

Assessment of Quality of Nursing Care for Children with Burns Injuries in Baghdad City Hospitals

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الخلاصة:

الهدف: هدف الدراسة تحديد جودة العناية التمريضية المقدمة للأطفال المصابين بحوادث الحروق والعلاقة بين الخصائص الديموغرافية للمرضى مثل العمر-الجنس-المستوى الثقافي-سنوات الخبرة في ردهات الحروق، الدخل الشهري و الدورات الخاصة بالحروق تجاه جودة العناية المقدمة للأطفال المصابين بحوادث الحروق في مستشفيات مدينة بغداد. **منهجية البحث:** دراسة وصفية غرضية غير احتمالية أجريت في ثلاثة مستشفيات غير تعليمية شملت مستشفى واحد في جانب الكرخ واثنان في جانب الرصافة للفترة من الاول من كانون الاول 2011 ولغاية الاول من شهر حزيران 2012. شملت العينة سبعون ممرضا وممرضة وشملت الممرضين في ردهات الحروق حصرا لديهم خبرة سنة فما فوق في هذا المجال. جمعت المعلومات باستخدام تأشير القائمة من قبل الباحث الخاصة بموضوع البحث لجمع المعلومات باستخدام استبانة مكونة من جزئين، الجزء الاول، يتضمن الخصائص الديموغرافية يحتوي على ستة فقرات والجزء الثاني، يتضمن استبانة اجراءات الدخول الى ردهة الحروق (9 فقرات، العناية بالجلد (16)فقرة والتي ملأت من قبل الباحث. حدد ثبات الاستبانة من خلال اجراء الدراسة المصغرة وحدد صدقها من خلال مجموعة مكونة من (14)خبيرا. تم وصف وتحليل البيانات باستخدام اساليب الاحصاء الوصفي والاستدلالي **النتائج:** اظهرت نتائج الدراسة ان هناك (37.1%) من مجموع العينة كان ادائهم جيد (37.1 %) كان ادائهم مقبول (25.7 %). كان ادائهم ردي. وبينت الدراسة ان هناك علاقة بين المستوى الثقافي للمرضى والممرضات وتقديم العناية الخاصة للأطفال المصابين بحوادث الحروق **الاستنتاجات:** أثبتت الدراسة ان هناك علاقة بين المستوى العلمي للممرضين والممرضات والعناية بالجلد للأطفال المصابين بحوادث الحروق. ولا توجد علاقة بين العناية بالجلد للأطفال المصابين بحوادث الحروق والخصائص الديموغرافية الأخرى. أكثر من نصف العينة كان أدائهم مقبول بتقديم العناية التمريضية للجلد للأطفال المصابين بحوادث الحروق. أكثر من نصف العينة حصلوا على درجات عالية حول أدائهم للعناية بالجلد للأطفال المصابين بحوادث الحروق. **التوصيات:** أوصت الدراسة الى الاهتمام بالجانب العلمي من خلال النشرات و البوسترات الخاصة بدرجات الحروق وطرق حساب نسبة الحرق للأطفال المصابين بحوادث الحروق، العلامات الخطرة وكيفية حساب السوائل واستخدام دليل عالمي للعناية بالأطفال المصابين بالحروق. التأكيد على الدورات الخاصة بحوادث الحروق، اختيار الكوادر العلمية المؤهلة في مجال العناية بالحروق مثل خريجي كليات التمريض والمعاهد الطبية.

