Implementing an Educational Module on Enhancing Nurses' Practice and Attitude for Orthopedic Patients with Traction

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ABSTRACT

Background: Patients with traumatic fractures require traction or internal fixation, which necessitates the use of skilled nurses to satisfy the patient's demands and avoid complications. As a result, orthopaedic nurses play a crucial role in the treatment of patients who require traction or internal fixation. **Aim:** To evaluate the effect of an educational module on enhancing nurses' practice and attitude for orthopedic patients with traction or internal fixation. **Subjects and method: Design:** A quasi experimental research design was utilized in this study. **Setting:** The study was carried out in orthopedic department at (Mansoura University Hospital and Mansoura Emergency Hospital). **Subjects:** A convenient sample of staff nurses (50 nurses) who were working in the previously mentioned settings and participate in this study. **Tools:** The data were collected using two tools; Nurses' Attitude Scale and Nurses' Observational Checklist **Results**: The study's results indicated that 82% of studied nurses had satisfactory total level of practice and 78% had positive attitude regarding orthopedic patients with traction immediately post educational module implementation with statistically significant differences whereas (p-value=0,001).**Conclusion:** Nurses' practice and attitude were improved after educational module implementation. **Recommendations**: Providing continuous inservice training for nurses related to nursing care of orthopedic patients with traction or internal fixation.

Keywords: **Educational Module, Nurses' practice and Attitude, Orthopedic patients, Traction**

INTRODUCTION

Musculoskeletal disorders are frequently caused by trauma. More than 150 disorders that impact the musculoskeletal system are classified as musculoskeletal injuries. The most common and common bone damage is a fracture. Fractures have a significant impact on people's normal activities and productivity. Human function is dependent on musculoskeletal health, which enables mobility, employability, and active engagement in all parts of life. As a result, nurses in all areas of practise should come across patients who have musculoskeletal function changes (Briggs et al., 2018).

A fracture is described by Gidden and Wilson (2020) as "an interruption in the continuity and integrity of the bone due to the bone's inability to tolerate the forces exerted on it." Fractures are accompanied by acute pain and edoema in the affected area. They're linked to higher rates of morbidity and death, as well as a higher chance of fractures. Fractures can occur at any age, but they are more common in the elderly people. Traction is an important aspect of fracture treatment. It entails applying traction to bones that have been fractured or dislocated. "Reverse pulling force" refers to a force that pulls in the opposite direction. Traction is a non-surgical method of treating fractures and dislocations. It is used to keep the body upright and to relieve muscle spasms. relieve pain, correct, lessen or prevent deformities (Townsend, 2021).

Traction is classified into two forms based on the nature of the applied device: cutaneous traction and skeletal traction. Under local or general anaesthesia, the surgeon inserts wires and needles through the bone distal to the fracture site to apply traction directly to the bone. Pins are inserted into the skin on the sides of the limb, and traction is provided by weights tied to the boom ropes. It is frequently used for fractures of the femur, knee, tibia, humerus, and cervical spine that need longer to heal (Babhulkar & Goel, 2020).

Skin traction is used to stabilise a fractured limb for a short amount of time, control muscle spasms, immobilise an area before surgery, and employ lighter weights, according to Cheever and Hinkle (2018). An adhesive or elastic wrap is used to apply the traction device to the skin. Apply tape, boots, or splints directly to the skin to keep the damaged area aligned and to assist prevent muscle spasms. Skin traction is divided into three categories: Bucks, Russells, and Bryants.

Significance of the study:

Musculoskeletal injuries include fractures are considered the second biggest cause of years living with disability and have a major impact on patients, families and the community. Each year, more than 12,000 egyptian lose their lives as a result of road traffic crashes and many thousands have fractures that lead to long term disability (Brashers,Mccance,Huether,&Gordon, 2018).Also, the number of patients with femur fracture entering mansoura emergency hospital on 2020 was 460 patients. These highest prevalence leads to increase the use of orthopedic intervention such as cast, skin, skeletal traction, external or internal fixation.

