

*df: degree of freedom, P: probability value, Sig: significant, N.S: not significant*

The results explained association between nurse's socio-demographic characteristic and overall knowledge regarding burns, the finding revealed that there is significant association between nurse's knowledge and level of education and insignificant association between level of knowledge and (age, gender, years of experience) at p-value 0.05.

## **Discussion:**

### **Discussion of Socio-Demographic Characteristics**

Regarding to age , 45% of the sample were young, and their age are ranging from 20-29 years. This result coincides with the result <sup>(8)</sup> mentioned nearly 75% of study sample with age ranging from 21-30 years. This may be related to the willingness of young nurses to take part in more educational courses in order to obtain more expertise and practice, while most older nurses do not think they need more courses because they have achieved a degree of experience to serve as a mentor.

Concerning to gender, majority of participants were female with percentage (65%). This finding disagree with <sup>(8)</sup> which revealed that most of sample were male with percentage (55%). Also this result disagree with <sup>(9)</sup> which explain that (62.2% ) of sample were male. This is may be linked to the few numbers of male in the burn center.

Regarding to educational level, the study finding explained that (60%) of sample had been graduated from institute and had diploma level of education. These results are in agreement with <sup>(10)</sup> reported that more than half of the nurses graduated from medical institutes. This may be associated that the burn center is considered one of the critical centers that require special care and a scientific nursing staff.

Regarding to the years of experience in the burn center, the finding of the present study showed that (50%) of participants had years of experience less than 10 years. This study agree with <sup>(9)</sup> explain that (75.7%) of participants had 1-10 years of experience.

### **Discussion of nurse's knowledge concerning burns**

The findings of the present study showed that ( 5%) of sample had poor level, (50% ) had moderate level, and (45%) had good level of knowledge. This results agree with <sup>(9)</sup> which revealed that most of participants answer questions regarding care of patient with burns correctly. 51.4% of sample mention that they should monitor patient for development of edema and measure pulse rate and blood pressure. Also, the findings agree with <sup>(11)</sup> which explained the nurse's practice and knowledge regarding infection control in a burn hospital in Egypt. The results revealed that 90% of the nurses had acceptable level of knowledge whereas 85% they had unacceptable level of practice about control of infection. In addition, <sup>(12)</sup> a survey involved 353 nurses in emergency and

trauma department in Vietnam. It involved several questions regarding primary care of patient with burn injuries. The results showed that only 15.3% of the participants answered over 50% of the items correctly.

## **Discussion of Association between Level of Knowledge and Socio-Demographic**

### **Characteristics**

The results of the present study explained that there is significant association between level of nurse's knowledge regarding burns and educational level and insignificant association between level of knowledge and( age, gender, years of experience) at p-value 0.05. This finding agree with <sup>(13)</sup> which explain there is an insignificant relationship between their nurses' knowledge and practices and (age, gender, years of experience) in burn units at p-value 0.05. Also, the results agree with <sup>(8)</sup> which reveal that there is no significant association between post-test and demographic data of study group in related to (age, years of experience). There are not results that match results of the current study regarding to significant association between level of nurse's knowledge and educational level.

### **Conclusions:**

- 1) The vast majority of nurses who working in burn center are at age of (20-29) years old, female, diploma level of education and have years of experience less than 10 years.
- 2) 5% of sample had poor level of knowledge, 50% had moderate level of knowledge, and 45% had good level of knowledge.
- 3) There is significant association between nurse's level of knowledge regarding burns and level of education and not significant association between level of knowledge and( age, gender, years of experience) at p-value 0.05

### **Recommendations:**

- 1) The researcher recommends that frequent lectures and educational program about management of burns should be implemented in burn center in future for nurses to increase their knowledge.
- 2) Preparing a booklet that includes information and practice about the management of burn.
- 3) There is a need to replicate a similar study on large sample size.

**References:**

- 1) Lewis SL, Bucher L, Heitkemper MM. Clinical Companion to Medical-Surgical Nursing-E-Book. Elsevier Health Sciences. 2014.
- 2) Rashid KJ, Babakir-Mina M, Abdilkarim DA. Characteristics of burn injury and factors in relation to infection among pediatric patients. *MOJ Gerontol Ger.*2017; 1(3): 00013.
- 3) World Health Organization. Burns fact sheet worldwide. 2017; 2:9.
- 4) AL-Sudani A, Ali E. Evaluation of an Educational Program on Nurses' Practices for children with Burns Injuries attending Burns Specialist Hospital in Baghdad City. *Journal of Nursing and Health Science.*2017; 6(4): 57-63.
- 5) Stewart B, Lafta R, Al Shatari S. Burns in Baghdad from 2003 to 2014: results of a randomized household cluster survey. *Burns.*2016; 42(1): 48- 55.
- 6) Karimi, H., Momeni, M., Motevalian, A., Bahar, M. A., Boddouhi, N., & Alinejad, F. (2014). The burn registry program in Iran-First report. *Annals of burns and fire disasters*, 27(3), 154.
- 7) Abbas, M. J., Alhemiary, N., Razaq, E. A., Naosh, S., & Appleby, L. (2018). The Iraqi national study of suicide: Report on suicide data in Iraq in 2015 and 2016. *Journal of affective disorders*, 229, 56- 62.
- 8) Kadhim H, Hamza R.(2020). Effectiveness of an Educational Program on Nurses' Knowledge toward Burn Management. *Medico-legal Update*, October-December 2020, Vol. 20, No. 4.
- 9) Kadhim M, Ahmad S, Kadhim, S. Assessment of nurses' knowledge towards management of patients with burn in Duhok city. *Journal of Duhok University.* 2019; 22(2): 35-40.
- 10) Mussa Y, Abass K. Assessment of nurses knowledge regarding nursing care for patients with burn. *Assessment.* 2014; 4(7).
- 11) El-Sayed M, Gomaa M, Abdel-Aziz M. (2015). Nurses' knowledge and practice for prevention of infection in burn unit at a university hospital: suggested nursing guidelines. *J Nurs Health Sci.* 4(4):P: 62-9.
- 12) Lam N, Huong H, Tuan C. (2018). Nurse knowledge of emergency management for burn and mass burn injuries. *Annals of burns and fire disasters.* 31(3):P: 246.
- 13) AL-Sudani A, Ali E. Evaluation of an Educational Program on Nurses' Practices for children with Burns Injuries attending Burns Specialist Hospital in Baghdad City. *Journal of Nursing and Health Science.*2017; 6(4): 57-63.