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Knowledge and Practices of Nurses Concerning Nursing Management for Patients with Skin Traction at Orthopedic Wards in Al-Hussein Teaching Hospital in Al-Samawa City

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ABSTRACT

Objectives:

1. Assessing nurses' knowledge concerning management of patients undergoing skin traction.
2. Evaluation of nurses' practices concerning management of patients undergoing skin traction.
3. Determine nurses' knowledge and practice in relation to their demographic characteristics (age, gender, marital status, level of education, total years of service, total years of experience in orthopedic wards, number of training sessions in Iraq, and number of training sessions outside of Iraq).

Methodology: *A descriptive design was conducted on Nurses' Knowledge and Practices Concerning Nursing Management for Patients with Skin Traction at Orthopedic Wards in Al-Hussein Teaching Hospital in Al-Samawa City. This study started from 16st of September 2019 up to 16th March 2020. Samples of (25) nurses who work in the orthopedic wards, (13) male and (12) female from the both morning and evening shift who are working in the hospital during the time of the study period and met the study criteria and agreed to participate in the study.*

Results*: the study result indicated that the majority of the study samples had moderate knowledge level classification in all domains of the study, and the majority of the study samples had poor practices level classification in all domains of the study.*

Conclusions: *the study concludes that nurses had a moderate knowledge level and a poor performance practices toward skin traction in the orthopedic wards.*

Recommendations: *The researcher recommends providing educational programs for nurses to emphasize the practical implementation and to increase knowledge level regarding management of skin traction patients.*

KEYWORDS*: Knowledge, Practice, Nurses, Patients, Skin Traction.*

معارف و ممارسات الممرضين المتعلقة بالعناية التمريضية لمرضى السحب الجلدي في ردهات الكسور لمستشفى الحسين التعليمي في مدينة السماوة

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الأهداف: تهدف هذه الدراسة إلى: 1. تقييم معرفة الممرضين فيما يتعلق برعاية المرضى الذين يخضعون للسحب الجلدي. 2. تقييم ممارسات الممرضين فيما يتعلق برعاية المرضى الذين يخضعون للسحب الجلدي. 3. ايجاد العلاقة بين معارف الممرضين وممارساتهم وخصائصهم الديموغرافية (العمر والجنس والحالة الزوجية ومستوى التعلم وسنوات الخدمة وسنوات الخبرة في ردهات الكسور وعدد الدورات التدريبية داخل وخارج العراق).

منهجية البحث: تم إجراء دراسة وصفية على معارف الممرضين وممارساتهم فيما يتعلق بالرعاية التمريضية للمرضى الذين يعانون من السحب الجلدي في ردهات الكسور لمستشفى الحسين (ع) التعليمي بمدينة السماوة. بدأت هذه الدراسة من 16 ايلول 2019 حتى 16 مارس 2020. العينات (25) ممرض يعملون في ردهات الكسور، (28) ذكر و (22) أنثى من الشفتين الصباحي و المسائي الذين يعملون في المستشفى خلال فترة الدراسة واستوفوا معايير الدراسة ووافقوا على المشاركة فيها.

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النتائج: أشارت نتائج الدراسة إلى أن غالبية عينات الدراسة لديها مستوى معرفة متوسط في جميع مجالات الدراسة وأن غالبية عينات الدراسة لديها مستوى ممارسات ضعيف في جميع مجالات الدراسة.

الاستنتاجات: أظهرت نتائج جميع مجالات الدراسة معرفة متوسط وأداء ممارسات ضعيف.

التوصيات: أوصى الباحث بتقديم برامج تعليمية للممرضين للتأكيد على التطبيق العملي وزيادة مستوى المعرفة فيما يتعلق بالعناية بمرضى السحب الجلدي.

INTRODUCTION: Current treatment options generally include conservative treatment (plaster / splinter, traction), external fixation, locked and unlocked panels, side fixed angle device (blade or sliding roller options), intra-joint nailing and arthroplasty (Ilyas, Parikh, Rehman, Scuderi & Wodajo, 2016).

Bony traction is the process of placing a limb, bone, or group of muscles under tension by using weights and pulleys to align or paralyze the part to reduce muscle spasm or reduce pressure on it.

