

Nurses Performance in Pain Management for Burn Patient at Baghdad City's General Hospitals

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الخلاصة

دراسة وصفية أجريت على الممرضين والممرضات العاملين في ردهات الحروق في مستشفيات بغداد الحكومية، مستشفى الكندي واليرموك والقادسية والكرخ والكرامة للفترة من ٢٠ تموز ٢٠٠٣ إلى ٢٠ تشرين الثاني ٢٠٠٣. تهدف الدراسة إلى تقييم أداء الممرضين والمرضى المتألمين نتيجة إصابته بالحروق، وإيجاد العلاقة بين بعض الصفات الديموغرافية للمرضى وأدائهم التمريضي. الدراسة غرضية (غير احتمالية) للعينة المتكونة من ٤٠ ممرض وممرضة من العاملين في ردهات الحروق. وجمعت المعلومات التي تخص الأداء التمريضي باستخدام قائمة رصد متكونة من ٣٨ فقرة متوزعة على أربعة أجزاء. وهي ١ - تقييم الألم ٢ - تشخيص الألم ٣ - اعداد الخطة بما يتعلق بالألم ٤ - تطبيقها على المرضى. تم التحقق من المصادقية والثبات لأداة البحث من خلال عرضها على مجموعة من الخبراء ذوي الاختصاص وملاحظه عشرة من الممرضين مع شخص اخر وكان معامل الارتباط (بيرسون) مقبولة إحصائياً ($r = 0.97$). تم تحليل النتائج من خلال تطبيق قوانين التكرارات والنسبة المئوية والمتوسط الحسابي ومتوسط الدرجات ومربع كاي .

أظهرت النتائج وجود نقص كبير في الأداء التمريضي للممرضين والممرضات في ردهات الحروق في مجالات التقييم والتشخيص التمريضي وكذلك في إعداد الخطة التمريضية وتطبيقها على المصابين. كما أظهرت النتائج وجود علاقة ذات دلالة احصائية بين الأداء والمستوى العلمي وكذلك أظهرت الدراسة بأن الممرضين في ردهات الحروق بحاجة إلى التدريب العالي في مجال العناية بألم مرضى الحروق. وقد تم الاستنتاج بأن الملاك التمريضي يجب ان يكون من حملة شهادات المعاهد الطبية الفنية أو شهادة أعلى. وبناء على نتائج البحث أوصى الباحث بأنه يجب أن يتم تطوير مستوى الأداء للممرضين والممرضات من خلال الدورات العلمية المستمرة في مجال العناية بالم مرضى الحروق وتشجيع الممرضين والممرضات في العمل في ردهات الحروق.

Abstract

A descriptive study was carried out on nurses who were working at burn. Units in Baghdad city hospitals, Al-Kindy , Al-Yarmook, Al-Qadisiya, Al-karkh, and Al-Karama hospital, in the period from 20th July 2003 to 20th November 2003. The study aimed to identify the nurses performance about pain management for burned patients at burn units and find out the relationship between the demographic characteristics and performance . A purposive (non-probability) sample of (40) nurses, (24) male nurses and (16) female. The data were collected through the use of observational checklist, which comprised (38) items distributed on four parts. The validity and reliability of the instrument were determined through a pilot study and by exposing the data to a panel of experts in the field. The data were analyzed through the application of descriptive statistical analysis that includes frequency count, percentages and means, also used inferential statistical analysis that includes the means of scores, chi-square test. The results of the study showed that there was deficiency in nursing management presented by the nurses at burn units. There was significant difference between the performance and level of education.

The results of the study showed that the nurses at burn units needs more training for pain management. The study concluded that those nurses should have institute level or more.

The study recommended that it is better to develop and improve the nursing staff by continuous educational and training program sessions.

Introduction

The management of pain is one of the primary issues in burn care. Pain is not only a physiologic experience, but a psychological too; the treatment of burned patients

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must incorporate a holistic view of pain management and healing⁽¹⁾. To manage pain effectively, clinicians need to have an understanding of the processes involved in the facilitation of pain transmission from the site of injury to the central nerves system and processes that augment or inhibit that transmission⁽²⁾. The development of a multidisciplinary pain management committee is a critical step in monitoring and improving pain management practices. The systematic evaluation of the quality of pain management using the process that can lead to improvements in the care that patients receive⁽³⁾. The nurse can rise to the challenge and have a significant impact on pain management. Some careful thought and planning may allow the nurse to adapt usual tools for use by patients who have difficulty in communicating⁽⁴⁾. The patient with burns suffers severe pain at the time of the burn and during subsequent treatment and rehabilitation. Pain has adverse physiological and emotional effects. Researches suggest that pain management is an important factor in better outcomes. There is increasing understanding of the private experience of pain⁽⁵⁾. A careful thorough attempt to assess pain can ensure better pain, outcomes as well as a quicker and more positive return to health⁽⁶⁾.

