

Evaluation of Nursing Knowledge and Practices Concerning Nursing Care of Patient with Skin Traction in Orthopedic Units in Kurdistan Region

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الخلاصة

الهدف: هو تقييم معلومات وممارسات الكادر التمريضي العامل في ردهات الكسور والمتعلقة بمرضى السحب الجلدي. **المنهجية:** تتألف العينة من (٤٠) ممرض وممرضة، (٢٠) من الكادر التمريضي هم من منتسبي مستشفى الطوارئ التعليمي في دهوك و(٢٠) ممرض وممرضة من مستشفى اربيل التعليمي في اربيل في الأول من كانون الأول ٢٠٠٤ إلى نهاية حزيران ٢٠٠٥ في منطقة كردستان. لتحقيق هدف الدراسة صممت أداتان، استمارة استقصائية لغرض تقييم المعلومات والتي تتألف من خمسة وعشرون سؤال متعدد الاختيارات، استمارة رصد لقياس الممارسات عن طريق الملاحظة باستعمال استمارة خاصة تتألف من أربعة أجزاء رئيسية وهي (قبل وضع السحب الجلدي، خلال وضع السحب الجلدي، بعد وضع السحب الجلدي ومتابعة المريض). تم تعيين مصداقية استمارة المعلومات والممارسات من خلال عرضها على مجموعة من الخبراء. **النتائج:** إشارة إلى ان معلومات الكادر التمريضي حول السحب الجلدي كانت كافية في مدينتي دهوك واربيل. أما ما يخص تقييم ممارسات الكادر التمريضي وجد ان الممارسات غير كافية حول العناية بمرضى لديه سحب جلدي في دهوك واربيل. أثبتت الدراسة انه لا يوجد فرق ذات دلالة إحصائية في المعلومات والممارسات بين دهوك واربيل. أشارت الدراسة أنه لا يوجد علاقة ذات دلالة إحصائية بين المعلومات والممارسات مع العمر والجنس والمستوى التعليمي وسنوات الخبرة في ردهة الكسور. **التوصيات:** زيادة الكادر التمريضي في ردهات الكسور، وعمل دورات تثقيفية وتدريبية للكادر التمريضي حول كيفية تقديم العناية التمريضية بمرضى الكسور ومنع حدوث المضاعفات ومعالجتها.

Abstract

Objective: The study aimed to evaluate knowledge and practices of nursing staff at the orthopedic units regarding the existing care of patient with skin traction.

Methodology: The sample consists of (40) nurses, (20) of them from Emergency Teaching Hospital in Duhok and the other (20) of them from Erbil Teaching Hospital in Erbil from 1st Dec. 2004 to the end of June 2005 in Kurdistan Region.

Two instruments were constructed to evaluate knowledge and practices. Evaluation of knowledge was done by using of multiple choice questions composed of (25) questions, and evaluation of practice was done by using the observational check list which consist of four main category (pre skin traction, during skin traction, post skin traction and follow up of patient have skin traction).

Validity of questionnaire was determined through the expert.

Results: Indicated that the nurses knowledge scores was satisfied about patient have skin traction in Duhok and Erbil.

In relation to the evaluation of nurses' practice, it was found that the practices of the nurses were inadequate in Duhok and Erbil Hospitals.

The study founded there was no significant difference between Duhok and Erbil of knowledge and practices.

The finding indicated that there was no significant relationship between nurses' knowledge and practices and years of experience in orthopedic units.

Recommendation: The number of staff should be increased in orthopedic units, education and special training programs for these nurses in orthopedic units should be designed and presented through how to provide nursing care, how to prevent complications and management of complications if present.

Key words: Nursing care- skin traction

Introduction

Orthopedic means correction of bony deformities. The word comes from Greek⁽¹⁾. Orthopedic patient is that person who has problems in his musculoskeletal system and needs help from the orthopedic team. One of these team member are orthopedic nurse⁽²⁾.

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Traction is the application of a pulling force to a part of the body⁽³⁾. It is a procedure to immobilizes a body part intermittently over an extended period through direct application of a pulling force on the patient skin⁽⁴⁾.