Infections of the pin tract and needle loss continue to be a problem for healthcare practitioners. Due to a lack of awareness and postoperative care and practise, approximately 70% of orthopaedic patients treated with K-wires get this infection, which has a high incidence. To avoid such consequences, clinical nursing education and adherence to specified standards of care are required (Sharif & Barawi, 2021).

The primary focus of orthopaedic care is on musculoskeletal problems and complications. Orthopaedic care's duty is to provide standardised patient care based on evidence-based practise for traction patients by doing musculoskeletal examinations, assisting with traction, and administering prescription pain medication. Orthopedic nurses assist and educate patients on mobility, joint and bone health, and the development of care plans to avoid issues (Mersal, Mersal, & Hussein, 2017).

AIM OF THE STUDY:

The present study aimed to evaluate the effect of an educational module on enhancing nurses' practice and attitude for orthopedic patients with traction. This aim was achieved through:

1. Assess the nurses’ practice in providing care for orthopedic patients with traction pre implementing educational module.
2. Assess the nurses’ attitude toward care of orthopedic patients with traction pre implementing educational module.
3. Design an educational module based on assessment to enhance nurses' practice and attitude for orthopedic patients with traction.
4. Implement an educational module on enhancing nurses' practice and attitude for orthopedic patients with traction.
5. Evaluate the effect of an educational module on enhancing nurses' practice and attitude for orthopedic patients with traction immediately post the module and after 3 months.

Research hypotheses:

The level of Nurses' practice and attitude regarding orthopedic patients with traction will differ after implementation of an educational module.

SUBJECTS AND METHOD:

A quasi experimental research design was used in this study.

Setting:

The study was conducted at orthopedic department in the following hospitals in Mansoura
city: 1- Mansoura University Hospital. 2- Mansoura Emergency Hospital.

Sample:

A convenient sample of all available nurses (50 nurses) working in the orthopaedic department was as follows: The orthopaedic department of Mansoura University Hospital employs 32 nurses, while the orthopaedic department of Mansoura Emergency Hospital employs 18 nurses.

Tools for Data Collection:

Data were collected using the following tools:

TOOL (I): Nurses' Observational Checklist

This tool was developed by (Abd-Alla, 1990) and modified by (Gouda, 2017) to assess nurses' level of practise in caring for orthopaedic patients (skin traction, skeletal traction, internal fixation). It is made up of the following five sections:

Part 1: Demographic characteristics and job data for nurses, including age, gender, marital status, education level, years of employment, employment location, and prior traction or immobilisation training.

.It included the following check.

Part 2: Includes 17 general nursing practise actions relating to skin, skeletal traction, and internal fixation, including bone herniation, auscultation for patient's chest sounds, body alignment, monitoring bowel habits, removing and applying bed linens, and encouraging distraction. Active activities include encouraging patients to engage in open and calm discussion, the use of foot pedals, active activity on unaffected body parts, passive exercise on affected body parts, and deep breathing and coughing exercises.

Part (3): Contains elements (6) relevant to the general evaluation of orthopaedic patients with cutaneous or skeletal distraction and distraction devices, such as neurovascular state assessment, comparison of the results of different distraction devices, and so on. Physicians must report any changes, document all assessed components in a patient chart, evaluate traction devices at least once per shift, and double-check traction alignment every two hours.

Part (4): Contains (8) items relevant to the caregiver's responsibility in caring for orthopaedic patients with skin traction, such as monitoring pressure points at the distal end of the dressing every 24 hours, keeping the affected foot in a neutral position, and so on. Examine the patient's skin for symptoms or discomfort such as burning, pain, itching, scratching edges, or pulling, and notify the doctor of any changes or signs of skin damage.

Part (5): Contains four steps linked to the role of the nursing staff in orthopaedic traction patient care, such as monitoring for signs of needle movement and contacting physicians.