The objectives of this study aimed to Identify the Nurses Performance in Pain Management to Patients with Burn. To find-out the Relationship of Nurses Performance and the Demographic variables such as (age, sex, educational level etc.)

Methodology

Descriptive evaluation design was used to identify the performance of nurses with pain management for burn patients. The study was carried out from 20th of July 2003 through 20th of November 2003.

The population consist of all nurses who worked in burn units at (5) hospitals which includes, Al-Yarmook teaching hospital, Al-kindy teaching hospital, Al-Karkh general hospital, Al-Kzarama teaching hospital, Al-thawra general hospital, the total number of nurses who worked in the aforementioned hospitals were (44) at the time of the data collection.

For the purpose of the present study, check list was constructed by the investigator to identify the performance of nurses related to pain management. The instrument was based on comprehensive review of relevant literature. The construction of following tools:

Part one: The nurses socio-demographic data, include gender, age, level of education, years of employment, years of experience in burn units, and number of training sessions related to burn management.

Part two: Checklist concerned with evaluation of nursing process application the nurses performance while they were management the pain of burn patient's which comprised of the following parts: Assessment of patients pain, Nursing diagnosis, Development of nursing care plan, Implementation of nursing care plan. The over all items of observation-check list were (38) items, each item in the observational check list was measured scored as two score for (yes, No) (2) degree for yes (1) degree for no, except some items in the assessment of patient pain and some items in implementation Care plans were measured, scored and related on three levels, type likert scale (good, faire, poor) which takes 3 degree for good, 2 degree for fair, 1 for poor.

The checklist was considered valid after taking into consideration of the experts comments. To obtain reliability of the checklist the investigator together with colleague had observed at the same time 10 nurses during their performance of managing pain for burned patient the reliability coefficient was 0.97 and statistically.

Data were collected through the application of observational checklist while the nurses were performing managing of pain for burn patient.

Results

Table (1): Distribution of nurse's socio-demography characteristics

Variables	Frequency	%
1-gender		
Male	24	60
Female	16	40
Total	40	100
2.Age (years)		
20-25	7	17.5
26-30	10	25
31-35	9	22.5
36-40	12	30
41-45	2	5
Total	40	100
3.Level of education		
nursing school	8	20
preparatory nursing school	10	25
nursing institute	22	55
Total	40	100
4.Years of employment		
1-5 years	15	37.5
6-10 years	6	15
11-15 years	3	7.5
16-20 years	14	35
21-25 years	2	5
Total	40	100

Variables	Frequency	%
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5.Years of experience at burns units		
1-5	29	72.5
6-10	9	22.5
11-15	2	5
Total	40	100
6.Training sessions		
no sessions	34	85
1	4	10
3	2	5
Total	40	100

Table (1) demonstrates the distribution of socio-demographic characteristics, the table showed that the majority of the sample (60%) were male, those at age (36-40) were 30% of the sample, most of the sample (55%) graduate from institute of nursing and appears that the higher percentage (37.5%) of the sample was related to (1-5) years of employment. The table presented also the duration of nurses experience in burn units (72.5)% of sample have (1-5) years of experience at burn units concerning number of training session (85)% hadn't any training sessions related to burn management.

Table (2): Frequency and percentage for nurse's performance of nursing assessment

No.	Items related to nursing assessment	Yes		No	
		Freq.	%	Freq.	%
1.	Does the nurse ask the patient about his pain location.	18	45	22	55
2.	Does the nurse ask the patient about the duration of pain	14	35	26	65
3.	Does the nurse ask the patient about occurrence of the pain.	7	17.5	33	82.5
4.	Does the nurse ask the patient about intensity level of pain.	11	27.5	29	72.5
5.	Does the nurse ask the patient about methods of relieving the pain.	16	40	24	60
6.	Does the nurse ask the patient about his feeling like (what).	4	10	36	90
7.	Does the nurse ask the patient about event making the pain is worse.	4	10	36	90
8.	Does the nurse ask the patient about rank of pain.	5	12.5	35	87.5
9.	Does the nurse record behavioral response.	5	0	40	100

The examination of table (2) indicated that the performance of nurses practices was inadequate in all item relative to assessment of burn pain as presented in item (9), 100% of the sample did not record behavioral response, 90% of the nurses has low performance in item (6.7), (87.5%) doesn't ask the patient about occurrence of pain, (55%) of the sample doesn't ask, about the pain location.