For hundreds of years, traction has been used for the management of fractures and dislocations, with the advancement of orthopedic technology and technique traction is rarely used today⁽⁵⁾. The general types of traction are skin traction and skeletal traction, the specific types of skin traction are buck's extension traction⁽⁶⁾. The type of buck's extension (unilateral or bilateral) (adhesive or non adhesive). Adhesive attachment allows more continuous traction, whereas non-adhesive attachment allows easier removal for daily skin care. Buck's extension traction used for many conditions affecting hip, femur, knee or back, it is used only when low level of force are needed⁽⁷⁾.

The nurse entering practice wants to learn, to perform nursing effectively and satisfactorily for themselves and for their patients. Since nursing offered to the public as help or services, nurse should attain and maintain a high level of nursing knowledge and nursing performance, in order to be effective in practice. Nurse must gain nursing knowledge before they enter practice⁽⁸⁾.

Therefore the aims of the study are to evaluate the nurse's knowledge and practices in orthopedic units in Kurdistan region and to compare between the two governorates, Erbil and Duhok orthopedic units..

Methodology

A descriptive and comparative study was carried out at the orthopedic units of Duhok and Erbil Teaching Hospital from Dec. 2004 to the end of June 2005 in Kurdistan Region.

The sample consists of all nurses at morning shift (40) nurses who worked in orthopedic units at main teaching hospitals in Duhok and Erbil city. The numbers of sample taken from Duhok city are (20) nurses and the sample taken from Erbil city are (20) nurses. A purposive sample of (40) nurses was selected through a non probability sampling technique.

A two parts instrument was conducted. (25) items regarding nurses knowledge are multiple choice questions, and nursing practices were used for patient with skin traction which are observational checklist. The observational check list consist of four main category as the following:

- 1- Checklist of pre-skin traction care, it consists of (10) items.
- 2- Checklist of during skin traction care, it consists of (7) items.
- 3- Checklist of post skin traction care, it consists of (9) main items.
- 4- Checklist for follow up of a nurse for patient have skin traction, it consists of (24) main items.

The items were measured on three levels of liker and rating scale, Always (3), Sometimes (2), Never (1).

A total (3) episodes of event were observed for each respondent's practices as mean of data collection, (3) or (2) correct practices out of (3) episodes were rated as always, (1) correct practices out of (3) episodes were rated as sometimes, and incorrect practices were rated never. The score of knowledge test and observation checklist were categorized according to the criteria that used by the Ministry of Higher Education and Scientific Research which include poor (0-49), Acceptable (50-59), Fair (60-69), Good (70-79), V.good (80-89), and Excellent (90-100).

A multiple choice (25) questions formulated with (4) alternatives, the true items were scored as four. Reliability of knowledge and observational checklist was determined through

collecting the data from 10 nurses, the correlation coefficient result are significant for knowledge and practices and validity of questionnaire was determined through the expert.

Data were analyzed through the application of descriptive data analysis (frequency, percentage, mean of scores), and the inferential data analysis (t-test, one way analysis of variance, and chi-square).

Results

Table (1): Distribution of demographical characteristics of Duhok and Erbil orthopedic nurse

Variable	Duhok		Erbil	
	F	%	F	%
* Age/Years				
20-29	4	20	7	35
30-39	13	65	8	40
40-and above	3	15	5	25
Total	20	100	20	100
* Gender				
Male	11	55	9	45
Female	9	45	11	55
Total	20	100	20	100
* Level of education				
Nursing institute graduated	0	0	8	40
Nursing secondary graduated	16	80	7	35
Nursing school graduated	4	20	5	25
Total	20	100	20	100
* Training courses in orthopedic				
Yes	1	5	5	25
No	19	95	15	75
Total	20	100	20	100
* Years of experience in orthopedic units				
1-5 years	13	65	11	55
6-10	5	25	4	20
11-and above	2	10	5	25
Total	20	100	20	100

Table (2): Knowledge score of Duhok and Erbil groups

Groups	Duhok		Erbil	
	No.	%	No.	%
Excellent	0	0	1	5
Very good	2	10	2	10
Good	4	20	2	10
Fair	7	35	9	45
Acceptable	2	10	3	15
Poor	5	25	3	15
Total	20	100	20	100

The table present that, the score of nurses knowledge in Duhok was ranged between poor (25%) and very good (10%), while in Erbil the scores ranged between poor (15%) and excellent (5%).