Scoring System:

Nurses' practice was evaluated as follows:

• Each done statement received one score, while not done statements received one point (zero). This The overall score for the nurse was calculated and then translated to a percentage, giving the following result: A satisfactory nursing practise level is defined as a total score of 60 percent or higher, whereas a score of less than 60 percent is defined as an unsatisfactory nurse practise level (Mostafa, Mehany, & Ahmed, 2019).

TOOL (II): Nurses' Attitude Scale

Nurses' attitudes regarding traction orthopaedic patients were assessed using the Nurse Attitude Scale (Gouda, 2017). It has twelve (12) attitude items that are written positively and negatively to encourage responders to read each statement and reply accordingly. The number of positive statements (1st, 3rd, 4th, 6th, 8th, 10th, 11th, and 12th) was measured using a 5-to-1 Likert five-point scale: strongly agree, agree, neutral, disagree, and strongly disagree. The fraction is inverted from 1 to 5 for negative values (2,5,7,9). The final score is derived by adding all of the scores together and then converted to a percentage. Nurses' attitudes were rated 60 percent positive or higher and less than 60 percent negative.

Operational design:

1-Preparatory Phase:

Reviewing the historical and present relevant literature, covering all elements of the problem, utilizing all official websites such as Pubmed, Google Scholar, and available scholarly books, papers, journals, and journals.

2-(A) Validity: 9 referees from the Faculty of Medicine, Surgery, Nursing, and Mansoura University Faculty of Medicine, University of Port Said, evaluated the tool's content validity, completeness, and applicability and revised the tools and no modifications were done according to their opinion.

(B)Reliability: It was done using Cronbach alpha coefficient to assess the internal consistency of the tool and its value was (0.81) for attitude and (0.78) for practice (Gouda, 2017) .

3- Pilot study

A pilot study was conducted to see if the data collecting tools are clear, intelligible, and doable by 10% (5 nurses) of the total number of nurses (55 nurses) working in the Orthopaedic Department at Mansoura University Hospital and Mansoura Emergency Hospital. Researchers can use the data from the pilot study to improve the tool by correcting or adding elements as needed. Changes were made as needed, and the final form was created. Nurses who took part in the pilot trial were not included in the main sample.

4-Field work:

The study was conducted for nine months from the beginning of October (2020) to the end of June (2021).The study was carried out through the following phases:

Step(1) Assessment phase:

The researchers utilised Tool (I) to assess nurses' practises and attitudes, and Tool (II) to build Tool (I). The researchers observed each nurse twice during actual clinical practise, one for each skill 20 minutes. Each caregiver took 5-10 minutes to complete Tool (II), which was developed to assess caregiver attitudes toward delivering traction or internal fixation for orthopaedic patients. A watch list was used to evaluate each nurse. Nursing protocols were created based on the researchers' collection of needs and requirements stated by nurses, as well as contemporary literature.

Step(2):Educational Module development phase.

(Lynn, 2018), (Sharma, 2020), (Cooper & Gosnell, 2019). The following sections are included: (Anatomy and Physiology of the Upper and Lower Limbs), Fractures (Definition, Causes, Classification, Signs and Symptoms, Healing Process, Complications), Fracture Management, Traction (Definition, Purpose, Types), Skin and Bones Traction (Definition, Indications, Contraindications, Complications), (Care of Traction Orthopedic Patients), The teaching module's goal is to help nurses improve their traction or internal fixation of orthopaedic patients. Enhance nurses' attitude related to orthopedic patients with traction or internal fixation.

Step (3): educational module implementation phase.

The educational module is divided into four sessions that are taught over the course of 14 weeks during morning and afternoon shifts. Seven groups of nurses were studied: four at

Mansoura University Hospital and three at Mansoura Emergency Hospital. Each group meets separately in a 45-minute meeting room before being transported to the assembly group during their shift (morning, afternoon). Each nurse was given a copy of the handout to help them remember the steps of the procedure. The module is taught utilizing a variety of teaching methods such as lectures, demonstrations, and repetitions, as well as relevant instructional media, like multimedia content in a clear and concise format. Using instructional videos and images, the researchers showed all procedure steps in front of nurses and highlighted the reason for each step. The nurse was asked to repeat or explain any processes that were unclear at the end of the researcher's presentation before demonstrating again. The registered nurse then performed the procedure on a genuine orthopaedic patient while the researchers watched.