Abstract:

Objective(s): To determine the quality of nursing care provided to children with burns at centers and units in Baghdad City Hospitals and to identify the relationships between nurse's demographic characteristics like (age, gender, level of education years of experience in burn units, monthly income, course of training in burns) and their quality of care provided to children with burn. **Methodology:** A descriptive study design was carried out at the non Teaching Hospitals in Baghdad City from the November 27th of 2011 up to the 20th of April 2012. Non probability (purposive) sample of (70) nurses were selected from burns wards in non Teaching Hospitals in Baghdad City, and they have at one year of experience in burn units of Hospitals. The part is concerning with observational checklist skin care and composed of (16) items about nurses' practices of child's with burns at burn units. Select the stability of the questionnaire during and select the pilot study through a group of 15 experts. Been described and data analyzed through using of two statistical approaches: descriptive statistical analysis and inferential statistical analysis. **Results:** The study revealed (37.1%) of the sample has good practices (37.1%) of them has acceptable practices and (25.7%) of the sample has poor practices about skin care for child's with burns at burn units. Moreover, the findings reflects that no significant relationship between nurse's practices and their demographic characteristics. However, significant relationship is found between their practices there is a significant relationship between nurses' level of education and their practices. **Conclusion:** There is significant relationship only between level of nurses' education and their practices of skin care for child with burn injury. There was no statistical significant association between nurses' practices and their general information. Nursing interventions practices shows high grade about skin care to the children with burns Injury. The study found more than half of the nurses have acceptable and good practices scores toward skin care of child with burns injury.

Recommendation: The study recommended that the educational by providing educational posters, guidelines, pamphlets and manuals, and training program of burns care which is important for the nurses working in burns wards.

Keyword: Assessment, Quality, Nursing Care, Children, Burns Injuries

INTRODUCTION

Few nursing research has focused on nurses experiences of nursing services provide to the severe burns injury patients'. This has provided a gateway to explore, describe and document the experience nursing care of severe burns injury patients. This thereby adds to the existing body of nursing quality upon which the nursing care of patients with severe injury can be made in an informative manner with confidence ⁽¹⁾. Burn injuries remain a major cause of morbidity and mortality in low and middle income countries. The Iraqi population has been struggling to cope with the impact of wars, sanctions and internal conflicts with poor public services and deteriorating living standards. While health statistics are generally lacking in the country, published data about burn injuries are scarce in Iraqi Kurdistan and their epidemiology has not been studied. Therefore investigating the epidemiological characteristics and risk factors for burns is essential to provide a better understanding of the problem and to plan preventive services. ⁽²⁾

Moderate and severe burn injured patients are in the high risk category for pressure area development according to the Braden scoring protocol; as they have reduced levels of mobility and skin integrity is compromised. Therefore, the pressure area prevention and treatment is another major feature of burn wound management. ⁽³⁾

A severe non-fatal burn injury is the most devastating injury because the young skin of a child tends to burn more quickly and deeply than adult skin, and at lower temperatures. Moreover, the child has endured a number of painful surgical procedures over an extended period of time. Even though advances have been made in techniques to improve care management, expediting the child's physical recovery from deep partial and full-thickness burns, and the emotional and the physical scarring of the child last a lifetime ⁽⁴⁾. There are factors that impact on the care to the patient with burn injury that deliver. Therefore providing safety of burn nursing care to them is important, accordance with clinical practice guidelines which is developed by the service. The minimization of infection risk is a priority issue for the service with infection surveillance mechanisms in place. Medical, nursing and allied health staffing levels and expertise are sufficient to maintain safety in the management of burn patients. ⁽⁴⁾ Burn wound sepsis was the most frequent complication and it accounted for the two deaths recorded during the period of burn. Late presentation to the hospital, care in the open ward and perhaps breakdown in infection control protocols may account for this sepsis. Controlled environment and skilled personnel in a burn unit, may help in reducing. It provision of early skin cover for deep burns will also help control septic complications as well as reduce hospital stay ⁽⁵⁾. Many excellent alternatives being developed to access to costly products which is not an option in many settings. In these situations, creativity and innovation have led to. In some instances sophisticated products are available but lack of clinical experience makes them difficult to use. Wound care needs to be undertaken in the context of the local environment. ⁽⁶⁾ The situations in Iraq published data regarding burns in Iraq including Kurdistan are scarce. The WHO estimates that there were 3,390 fire-related deaths in 2004 in Iraq which is equivalent to a death rate of 12.3 per 100,000 per year, which is higher than the global rate ⁽⁷⁾.