The highest percentage (35%) of nurses in Duhok and (45%) of nurses in Erbil were had fair scores.

Table (3): Analysis of variance for the difference of nurse's knowledge between Duhok and Erbil groups

Source of variance	Summation of square	Df	Mean of square	F.obs.	P<0.05 Sig.
Between groups	40	1	40	0.235	0.630
Within groups	6462.4	38	170.06		NS.

This table indicated that there are no significant differences between Duhok and Erbil groups nurses knowledge.

Table (4): Practice score of Duhok and Erbil groups

Groups Practices scores	Duhok		Erbil	
	No.	%	No.	%
Excellent	0	0	0	0
Very good	0	0	0	0
Good	0	0	0	0
Fair	0	0	0	0
Acceptable	1	5	2	10
Poor	19	95	18	90
Total	20	100	20	100

This table shows that, the score of nurses practices was ranged between Poor and Acceptable for both group of Erbil and Duhok.

Table (5): The comparison of nurses practices for four parts between Duhok and Erbil groups

Nurses practices	Df	Duhok Mean	Erbil Mean	t.observed	Sig. P<0.05
Pre-skin traction	38	1.5	1.4	0.508	NS.
During skin traction	38	2	2.01	-0.066	NS.
Post skin traction	38	1.122	1.1	0.421	NS.
Follow up of nurses	38	1.173	1.2	-0.414	NS.

The table shows that there is no significant difference between Duhok and Erbil.

Table (6): Differences of nurses knowledge and practice scores with level of education toward Nursing care of patient with skin traction

Level of Education	Knowledge scores														Practice scores					
	Excellent		V. good		Good		Fair		Acceptable		Poor		Total		Acceptable		Poor		total	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Institute	0	0	0	0	1	2.5	3	7.5	1	2.5	3	7.5	8	20	1	2.5	7	17.5	8	20
Secondary	0	0	3	7.5	4	10	9	22.5	3	7.5	4	10	23	57.5	2	5	21	52.5	23	57.5
Primary	1	2.5	1	2.5	1	2.5	4	10	1	2.5	1	2.5	9	22.5	0	0	9	22.5	9	22.5
Total	1	2.65	4	10	6	15	16	40	5	12.5	8	20	40	100	3	7.5	37	92.5	40	100

X^2 Obs. = 6.45 / Crit. = 18.307 / Df. = 10 Knowledge

X^2 Obs. = 1.04 / Crit. = 5.991 / Df. = 2 Practice

The statistical result present there were no significant differences between level of education with nurses knowledge and practices scores toward Nursing care of patient with skin traction.

Table (7): Differences of knowledge and practice scores with years of experience in orthopedic unit toward Nursing care of patient with skin traction

Level of Experience in Orthopedic Unit	Knowledge scores														Practice scores					
	Excellent		V. good		Good		Fair		Acceptable		Poor		Total		Acceptable		Poor		total	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
1-5	1	2.5	1	2.5	5	12.5	9	22.5	2	5	6	15	24	60	2	5	22	55	24	60
6-10	0	0	1	2.5	1	2.5	4	10	2	5	1	2.5	9	22.5	0	0	9	22.5	9	22.5
11 and above	0	0	2	5	0	0	3	7.5	1	2.5	1	2.5	7	17.5	1	2.5	6	15	7	17.5
Total	1	2.5	4	10	6	15	16	40	5	12.5	8	20	40	100	3	7.5	37	92.5	40	100

X^2 Obs. = 7.43 / Crit. = 18.307 / Df. = 10 Knowledge

X^2 Obs. = 1.21 / Crit. = 5.991 / Df. = 2 Practice

The study present there were no significant differences between these nurses knowledge and practices scores with years of experience in orthopedic units toward Nursing care of patient with skin traction.