Step (4). Module Evaluation Phase:

To evaluate the effects of educational modules, use Tools (I) and (II). Nurses' practice and attitudes about the management of orthopaedic patients with distraction or internal fixation were assessed for the first time after the module was implemented. The researchers asked nurses to appraise the modules' usefulness and to give and complete Tool (II) three months later, while observing and analyzing nurses' practise using Tool (I).

C-ADMINISTRATIVE DESIGN:

The hospital's management received legal consent for data collecting from Mansoura University Hospital and Mansoura Emergency Hospital after presenting an official letter from the Vice Dean of the Faculty of Nursing at the University of Port Said. Researchers and nursing managers met for a meeting and discussion to educate them on the study's goals and to improve collaboration during the study's implementation phase. Additionally, prior to data collection, the nurse's verbal agreement was acquired.

Ethical Considerations:

The Research Ethics Committee of the University of Port Said ,faculty of Nursing gave their approval. In addition, the hospital director's agreement to participate in the study was obtained after presenting the study objectives. After discussing the study objectives and comprehensive data collection process to each participant (caregiver), seek their consent so that they are aware of the importance of their involvement. In addition, the nurse was given a brief and thorough description of the study, assuring that the information acquired would be kept private and utilized solely for research purposes.

The participants (caregivers) were told that their participation was completely voluntary and that they might leave the study at any moment for any reason. Furthermore, all information gathered from inspection subjects is kept totally private. Furthermore, the data gathering process does not interfere with the flow of work in the aforementioned environment.

D-STATISTICAL ANALYSIS:

Using numerical and percentage distributions, organize, modify, store, tabulate, and evaluate acquired data. The Statistical Package for the Social Sciences Program (SPSS) software package version 16 was used for statistical analysis. Determine whether there are statistically significant differences between study variables using appropriate statistical tests. When the p-value is less than 0.05, significance level values are considered, but a p-value of less than 0.05 indicates that the result is not significant.

Results:

Table (1): Shows that 40% of the studied nurses were at age group from30 to less than40 years old. Regarding gender, 82% of studied nurses were female. As regards to marital status, 72% of them were married. In relation to educational level, 46% of studied nurses had technical secondary school of nursing.

Table (2): Shows that 64% of studied nurses' workplace in Mansoura university hospital while 36% their workplace in Mansoura emergency hospital. In relation to years of experience, 66% of studied nurses had more than 10 years experiences. Regarding training courses, 90% of studied nurses didn't attend any training courses in the field of caring orthopedic patient with traction .As regards to working outside, 96% of studied nurses didn't work outside their country.

Table (3): Illustrated that 82% of studied nurses had satisfactory total practice immediately post educational module implementation compared to 44% pre and 76% of them follow up after educational module implementation with statistically significant differences whereas **(P=0.001)**.

Table (4): Represents that78%,72% of studied nurses had positive attitudes immediately post and follow up educational module implementation compared to 10% of them had positive attitudes pre educational module implementation regarding their total scores of attitude with statistically significant differences whereas **(P=0.001).**

Table (5): Illustrates that there were no statistically significant relations between demographic characteristics of the studied nurses and their practice pre, immediate post, follow up after educational module implementation.

Table (6): Shows that there was a significant relation between work related data of the studied nurses and their practice related to years of experience pre educational module implementation.

Table(7): Illustrates that, there was a statistically significant relation between demographic characteristics of the studied nurses and their attitude related to marital status pre educational module implementation. While there were no statistically significant relations between demographic characteristics of the studied nurses and their attitude immediate post,follow up after educational module implementation.

Table(8): Shows that there was a statistically negative significant correlation between total nurses' practice scores pre and total nurses' attitude scores immediately post after educational module implementation. While, there was a statistically positive significant correlation between total nurses' practice scores and total nurses' attitude scores immediately post after educational module implementation.