(Mosby, 2013) Traction is used to suppress fractures or disorders that are displaced by muscle forces and that are not sufficiently controlled by simple splints. The most common indications are pelvic vasectomy lesions, hip dislocations, annular fractures and fractures of the proximal femur or femoral axis. (Beauchamp, Evers, Mattox, Townsend & Townsend, 2012)

It is estimated that by 2050 half of the hip fractures will occur in Asia. This review describes the occurrence of a hip fracture in different regions of the world and discusses possible causes for this wide geographical variation. Data analyzes from various studies show wide geographical variation worldwide. (Dhanwal, Dennison, Harvey, & Cooper, 2011)

In 2050, it is estimated that there will be 3.9 million fractures worldwide, with more than 700,000 in the United States. However, it is not clear whether there are differences in morbidity, mortality and functionality between men and women or between races. (Sterling, 2011)

In addition to damaging the quality of life, fractures are associated with a high death rate of 32% over the past decade. (Nazrun, Tzar, Mokhtar, & Mohamed, 2014)

However, only one study that focused on the knowledge and practice of nurses on the care of patients trapped in the skin in Iraq was found and reported poor performance. Although the lack of care for patients with traction can cause significant morbidity and may delay patient rehabilitation. (Hajbaghery, & Moradi, 2013)

SUBJECTS AND METHODS:

A descriptive design was conducted on Nurses' Knowledge and Practices Concerning Nursing Management for Patient with Skin Traction at Orthopedic Wards in Al-Hussein Teaching Hospital in Al-Samawa City. This study started from 16st of September 2019 up to 20th March 2020. Samples of (25) nurses who work in the orthopedic wards, (13) male and (12) female from the both morning and evening shift who are working in the hospital during the time of the study period and met the study criteria and agreed to participate in the study. The study instrument was constructed based on advanced references related to study problem to reach the objectives of the study, which consist of two parts, the first part was constructed to assess the nurses' knowledge concerning nursing management for patients with skin traction. It consisted of (24) multiple choice questions in three domains, and the second part consists of (46) items of observational checklist related to nurses' practices toward care of skin traction patients, and classified into (4) domains. Reliability test of the knowledge questionnaire was (0.976) and the practices questionnaire was (0.99049) by using a **Pearson's Ccorrelation Coefficient.**

RESULTS

Table 1: Distributions Study Samples According to The Socio Demographic Characteristics:

Demographic data groups		Samples	
		F	**P**
Age/ Years	≤ 25	**9**	**36**
	26–31	3	12
	32–37	5	2
	38–43	6	24
	44+	2	8
	Total	25	100
		M.= 31.3600 Sd.= 9.01759	
Gender	Male	**13**	**52**

	Female	12	48
	Total	25	100
Marital Status	Single	5	20
	Married	**20**	**80**
	Total	25	100
Level of education	Institute Degree	**17**	**68**
	Nursing secondary school graduate	8	32
	Total	25	100
Total years of service	≥ 5	**9**	**36**
	6–10	4	16
	11–15	4	16
	16–20	3	12
	21+	5	20
	Total	25	100
		M.=10.8400 Sd.= 8.07094	
Total years of experience in orthopedic wards	≥ 2	8	32
	3-4	**9**	**36**
	5-6	4	16
	7-8	3	12
	9+	1	4
	Total	25	100
		M.=3.8800 Sd.= 2.315117	
Number of training sessions in Iraq	0	7	28
	1	**9**	**36**
	2	**9**	**36**
	3	0	0
	4	0	0
	5	0	0
	Total	25	100
Training sessions outside Iraq	**Total**	0.00	

F: Frequency, P: Percentage, M: Mean, Sd.: Standard deviation.

This table show that age majority of the study samples was less than (25) years (36%), the male nurses more than half of the sample (52%), most of them married (80%) where graduated from institute (68%) and had majority total service (9) years (36) percentage also the same perecentage for the total experience as in the orthopedic wards so training sessions in Iraq (1 to 2) training session and all the study samples do not have any training sessions outside of Iraq.

Table 2: The Knowledge of the study Samples concerning nursing management for Patients with Skin Traction:

Variables	Classification	Samples

General nurses' knowledge toward skin traction	Poor	0
	Moderate	**24**
	High	1
Nurses' knowledge concerning complications of skin traction	Poor	1
	Moderate	**24**
	High	0
Nurses' knowledge concerning complications of skin traction	Poor	0
	Moderate	**15**
	High	10
Total Knowledge test	Poor	0
	Moderate	**25**
	High	0

This table indicated that majority of the study samples had a moderate knowledge level classification in all domains.