Administrative Arrangement: An official permission is obtained from the Ministry of Planning Central Council of Statistics for the acceptance of the draft of the instrument,

Another approval is issued from the Ministry of Health in Baghdad city non-Teaching Hospital and initial agreement of (3) non Teaching Hospital in Baghdad city in order to carry out the study and finally subject agreement is also obtained from the nursing staff, in burn units and center.

Data Analysis: In order to achieve the early stated objectives, the data of the study were analyzed through the use of statistical package of social sciences (SPSS) version 18 through descriptive and inferential statistical analyses

Design of the Study: A descriptive (Cross-sectional) of study.

Setting of the Study: The study is carried throughout Baghdad city non Teaching Hospitals as being divided into (3) hospitals according to the Ministry of Health. A total of (3) burn units and center is selected for the purpose of the study .These hospitals had included the princes AL- karkh General Hospital which were located in the AL-karkh side. Specialist Burns Hospital were in the AL- Russafa side .AL-Imam Ali hospital AL-Russafa side. All these hospitals non Teaching Hospitals in Baghdad city.

Data Collection: Data are collected through the utilization of the developed questionnaire and the checklist as a tool. The investigator collected the subjects' responses through direct observation of their practices technique as means of data collection and keeping records of all available contact that facilitate the access to the study sample. Checklist takes approximately (25-35) minutes. The data collection is carried out from February 20th 2012 to the April 20th 2012.

Instruments : Through an extensive review of literature, instruments is constructed for the purpose of study .By the researcher according to the burn units and center nursing care to measure the underlying concepts in the present study. The questionnaire is consisted of (16) items. All these items have been measured, scored and rated three levels liker scale which are indicated by score (3) for always, score (2) for sometimes, and score (1) for never (8).

RESULTS

Table (1): Distribution of the nursing intervention practices about skin care to the child with burn injury.

No. / Skin care of child with burn Items		Always		Sometimes		Never	
		No.	%	No.	%	No.	%
1.	Prepare a sterile surgical instrument for changing the dressing of the patient with burn's children	27	38.6	22	31.4	21	30.0
2.	Used disinfection to sterilize the bathroom area between burn's children and another .	50	71.4	0	0	20	28.6
3.	Check the temperature of water used to wash the burns' child .	68	97.1	2	2.9	0	0

4.	Uses a sterile medical solution (iodine) to sterilize the affected burns area .	56	80.0	14	20.0	0	0
5.	Wearing a head cover .	13	18.6	6	8.5	51	72.9
6.	Used ointments for burns	55	78.6	11	15.7	4	5.7
7.	Wearing a sterile uniform	20	28.6	11	15.7	39	55.7
8.	Wearing a face mask	36	51.4	15	21.5	19	27.1
9.	Wearing sterile gloves for each patient	55	78.6	10	14.3	5	7.1
10	Wearing a special boot (slipper) for burn units .	46	65.7	1	1.4	23	32.9
11	Prepare sterile dressing materials such as cotton - to wrap medical	31	44.3	13	18.6	26	37.1
12	Wash the affected body burns daily and remove dead tissues	66	94.3	4	5.7	0	0
13	Assessment the burn case of child after the washing process which included						
13	skin color	31	44.3	13	18.6	26	37.1
13	Discharge from burn area	30	42.9	15	21.4	25	35.7
13	Healing of burn area	41	58.6	12	17.1	17	24.3
14	Elevate the affected child limbs to decrease of burn edema swelling a result of burns injury	11	15.7	17	24.3	42	60.0
	Levels and scores of nurses' toward practices of skin care	Scores			No.		%
		Poor <32			18		25.7%
		Acceptable 32-39			26		37.1%
		Good = > 40			26		37.1%

The finding of this table indicated (26) (37.1%) was good scores, (26) (37.1%) was acceptable and only (18) (25.7%) was poor score (table1)

Table (2) Level of nursing intervention practices of skin care for child with burn injury and associated with nurses demographic characteristics