Table (1): Demographic characteristics of the studied nurses (n=50)

Variable	**Nurses (n=50)**	
	N	**%**
Age in Years		
<30	17	34.0
30 <40	20	40.0
40<50	12	24.0
50-60	1	2.0
(Range) Mean±SD	(25-50)	36.5 ± 8.9
Gender		
Male	9	18.0
Female	41	82.0
Marital Status		
Single	8	16.0
Married	36	72.0
Divorced	4	8.0
Widowed	2	4.0
Level of education		
Technical secondary school of nursing	23	46.0
Technical institute of nursing	15	30.0
Bachelor degree of nursing	12	24.0

Table (2): Work related data of the studied nurses (n=50

Variable	**Nurses (n=50)**	
	N	**%**
Workplace		
Mansoura university hospital	32	64.0
Mansoura emergency hospital	18	36.0
Years of Experience		
5-10 years	17	34.0
More than 10 years	33	66.0
Training courses related to care of orthopedic patient with traction.		
Yes	5	10.0
No	45	90.0
Number of courses		
Zero	45	90.0
One course	4	8.0
Two courses	1	2.0
Working outside the country		
Yes	2	4.0
No	48	96.0
Duration of working outside the country		
None	48	96.0
Two years	1	2.0
Four years	1	2.0

Table(3):Total nurses' practice pre,immediate post and follow up after educational module (n=50).

Main items		module phases						X^2	P
		Pre		Immediate post		Follow up			
		N	%	N	%	N	%		
Total practice score	Unsatisfactory	28	56.0	9	18.0	12	24.0	18.847	**0.001***
	Satisfactory	22	44.0	41	82.0	38	76.0		

Table (4): Total nurses' attitude level pre,immediate post and follow up after educational module (n=50).

Main items		**module phases**						**X^2**	**P**
		Pre		**Immediate post**		**Follow up**			
		N	**%**	**N**	**%**	**N**	**%**		
Total Attitude Score	**Negative**	**45**	**90.0**	**11**	**22.0**	**14**	**28.0**	**56.567**	**0.001***
	Positive	**5**	**10.0**	**39**	**78.0**	**36**	**72.0**		

***Significant (P<0.05)**

Table (5): Relation between nurses' practice &demographic characteristics during different phases of educational module intervention among studied nurses (n=50).

Variables	Nurses' practice in different module phases								
	Before Module		χ^2 (P) value	Immediate post Module		χ^2 (P) value	3 months after Module		χ^2 (P) value
	Unsatisfactory	Satisfactory		Unsatisfactory	Satisfactory		Unsatisfactory	Satisfactory	
Age years:									
30<	12(70.6)	5(29.4)	3.750	4(23.5)	13(76.5)	1.386	4(23.5)	13(76.5)	1.066
40<30	11(55.0)	9(45.0)	(0.290)	4(20.0)	16(80.0)	(0.709)	6(30.0)	14(70.0)	(0.785)
50<40	5(41.7)	7(58.3)		1(8.3)	11(91.7)		2(16.7)	10(83.3)	
50-60	0(0)	1(100)		0(0)	1(100)		0(0)	1(100)	
Marital status:									
Married	21(58.3)	15(41.7)	2.821	7(27.8)	29(80.6)	0.787	12(33.3)	24(66.7)	6.140
Single	5(62.5)	3(37.5)	(0.421)	1(12.5)	7(87.5)	(0.853)	0(0)	8(100)	(0.105)
Widowed	0(0)	2(100)		0(0)	2(100)		0(0)	2(100)	
Divorced	2(50.0)	2(50.0)		1(25.0)	3(75.0)		0(0)	4(100)	
Level of education									
Technical secondary school of nursing	11(47.8)	12(52.2)	1.343 (0.511)	3(13.0)	20(87.0)	1.161 (0.560)	7(30.4)	16(69.6)	1.008 (0.604)
Technical institute of nursing	10(66.7)	5(33.3)		4(26.7)	11(73.3)		3(20.0)	12(80.0)	
Bachelor degree of nursing	7(58.3)	5(41.7)		2(16.7)	10(83.3)		2(16.7)	10(83.3)	
Gender									
Male	6(66.7)	3(33.3)	0.507	1(11.1)	8(88.9)	0.353	0(0)	9(100)	3.466
Female	22(53.7)	19(46.3)	(0.477)	8(19.5)	33(80.5)	(0.552)	12(29.3)	29(70.7)	(0.063)