Table(3): Mean of scores for nurse’s performance toward nursing assessment of pain for burn patient

No.	Items related to nursing assessment	good		Fair		Poor		M.S
		F	%	F	%	F	%	
1.	Does the nurse check vital signs such as blood pressure, pulse rate respiration?	9	22.5	29	72.5	2	5	2.1
2.	Does the nurse check the Alertness	0	0	16	40	24	60	1.4
3.	Does the nurse record vital signs in the chart?	3	7.5	26	65	11	27.5	1.8
4.	Does the nurse inspect any associated symptoms such as Nausea, vomiting...etc?	10	25	30	75	0	0	1.5
5.	Does the nurse record associated symptoms in the patient chart.	0	0	7	17.5	33	82.5	1.1

This table shows that the nurses performance toward assessment of pain for burn patient, showed most of the sample were low performance with item (1,3,4) and no performance with item (2,5).

Table (4): Frequencies and percentages for nursing diagnosis Related to pain of burn patients

No.	Items related to nursing diagnosis	Yes		No	
		F	%	F	%
1.	Does the nurse record the developed nursing diagnosis about pain related to burn.	17	42.5	23	57.5
2.	Does the nurse record the developed nursing diagnosis about anxiety related to pain.	19	47.5	21	52.5
3.	Does the nurse record the developed nursing diagnosis about activity intolerance related to pain.	4	10	36	90
4.	Does the nurse record the developed nursing diagnosis about potential for pain.	3	7.5	37	92.5
5.	Does the nurse record the developed nursing diagnosis about knowledge deficit for self care.	4	10	36	90

The finding of table (4) revealed that the nurses performance toward nursing diagnosis was in adequate for most of them 92.5% doesn’t record developed nursing about potential for pain and (90%) of sample doesn’t recognize the patient knowledge deficit , and (57.5%) of sample doesn’t record develop nursing diagnosis about pain related to burn. (52.5%) of sample doesn’t recognize anxiety related to pain.

Table (5): Frequencies and percentages for development of nursing care plan for patient with burn

		Yes		No	
No.	Items related to development of nursing care plan	Freq.	%	Freq.	%
1.	Does the nursing care plan include giving prescribed medication.	20	50	20	50
2.	Does the nursing care plan include enhancing emotional support.	21	52.5	19	47.5
3.	Does the nursing care plan include performing comfort measure,	16	40	24	60
4.	Does the nursing care plan include educating the patient about pain reduction	5	12.5	35	87.6

This table indicated that the nurses performance toward nursing care plan indicate that (87.6%) doesn't educate the patient about pain reduction, (60%) of nurses doesn't perform comfort measures, (50%) of nurses give prescribed medication, and (52.5%) of nurses were enhancing emotional support.

Table (6): frequencies and percentage for nurse's performance toward implementation of nursing care plan for patient with burn pain

No	Items related to implementation of nursing care plan	Yes		No	
		Freq.	%	Freq.	%
1.	Giving medication as order.	25	62.5	15	37.5
2.	Using non-pharmacological management for burn pain.	13	32.5	27	67.5
3.	Presenting emotional support.	5	12.5	35	87.5
4.	Present in divisional activities.	7	17.5	33	82.5
5.	Demonstrating concern by spending time for talk with patient.	11	27.5	29	72.5

This table indicated that the nurses performance toward implementation of nursing care plan showed that (87.5%) was inadequate for presenting emotional support, (82.5%) was inadequate for presenting in divisional activities, and (72.5%) was inadequate for Demonstrating concern by spending time for talk with patient.

Table (7): Mean of scores for nurses performance toward implementation of nursing care plan for burn pain.

No.	Items related to implementation of nursing care plan	good	Fair	Poor	M.S
6.	Performs measures of change patient position.	16	22	2	2.3
7	Performs measures for providing oral hygiene daily.	5	20	15	1.7
8	Performs measures for washing patient face and hands.	11	13	16	1.8
9.	Performs measures of physical behavioral such as (ROM) Rang of motion.	5	27	8	1.9
10.	Performs measures of psychological behavioral, such as encouraging the patient express feeling about his body image and self.	20	15	5	2.3
11	Helping the patient to enhancing the effect of pharmacological management by (therapeutic touch, massage, music, sensory environment)	20	16	4	2.4
12	Giving information for procedures such as relaxation, hypnosis, prayer, pictures of rest, pain modulation.	15	20	5	2.2
13	Observing the maintaining of good bowel habit.	19	19	2	2.4
14	Observing the maintaining of respiration function.	6	28	6	2.0
15	Observing the maintaining of self mobility.	12	24	4	2.2

Mean of score for nurses performance toward implementation of nursing care plan for burn pain, the finding revealed that the mean of score of nurses performance were low performance in items (6, 7, 8, 9, 10, 11, 12, 13).