Table 3: The Practices of the study Samples concerning nursing management for Patients with Skin Traction:

Variables	Classification	Study
Pre-skin traction	Poor	**16**
	Moderate	9
	High	0
During skin traction	Poor	**14**
	Moderate	11
	High	0
Post-skin traction	Poor	**25**
	Moderate	0
	High	0
Follow up of nurses for patient with skin traction	Poor	**21**
	Moderate	4
	High	0
Total practices test	Poor	**16**
	Moderate	9
	High	0

This table indicated that majority of the study samples had a poor practices level classification in all domains.

Table 4: The Relationship between Nurses' Knowledge Variables and Demographic Data

Demographic Data	General nurses' knowledge toward skin traction	Nurses' knowledge concerning complications of skin traction	Nurses' knowledge concerning nursing management of skin traction
Age	Chi-square=7.639[a] P. value=0.106 **Non-Significant**	Chi-square=1.852[a] P. value=0.763 **Non-Significant**	Chi-square=1.991[a] P. value=0.737 **Non-Significant**
Gender	Chi-square=0.962[b] P. value=0.327 **Non-Significant**	Chi-square=1.128[b] P. value=0.288 **Non-Significant**	Chi-square=0.962[b] P. value=0.327 **Non-Significant**
Marital Status	Chi-square=0.260[b] P. value=0.610 **Non-Significant**	Chi-square=4.167[b] P. value=0.41 **Non-Significant**	Chi-square=1.042[b] P. value=0.307 **Non-Significant**
Level of education	Chi-square=2.214[b] P. value=0.137 **Non-Significant**	Chi-square=0.490[b] P. value=0.484 **Non-Significant**	Chi-square=0.31[b] P. value=0.861 **Non-Significant**
Total years of service	Chi-square=5.469[b] P. value=0.242 **Non-Significant**	Chi-square=1.852[b] P. value=0.763 **Non-Significant**	Chi-square=3. 380[b] P. value=0.496 **Non-Significant**
Total years of experience in orthopedic ward	Chi-square=1.852[a] P. value=0.763 **Non-Significant**	Chi-square=2.214[a] P. value=0.697 **Non-Significant**	Chi-square=3.762[a] P. value=0.439 **Non-Significant**
Number of training sessions in Iraq	Chi-square=1.852[a] P. value=0.396 **Non-Significant**	Chi-square=2.679[a] P. value=0.262 **Non-Significant**	Chi-square=4.233[a] P. value=0.120 **Non-Significant**
Training sessions outside Iraq	All nurses do not have any training sessions outside of Iraq		

P. value: Probability.

This table indicated that the association between nurses' knowledge toward skin traction and demographic characteristics was **non-significant**.

Table 5: The Relationship between Nurses Practices' Variables and Demographic Data:

Demographic Data	Pre-skin traction	During skin traction	Post-skin traction	Follow up of nurses for patient with skin traction
Age	Chi-square=7.639[a] P. value=0.106	Chi-square=4.618[a] P. value=0.329	All items are in poor	Chi-square=3.753[a] P. value=0.440

	Non-Significant	**Non-Significant**	classification	**Non-Significant**
Gender	Chi-square=0.071[b] P. value=0.790 **Non-Significant**	Chi-square=0.051[b] P. value=0.821 **Non-Significant**	All items are in poor classification	Chi-square=0.008[b] P. value=0.930 **Non-Significant**
Marital Status	Chi-square=0.694[b] P. value=0.405 **Non-Significant**	Chi-square=0.41[b] P. value=0.840 **Non-Significant**	All items are in poor classification	Chi-square=0.74[b] P. value=0.785 **Non-Significant**
Level of education	Chi-square=0.11[b] P. value=0.915 **Non-Significant**	Chi-square=0.172[b] P. value=0.678 **Non-Significant**	All items are in poor classification	Chi-square=0.107[b] P. value=0.743 **Non-Significant**
Total years of service	Chi-square=3.998[a] P. value=0.406 **Non-Significant**	Chi-square=8.676[a] P. value=0.070 **Non-Significant**	All items are in poor classification	Chi-square=1.273[a] P. value=0.866 **Non-Significant**
Total years of experience in orthopedic wards	Chi-square=2.033[a] P. value=0.730 **Non-Significant**	Chi-square=2.115 P. value=0.715 **Non-Significant**	All items are in poor classification	Chi-square=1.335[a] P. value=0.855 **Non-Significant**
Numbers of training sessions in Iraq	Chi-square=0.198[a] P. value=0.906 **Non-Significant**	Chi-square=2.711[a] P. value=0.258 **Non-Significant**	All items are in poor classification	Chi-square=0.435[a] P. value=0.805 **Non-Significant**
Training sessions outside Iraq	All nurses do not have any training sessions outside of Iraq			

P. value: Probability.

This table indicated that the association between nurses' practices toward skin traction and demographic characteristics was **non-significant**.