Table (6): Relation between nurses' practice & work related data during different phases of educational module intervention among studied nurses (n=50).

Variables	Nurses' Practice in different module phases								
	Before Module		χ^2 (P) value	Immediate post Module		χ^2 (P) value	3 months after module		χ^2 (P) value
	Unsatisfactory	Satisfactory		Unsatisfactory	Satisfactory		Unsatisfactory	Satisfactory	
Workplace									
Mansoura university hospital	18(56.3)	14(43.8)	0.002 (0.962)	4(12.5)	28(87.5)	1.822 (0.177)	7(21.9)	25(78.1)	0.220 (0.639)
Mansoura emergency hospital	10(55.6)	8(44.4)		5(27.8)	13(72.2)		5(27.8)	13(72.2)	
Experience years 5-10 years More than10 years	13(76.5) 15(45.5)	4(23.5) 18(54.5)	4.381 **(0.036*)**	4(23.5) 5(15.2)	13(76.5) 28(84.8)	0.534 (0.465)	(23.5) 4 8(24.2)	(76.5) 13 25(75.8)	0.003 (0.955)
Training courses related to caring of orthopedic patients with traction or internal fixation									
Yes	2(40.0)	3(60.0)	0.577 (0.447)	1(20.0)	4(80.0)	0.015 (0.902)	1(20.0)	4(80.0)	0.049 (0.825)
No	26(57.8)	19(42.2)		8(17.9)	37(82.2)		11(24.4)	34(75.6)	
Working outside									
Yes	0(0)	2(100)	2.652 (0.103)	0(0)	2(100)	0.457 (0.499)	0(0)	2(100)	0.658 (0.417)
No	28(58.3)	20(41.7)		9(18.8)	39(82.0)		12(25.0)	36(75.0)	

***Significant(P<0.05)**

χ^2= chi-square test.

Table (7): Relation between nurses' attitude &demographic characteristics during different phases of educational module intervention among studied nurses (n=50).

Variables	Nurses' Attitude in different module phases								
	Before module		χ^2 (P) value	Immediate post Module		χ^2 (P) value	3 months after Module		χ^2 (P) value
	Negative	Positive		Negative	Positive		Negative	Positive	
Age years:									
30<	15(88.2)	2(11.8)	1.318	3(17.6)	14(82.4)	1.415	4(23.5)	13(76.5)	1.758
40<30	19(95.0)	1(5.0)	(0.725)	4(20.0)	16(80.0)	(0.702)	5(25.0)	15(75.0)	(0.624)
50<40	10(83.3)	2(16.7)		4(33.3)	8(66.7)		5(41.7)	7(58.3)	
50-60	1(100)	0(0)		0(0)	1(100)		0(0)	1(100)	
Marital status:									
Married	33(91.7)	3(8.3)	8.333	10(27.8)	26(72.2)	3.542	10(27.8)	26(72.2)	6.115
Single	8(100)	0(0)	**(0.041*)**	0(0)	8(100)	(0.315)	1(12.5)	7(87.5)	(0.106)
Widowed	2(100)	0(0)		0(0)	2(100)		0(0)	2(100)	
Divorced	2(50.0)	2(50.0)		1(25.0)	3(75.0)		3(75.0)	1(25.0)	
Level of education									
Technical Secondary nursing school	22(95.7)	1(4.3)	4.002 (0.135)	6(26.1)	17(73.9)	3.177 (0.204)	7(30.4)	16(69.6)	0.713 (0.700)
Technical institute of nursing	14(93.3)	1(6.7)		1(6.7)	14(93.3)		3(20.0)	12(80.0)	
Bachelor degree of nursing	9(75.0)	3(25.0)		4(33.3)	8(66.7)		4(33.3)	8(66.7)	
Gender									
Male	8(88.9)	1(11.1)	0.015	1(11.1)	8(88.9)	0.758	3(33.3)	6(66.7)	0.55
Female	37(90.2)	4(9.8)	(0.902)	10(24.4)	31(75.6)	(0.348)	11(26.8)	30(73.2)	(0.697)