<div>Skin care level</div> <div>Variables</div>	Skin care level						P value
	Poor		Acceptable		Good		
	No.	%	No.	%	No	%	
1-Age (years)							0.599
< 20	1	33.3	0	0	2	66.7	
20-29	7	22.6	12	38.7	12	38.7	
30-39	6	23.1	12	46.1	8	30.8	
40-49 and more	4	40.0	2	20.0	4	40.0	
2. Gender							0.950
Male	13	26.0	18	36.0	19	38.0	

Female	5	25.0	8	40.0	7	35.0	
3- Level of education							0.025*
Primary nursing	3	50.0	3	50.0	0	0	
Secondary nursing	9	33.4	12	44.4	6	22.2	
Nursing institute	6	16.2	11	29.7	20	54.1	
4- Monthly income							0.620
Enough	1	20.0	1	20.0	3	60.0	
To some extent enough	4	25.0	8	50.0	4	25.0	
Not enough	13	26.5	17	34.7	19	38.8	
5-Years of practice in burn unit							0.236
<5	10	20.0	20	40.0	20	40.0	
5 -9	5	45.4	5	45.5	1	9.1	
10-14	2	33.3	1	16.7	3	50.0	
15-19	0	0	0	0	0	0	
=>20	1	33.3	0	0	2	66.7	
6-Training of burn care							0.060
Yes	6	16.3	13	35.1	18	48.6	
No	12	36.4	13	39.4	8	24.2	
6.1 Number of training courses							0.627
One	3	13.6	10	45.5	9	40.9	
Two	1	16.6	1	16.7	4	66.7	
Three	-	-	1	33.3	2	66.7	
Four & more	2	33.3	1	16.7	3	50.0	
6.2 Place of training on burn care							0.102
Inside	2	11.1	4	22.2	12	66.7	
Outside country	4	21.1	9	47.3	6	31.6	
*Level of significance at ≤ 0.05				No significant at > 0.05			

There is significant relationship only between level of nurses' education and their practices of skin care for child with burn injury.

DISCUSSIONS

Table (1) shows that nurses' interventions in burn units indicated that high grades in practices are for items questionnaire for standard care : " prepare a sterile surgical instruments for changing the dressing of child with burn , disinfection used to sterilize the bathroom wasting between one burn child and another, check the temperature of water used to wash the burned child, uses a sterile medical solution (iodine) to sterilize the affected burns' area, used ointment for burns, wearing a face mask, wearing sterile gloves for each patient, wearing a special boot for burn units, prepare sterile dressing materials (cotton ,bandage , and gauze), daily wash the affected body burns and removed death tissues, assessment the burns case of child after the washing process that includes (exudates from burn area, skin color and healing of burn area". These items reflect completed skin care; this is a routine work for nurses to do to child with burn injury. Also this study shows low grades in other items (elevate the affected child's limbs to decrease of swelling, wearing a sterile uniform and wearing a head cover).

Initial burn assessment and care with an emphasis on pediatrics a study mentioned that the avoiding infection remains a primary goal in wound care .In the acute burn units, patient are treated daily in a tank room. On the burn unit, patient have a private room, bathroom, and shower. This is an important component of care because it minimizes the possibility of cross-contamination .Once in rehabilitation ,child's in wound care begins with the shower .The occupational therapist participant on the first day to evaluate the need for adaptive equipment.⁽⁹⁾

The results mentioned that the surface infection can occur at any stage in healing process. Common causes include gram-negative and gram-positive bacteria. Although surface area infection is a setback, it often is easily treated, and responds well to topical antimicrobial, bacteriostatic, and/ or bactericidal therapies, including contain of silver. It is extremely important to prevent surface area infection; daily cleansing of the patient's skin with a solution, perfume-free soap and water is acceptable for daily showering and cleansing. Removing sloughing skin cells, dried ointment, and/or drainage helps prevent bacteria from invading fragile sites. It is essential to wear gloves during burn wound care and any time there is contact with open skin. Hand washing, head cup and mask are essential for caregivers, patients, family and relative.⁽¹⁰⁾