DISCUSSION:

Discussion The Distribution of The Nurses' Demographic Characteristics and Compare Between The Study and Control Group (Table 1)

Ages of Nurses: The characteristics of the study samples that included in the present study at age group (19 to 43) years old, and confirms that the majority of nurses' age were less than 25 years with the percentage of (36%). Study results of age are supported by Khudhayer, & Atiyah, (2019) results who showed that the majority of nurses' age in both the study and control groups was less than 39 years with the percentage of (40.9%) in the study group and with a percentage (47.1%) in the control group. Age findings are also agreed with Wahba, Qalawa, El–Ata, & khalik Gouda, (2014) who shows that more than half of studied nurses (54%) were in age group from 20 to less than 30 years. Age results are also agreed with Poudyal, Neupane, & Lopchan, (2014) who revealed that 45.9% were between age group 16-30 years. The researcher believes that ages of nurses in the orthopedic wards were in young ages indicated as positive point because this area requires more effort muscle strain.

Nurses' gender: the present study ensures that the majority of nurses in orthopedic wards were males with a percentage (52%). Gender results are agreed with Panta, Ban, Pandey, & Dhital, (2019) who reveals that Majority nurses participants (68.8%) were male. Gender findings are also agreed with Tawfiq, & Radhi, (2016) who shows that the majority of participants were male (56%). The researcher thinks that nurses' gender is mostly male, due to the nature of the work that requires more efforts and the structure of the male body that bears more efforts.

Marital status of Nurses :results of the mrital status to study samples revealed that most of samples are married with a percentage (80%). These findings are agreed with Wahba, Qalawa, El–Ata, & khalik Gouda, (2014) who shows that the majority of the studied nurses (98%) were married. These findings are also supported by Poudyal, Neupane, & Lopchan, (2014) results who revealed that 84.2% were married. These results are also agreed with Mohamed, Mansour, Mohamed Taha, & Abd Elkareem Moghazy, (2020) who indicates that 87.3% of nurses were married. The researcher thinks that most nurses are married because all nurses in the orthopedic wards are above the age 25 years and in early age employed because they either secondary nursing school graduate, or institute degree and that factors encourages in marriege.

Levels of education: As to the level of education, the present study reveals that the majority of nurses (68%) institute graduated. These findings agreed with Atiyah, (2018) the study has revealed the majority of nurses in the study group (50%) and (45.5%) in the control group were nursing school graduated related to educational level. These results are agreed with Tawfiq, & Radhi, (2016) that shows that more than half of them has nursing institute graduate (64%). The researcher thinks that level of education for nurses are either either nursing secondary school graduate, or institute degree because the leakage in the number of Bachelor degree or above in Al Hussein teaching hospital and in Al-Muthanna Health Directorate only few numbers destributed in the critical wards.

Total years of service: the present study demonstrates that the majority of nurses who work in the orthopedic wards have less than 5 years of employment with percentage (36%). Results of the study group are agreed with Atiyah, (2018) the findings demonstrated that the majority of nurses who work in the orthopedic wards were having less than 5 years employment with percentage (36.4%) in the study group and (36.4%) in the control group.The researcher thinks that this service are correlates with ages of nurses that work in the orthopedic ward were most of them less than 25 years.

Total years of experience in orthopedic ward :this study reveals that the majority of nurses who work in the orthopedic wards had between (3-4) years of experience in the orthopedic nursing. This result is agreed with Tawfiq, & Radhi, (2016) that shows more of the half of the sample has (1-5) years of experience in orthopedic ward (52%).