Table(8): Correlation between nurses' practice and nurses' attitude in different phases of module intervention among the studied nurses (n=50).

Total practice scores	Total attitude scores					
	Pre		Immediate post		Follow up	
	r	P	r	P	R	P
Pre	0.107	0.458	- 0.434*	**0.002**	0.034	0.071
Immediate post	-0.017	0.905	0.405*	**0.004**	-0.060	0.677
Follow up	0.187	0.193	0.041	0.779	-0.038	0.796

r= Pearson correlation coefficient **significant (p ≤0.05)**

DISCUSSION:

The findings of this study reveal that female nurses are more common than male nurses in terms of nurse demographics. Less than half of all qualified nurses are between the ages of 30 and 40. However, only about a quarter of the nurses in the study were married. Furthermore, less than half of the nurses in this study had graduated from nursing school.

This study found that two-thirds of registered nurses had more than ten years of experience in the field, and more than one-third of registered nurses have five to ten years of experience. Most graduate nurses have not received any training in the management of orthopaedic patients who require distraction or internal fixation.

This study found that more than half of registered nurses were unsatisfied with the implementation of the preschool module at the overall practise level before and after follow-up. The researchers suggest that registered nurses are unable to apply low-level practise preschool modules because to a high workload, a shortage of nursing staff (low nurse-to-patient ratios), a lack of supervision, training, and constant child assessment. Practice as a nurse. Furthermore, orthopaedic nurses' care was shown to be the outcome of their sensitivity to the patient and the caring relationship that arose from their own knowledge, abilities, and attitudes (Garcia & Fugulin, 2012).

This finding is in line with (Hajbaghery & Moradi, 2013), who found that the quality of care delivered to traction patients was insufficient in their Quality of Care in Traction Patients study. (Atta & Kadush, 2020), who also found that virtually all nurses in the study performed badly in caring for patients with skin traction, and that nurse practice in orthopaedics was poor for caring for patients with skin traction. Despite the fact that the data are conflicting (Gautam & Thapa, 2020), they state that most RNs provide appropriate care to patients into practice.

However, the majority of RNs had satisfactory overall practice levels immediately after graduation, and after three months of follow-up, overall practice had reduced slightly, but was still extremely high with the preschool module implemented. These findings are in accordance with (Parmer, 2017), which found a significant statistical difference between nurse practice scores before and after implementation of the guidelines. This conclusion was backed up by (Elhabiby, 2021), who discovered statistically significant differences in the nurses' practice before and after the intervention.

This progress, in my opinion, can be attributable to the intervention's comprehensive and successful combination of theoretical and practical training elements. All orthopaedic nurses receive regular training and education to ensure they have the necessary knowledge and abilities to improve patient outcomes and satisfaction.

Concerning total attitude scores of studied nurses, this study revealed that the majority of college nurses had a negative attitude on the overall score of their preschool module implementation. This research backs up the findings of (Wahba, Hamouda, Ibrahim, & Hassan, 2016), who found that most undergraduate nurses had an unsatisfactory attitude. In contrast, (Hagerling, 2015) reported that more than two-thirds of research nurses assessed their overall practice scores for elderly patients with delirium as good in his study.