Discussion

Through the data analysis distribution of demographic characteristics, the study revealed that most of the nurses (65%) and (40%) at age group (30-39) years of old in Duhok and Erbil that present most of them young age group. In Duhok the majority of these nurses (55%) were male, in Erbil the (55%) of nurses were female it present that half of nurses male and another half female when compared between Duhok and Erbil. Concerning to the level of education the highly percentage (80%) were nursing secondary graduated in Duhok and (40%) of nurses' were nursing institute graduated in Erbil (Table 1).

Al-Aboudy stated that the highest percentage (30%) of nurses at (25-29) age, regarding to the gender the highest percentage (70%) of nurses male and for the level of education the highest percentage (42%) are nursing institute graduated⁽⁸⁾.

The study findings had reported that the majority of these nurses were not enrolled in any sort of orthopedic nursing training courses in Duhok and in Erbil. This was may be due to the policy of the hospitals was not prepared programs to improve the nurses knowledge and skills in orthopedic ward.

Regarding to the experience in hospital most of the nurses have (1-5) years of experience (40%) in Duhok and (65%) of these nurses have (1-5) years of experience in orthopedic ward in Duhok and (55%) had (1-5) years of experience in orthopedic ward in Erbil (table 1).

The study revealed that there were no significant differences of the nurses knowledge between Duhok and Erbil scores (Table 3) that mean the nurses knowledge in Duhok and Erbil same regarding to the hospital policy, that present the curriculum in Duhok and Erbil was same.

The finding of the present study revealed that the score of knowledge of Duhok nurses was ranged between poor (25%) and very good (10%) while in Erbil the scores ranged between Poor (15%) and Excellent (5%) (Table 2).

The nurse must have a sound understanding of scientific principles underlying each step of any procedure in order to prevent possible risk factors, so they become able to apply their knowledge into effective care⁽⁹⁾.

The nurse in Duhok and in Erbil had the same, curriculum regarding nursing and teaching method. The nurses need to improve knowledge in orthopedic nursing especially concerning skin traction.

Al-Aboudy mentioned in his study that the nurses in orthopedic ward must take in services education to motivate them and increasing their knowledge regarding nursing management of the orthopedic ward⁽⁸⁾.

The finding of the present study revealed that the nurses practices scores in Duhok was ranged between poor (95%) and acceptable (5%) while in Erbil also ranged between poor (90%) and acceptable (10%) (Table 4).

The result of the comparison of mean present there is no significant different between Duhok and Erbil mean of score in four parts, pre skin traction, during skin traction, post skin traction and follow up of nurses (Table 5).

The nurses knowledge important for improving practices of care of patients, good knowledge resulted in good practices.

The study findings present that the majority of nurses was scored inadequate in Duhok and Erbil, that mean the nurses practices is not enough to give a care to patients who have skin traction in orthopedic unit, in the observational checklist same item not implemented to patients when they give a care to patients, we should

emphasized on hospital polices for these nurses work in orthopedic unit and increasing educational programs.

The result of the study revealed that there were no significant differences between the level of education with knowledge and practices scores, the study present the highly percentage of the (75.5%) nursing secondary school graduated (Table 6).

Many authorities in education emphasis, that the level of education have a positive effect on the quality and quantity of knowledge and skill acquired by the recipient of education⁽⁸⁾⁽⁹⁾.

The differences between the knowledge and practice score with years of experience in orthopedic units were not significantly (Table 7).

Al-Botany revealed that in her study there is no significant relation between knowledge and practice score with years of experience in orthopedic unit(10).

The nurses experience in any specialization should be improved by years of experience.

Recommendation

- 1- Nurse in orthopedic units must take the opportunity for continuing their education to maintain knowledge and skills, as well as updated in orthopedic nursing.
- 2- In-service education for nurses may motivate their knowledge regarding nursing management of the orthopedic patients.
- 3- Special orthopedic nursing training program can be designed and presented to these nurses or should be taken place in developed countries in order to increase their skill.
- 4- A policy should be initiated for increasing the number of nursing staff in orthopedic units.

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