Table (8): Association between the nurse's gender and their performance toward burn pain management

Gender	Performance							
	good		Fair		Poor		Total	
	F	%	F	%	F	%	F	%
Male	10	41.6	10	41.6	4	16.8	24	60
Female	0	0	11	68.5	5	31.5	16	40
Total	10	25	21	52.5	9	22.5	40	100
$X^2 = 9.26$	Df=2		P>0.05		crit=5.99			

Table (8) presented no significant association between nurses performance and their gender ($P > 0.05$). The majority of male nurses had good and fair grade (41.6%) and the female had a Fair grade (68.5%).

Table (9): Association between the nurse's age and their performance

Age (year)	Performance							
	good		Fair		Poor		Total	
	F	%	F	%	F	%	F	%
20-30	2	11.8	11	64.7	4	23.5	17	5.0
31-40	6	28.6	12	57.1	3	14.3	21	42.5
41-above	2	100	0	0	0	0	2	52.5
Total	10	25	23	57.5	7	17.5	40	100
$X^2 = 7.56$	Df=4		P>0.05		crit=9.48			

Table (9) revealed that there is no significant difference between nurses performance with their age distribution ($P > 0.05$).while The high percentage (100%) of those with age (41 year & above) have good level, (64.7%) of those with age (20-30) year age were Fair level, (57.1%) of those with (31-40)year age were Fair level.

Table (10): Association between the nurse's education level and their performance

Education level	Performance							
	good		Fair		Poor		Total	
	F	%	F	%	F	%	F	%
Primary Nursing school	0	0	3	37.5	5	62.5	8	100
Secondary Nursing school	0	0	8	80	2	20	10	100
Nursing institute	10	45.5	12	54.5	0	0	22	100
Total	10	25	23	57.5	7	17.5	40	100
$X^2 = 12.8$	Df=4		P=<0.05		crit=9.48			

Table (10) Illustrates there are significant differences between nurses performance, related to burn pain management and their educational level ($P \leq 0.05$), The data revealed that, those who graduate from nursing institutes constitute the all nurses at the good and fair performance,(45%) (54.5%) were fair performance, the nurses with secondary school (80%) were Fair, and showed there are not good performance for nurses who graduate from nursing school.

Table (11): Association between the nurse employment year's and their performance

Employment years in nursing field (year)	Performance							
	good		Fair		Poor		Total	
	F	%	F	%	F	%	F	%
1-10	2	9.5	17	81	2	9.5	21	52.5
11-20	6	35.3	7	41.2	4	23.5	17	42.5
21-30	2	100	0	0	0	0	2	5
Total	10	25	24	60	6	15	40	100
$X^2 = 14.5$	Df=4		P=<0.05		crit=9.48			

Table (11) examination out of this table indicated that highest percentage of nurse with good performance as employment years of (21 and above), the high percentage (81%) of nurses were with fair performance as employment years (1-10) years. This table also revealed a significant association between nurse's performance toward pain management of burn patient and their years of employment ($P \leq 0.05$).

Table (12): Association between experience years in burn unit and their performance

Experience years in burn units	Nursing Performance							
	good		Fair		Poor		Total	
	F	%	F	%	F	%	F	%
1-5	8	27.5	16	55.2	5	17.2	29	100
5-above	1	9.1	8	72.7	2	18.2	11	100
Total	9	22.5	24	60	7	17.5	40	100
$X^2 = 1.6$	Df=2		P > 0.05		crit=5.991			

Table (12) showed that there was the highest percentage (72.7%) of nurses with Fair performance have (5 years and above) also the highest percentage (55.2%) with fair performance have (1-5) years of experience in burn unit. No significant association is noticed between nurses performance toward management of burn pain and their years of experience.