Training sessions in Iraq: As to the training courses of orthopedic nursing in Iraq, the current study confirms that the majority of nurses in the study samples who participated in one training course or session with a percentage (36%). These results are agreed with Tawfiq, & Radhi, (2016) who revealed that the majority of the study samples have not share in any training courses and (46%) have training courses (1-2) related to nurses intervention for orthopedic care.

Training sessions outside Iraq: The current study ensures that all nurses in orthopedic ward don't participate in any training sessions outside Iraq. Result of this finding is agreed with Mohamed, Mansour, Mohamed Taha, & Abd Elkareem Moghazy, (2020) 90.9% of the studied nurses hadn't attended previous training courses about caring of orthopedic patients with external fixation.

Discussion The Knowledge For Nurses About The Management Of The Patients With Skin Traction: the results of the present study in table (2) explored the statistics of nurses' knowledge concerning nursing management for patients with skin traction at orthopedic wards. Nurses' knowledge statistics classified into three main domains as general nurses' knowledge toward skin traction, nurses' knowledge concerning complications of skin traction, Nurses knowledge concerning nursing management of skin traction. The results of all knowledge domains showed that nurses' knowledge toward skin traction for all domains are in the **moderate** level classification. These findings are

agreed with Wahba, Qalawa, El–Ata, & khalik Gouda, (2014) who demonstrated that, more than half of the studied nurses (62%) had unsatisfactory total knowledge. These was supported by (Khudhayer, & Atiyah, 2019) who indicated that the knowledge score of nursing staff was inadequate for both (study and control) group in the pre-test. These results are also agreed with Mohamed, Mansour, Mohamed Taha, & Abd Elkareem Moghazy, (2020) who indicates that 71% of studied nurses had unsatisfactory total knowledge regarding orthopedic external fixation. The researcher mentioned that orthopedic nurses really had a gap in their knowledge in the mentioned area of orthopedic nursing.

Discussion The Practices for Nurses about The Management of The Patients with Skin Traction: the result of the present study in table (3) those nurses' practices toward skin traction are classified into four main domains as Pre-skin traction, during skin traction, post-skin traction, and Follow up of nurses for patient with skin traction. The results of all practices domains showed that nurses' practices toward skin traction are the **poor** level. These results is agreed with Tawfiq, & Radhi, (2016) that presents there are low mean of score postoperative nurses' intervention after external fixation surgery for item number. These findings are agreed with Wahba, Qalawa, El–Ata, & khalik Gouda, (2014) who shows that most of the studied nurses (78%) had an unsatisfactory total practice. The researcher mentioned that orthopedic nurses really had a gap in their knowledge and practices in the mentioned area of orthopedic nursing. The researcher mentioned that orthopedic nurses really had a gap in their practices performance toward skin traction in the orthopedic wards.

Discussion The Relationship between The Nurses' Knowledge and Practice with Their Demographic Characteristics: Tables (4), and (5)

There are **non-significant** associations between nurses' knowledge and practices toward skin traction with demographic characteristics. These findings are supported by (Khudhayer, & Atiyah, 2019) who show **non-significant** relationships are accounted at P>0.05, are proved with demographic characteristics. These results are agreed with Panta, Ban, Pandey, & Dhital, (2019) who pointed that there is **no significant** association between sex and occupation with awareness level of caregivers regarding prevention of complication in traction patient. These findings also supported by (Gautam, & Thapa, 2020) who found that age, education, and work experience, worked in orthopedic ward has **no significance** effect on the knowledge. This finding supported by (Gautam, & Thapa, 2020) who found that age, education, and work experience, worked in orthopedic ward has **no significance** effect on the practice. The researcher revealed that there are no correlation between the nurses' knowledge and practice with their demographic characteristics.

CONCLUSIONS: the present study concluded

1. The study concludes that knowledge of nurses toward skin traction in the orthopedic wards is in the **moderate** level.
2. The study concludes that practices of nurses toward skin traction in the orthopedic wards are in the **poor** level.
3. The study concludes that the association between nurses' knowledge and practices toward skin traction with demographic characteristics was **non-significant.**

RECOMMENDATIONS: the study recommends

1. The researcher recommended providing educational programs for nurses to emphasize the practical implementation and to increase knowledge level regarding management of skin traction patients.
2. The researcher recommended repeating this study in future including all types of traction in Al-Muthana Province as a whole.
3. The researcher recommended more reasearches and programs about fracture management.
3. The researcher recommended more researches about traction in other provinces because the lack of studies about this topic in Iraq.

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