The study, which found that the majority of staff working in the studied severe burns injury unit, did not experience for burn care, In addition, claimed that burns nurses experience lower levels of depersonalization compared with critical care nurses in which rationale was related to the patient.⁽¹¹⁾

Wright mentioned that the interesting to note that found that burns nurses in their study experienced low levels of burnout and stress, and high levels of hardiness. Therefore it is evident that a correlation exists between burnout and hardiness among nurses.⁽¹²⁾

In Relation to Nurse's Demographic Characteristic and Significant Association with Practices for Skin Care of Child's with Burns Injury.

The study shows that there is no significant association between nurses of age and their practices .This result agree with result⁶ done by which indicated that there were no significant difference between nurses' age and their practices (table 2).⁽¹³⁾

The study shows that there is no significant association between nurses' practices and gender (table 2) this result agreed with obtained from study by which indicated that, there is no relationship between gender and nurses' practices.⁽¹⁴⁾

The results show that there is no significant association between monthly income and nurses' practices. This result agrees with result done by their study show no statistical significant association between nurses practices and at their monthly income (table 2).⁽¹⁵⁾

The finding indicated that there was no significant association between nurses' practices and number of training sessions (table, 2). This result was supported by study which revealed no statistical significant association between nurses 'practices and number of training sessions. The researcher reported that this may be result which lack in planning of Training sessions to achieve the Ministry of Health goals.⁽¹⁶⁾

The finding indicated that there was no significant association between nurses' practices and their years of experience (table2) supported this results .There finding show no difference

in knowledge and practices, between staff members with difference level of experience, qualification and seniority.⁽¹⁷⁾

The finding indicated that there was no significant association between nurses' practices and place of training sessions (table 2). This result might be due to the insufficient training sessions related to nurses' practices toward child with burns injury at burn units with the training inside or outside Iraq. The researcher reported that all nurses' working in burn units learning from each other, there is no guide or international program to support their practices and help them to improve them and their nursing care provided to the children.

The finding of the study show there was significant association with level education and nurses' practices about child's with burns since higher percentage of nurse's practices was found among nurses primary school graduate (table 2). These results are in line with Issac study. This study revealed that positive relationship between nurses' practices and their level of education. (4)

That result agreed with study that showed that there is relationship between nurse's practices and level of education.⁽¹⁸⁾

This result disagree with obtaining from study by their study although silver sulphadiazine cream is widely used for the prevention of infection of superficial and mid dermal burns, there is currently little evidence supporting its use. The evidence is inconsistent and of limited quality. One in blinded found that there was a wider variety of bacterial flora and a larger amount of bacterial growth with the use of a silicone mesh dressing compared with silver sulphadiazine. However, this study found no differences in the signs of infection or the amount of wound drainage in both groups. Another study comparing the same products also found no significant difference in the number of infection.⁽¹⁹⁾

CONCLUSION

1. There is significant relationship only between level of nurses' education and their practices of skin care for child with burn injury.
2. There was no statistical significant association between nurses' practices and their general information.
3. Nursing interventions practices shows high grade about skin care to the children with burns Injury.
4. The study found more that than half of the nurses have acceptable and good practices scores toward skin care of child with burns injury.

RECOMMENDATIONS

- a. Great emphasis should be directed toward the educational aspects at burns care units by providing educational posters, guidelines, pamphlets and manuals.
- b. Policy should be initiated to proving a special educational sessions for burns care units nurses'.
- c. Modern educational facilitate for nursing team at burns units should be provided to enhances nurses ' knowledge and practices.

- d. It is necessary to initiate a burns care specialty after the graduate from nursing college and medical institutes.
- e. Applying global educational standards to promote nurses' knowledge and practices.
- j. Providing training and professional development learning opportunities through Tele health support for nurses and allied health professionals in rural and remote areas.

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