Discussion

The results of this study revealed that, the majority (60%) of these nurses were male, (30%) at age of the (30-40) years old, (55%) had diploma in nursing, (37.5%) had

(1-5) years of employment, relative to their experience in nursing the data revealed that most (72.5%) of them haven't enough experience in burn units and (85%) of the nurses hadn't been enrolled in any training session related with burn units (Table 1) These results may be due to the fact that a shortage of qualified nurses in the burn units who introduce quality nursing care to burn patients and dealing with critical care patients who requires specialized care and professional nursing.⁽⁹⁾

Relative to assessment of burn pain the data analysis revealed that (100%) of the nurses didn't record behavioral responses, (90%) of the nurses didn't ask the patient about feeling of pain, (87.5%) the nurse didn't ask the patient about occurrence of pain, (72.5%) didn't ask the patient about intensity level of pain (table (2)). It had been noted also through the data analysis that the mean of score of nursing responses with most item in determination of nursing of pain for burn patient were ranging from (2.1-1.1) mean of score (Table 2). Similar finding were reported by (Melzack and Kat) who stated that the un- dimensional tools measure one dimension of pain experience, for example its intensity⁽⁷⁾. To facilitate documentation and recommended of pain management , it has recently recommended that the pain becomes the fifth "vital signs"⁽¹¹⁾.

Concerning nurses diagnosis of pain, the data analysis had indicated that the majority of the nursing diagnosis (92.5%) which related to recording of developed nursing diagnosis about potential for burn pain hadn't been recorded by nurses who were working at the burn unit's. (90%) of nurses doesn't record the nursing diagnosis about activity and knowledge deficit for self care (table 4). According to the present results .⁽⁸⁾

Finding of development of nursing care plan revealed that the majority of nurses (87.6%) of the sample hadn't developed the education of the patient. For their pain reduction, while (52.5%) of nurses developed enhancing emotional support. These results show that nurses had inadequate performance for planning in order to help the burn patient (table 5).

It appears from the result related to implementation of nursing care plan that more than half of the nurses were giving medication as order but most nurses were not using non- pharmacological management ,emotional support , divisional activities ,spending time for talking with patient (67.5%,87.5%,82.5%, 72.5% respectively) (table 6).In general the performance of nursing regarding patients care plane implementation is fair to apply the pain management for burn patients (table 7). This finding disagreed with other research who stated that Non- pharmacological methods of pain relief achieve their effect in numerous ways, not only in reducing the intensity of the pain but also by reducing the emotional components. So reducing anxiety, facilitating coping skills ,providing sense of control, enhancing comfort , promoting sleep , reducing fatigue and improving quality of life.⁽¹²⁾

No Significant differences in this study were obtained on correlating gender with nursing performance $p \leq 0.05$; the male nurses had good and fair performance while the female nurses had fair and poor performance (table 8). That means male nurses had better performance than female.⁽¹⁰⁾

Association between nurse's age and their performance analysis of such association nurses who were 41 years and above have (100%) good performance, the nurses with (31-40) (28.6%) were good performance, (11.8%) were good performance for nurses with (20-30) years old (table 9). These finding was evidence that though the percentage of nurses performance increase with increase age .no clear trend is observed.

The results have revealed that the nursing institute level were (45.5%) good, while zero for good to the other nurses who graduate from secondary school of nursing

(table 10) ,so that in respect to such association, the study finding had revealed that the nurses with institute level had experienced adequate performances concerning the management of burn pain, than the other educational level

The finding indicated that the Nurses of (21 years and above), (100%) have a good performance, the nurses of (1-10) years, have 9.5% good but 81% of them were Fair, the nurses who have (11-20) years of employment, (35.3%)of them have good performance and (41.2%) of them were fair it was very obvious out of the data analysis that only nurses with 21 years and above (100%) of them have good performance toward the management of burn pain (table 11). Years of employment affect the nurse performance related to burn pain management given significantly in our study.

The study revealed no statistical significant differences in this study were obtained on association between year experience in burn units and their performance, although the high percentage 72.7% with fair performance have five year and above (table 12).

Recommendations

1. The nursing staff who work at burn units should be enrolled in training sessions and programs in order to be familiar with correct nursing management about burn pain.
2. Highly qualified nurses should be engaged at burn units.
3. Continuous burn pain management education and training programs should be arrange for nurses who work in burn units with special lectures on non-pharmacological treatment and nursing process in pain management.
4. Encouragement to establish a burn center in Baghdad ,the future goal for this center is ,to work with burn units to help developing a burn institute, the burn institute would assist the burn center in providing preventive teaching to schools and community to preclude these injuries from occurring ,many of the burn centers community activities ,specialized care and supportive services to patient.
5. Training and education on the pharmacology, indications, contraindications and safe use of drugs, may help nurses more confident in the administration of opioids or non opioids; it may also give them the confidence to use it in a wider range administration during painful procedures.

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