From the researcher's point of view, Nurses need to educate themselves about traction or immobilization patient care by accessing a variety of resources, according to researchers, because the attitudes of nurses caring for orthopaedic patients can affect the quality of care provided and understanding the implications for their practice. Aspects are crucial. However, knowledge alone will not ensure safe practice

unless other personal (e.g., good attitudes) and organizational (e.g., time, nurse-patient ratios, resources) impediments are successfully addressed.

Furthermore, more than three-quarters of the nurses interviewed said they felt better about themselves after completing the educational module. As a result, educational modules had a considerable impact on nurses' attitudes, according to the findings. This finding is in line with the findings of (Hababbeh & Alkhalialeh, 2020), who discovered that nurses' attitudes toward patient safety were originally negative after three months but considerably changed after participating in the program.

This study showed the relationship between nurses' overall practice outcomes and their demographic and job-related data characteristics, and the findings reveal that there is no statistically significant difference in nurses' overall practice outcomes before, after, and after the demographic characteristics are changed. The findings also revealed a statistically significant link between the nurses' job-related data features and their practice in terms of years of experience executing previous educational modules.

These findings are in line with those of (Thandar, 2018), who found that nurses' skeletal traction practice was unaffected by their age or educational level in her study. Furthermore, these findings are in line with a study (Parmer, 2017) that found a link between registered nurses' pre-testing experience and their practise in preventing problems in orthopaedic immobilization patients. In contrast, (Parmer, 2017) Panta, Ban, Pandey, and Dhital (2019) found a link between practice level and age, education, and gender in their study.

Regarding the relationship between nurse attitude and its demographic characteristics, this study showed that there was no statistically significant association between the total score of nurse attitude and its demographic characteristics before and after the survey, with the exception of marital status at the time of preschool education implementation. module.

Finally, prior to the implementation of the educational module, there was a statistically significant negative association between nurses' total practice scores and immediate recruiting nurses' total scores. The overall score of nurse practice and the total score of nurse attitude, which will be released immediately after the teaching module is implemented, have a statistically significant positive link. These findings are in line with

those of (Ali & Hafez, 2020), who found a correlation between nurses' attitudes and practices after implementing the intervention, and that the association was statistically significant.

CONCLUSION:

According to the current findings, more than half of the nurses interviewed had unsatisfactory overall practice, and the majority of them had a negative attitude toward the care of orthopaedic patients with traction prior to the installation of the preschool module. To date, most RNs' practice has greatly improved statistically, with more than three-quarters of RNs expressing favorable views shortly after adopting the teaching modules. In addition, after implementing the instructional module, there was a statistically significant favorable link between total practice scores and overall nurse attitudes.

RECOMMENDATION:

1. Providing continuous inservice training for nurses to upgrade their practice related to nursing care of orthopedic patients with traction.

2. Nurses should be encouraged to attend national and international conferences, workshops and training courses related to nursing care of orthopedic patients with traction.

3. Replication of the current study on a large probability sample from different geographical areas of Egypt to raise the efficiency of nurses' performance in caring for orthopedic patients with traction and to achieve more generalized results.

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تطبيق نموذج تعليمى لتعزيز ممارسات وإتجاهات الممرضين تجاه مرضى العظام المعالجين بالشد

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الخلاصة

يعتبر الشد من أكثر الأوضاع إجهادا بالنسبة لمرضى الكسور.ولذلك فإنه يتطلب ممرضه ذو كفاءة لتلبيه احتياجات هذا المريض ومنع حدوث مضاعفات الناتجة من استخدامهم. ونظرا لهذا الدور الحيوي والمعقد لممرضين العظام فقد أجريت هذه الدراسة الشبه تجريبية بهدف تطبيق نموذج تعليمى لتعزيز أداء الممرضين تجاه مرضى العظام المعالجين بالشد.وقد أجريت هذه الدراسة بأقسام العظام الموجودة بالمنصورة وتشمل مستشفيتين وهم (مستشفى المنصورة الجامعي ومستشفى الطوارئ بالمنصورة) وقد شارك في هذه الدراسة عدد 50 ممرض من الذكور والإناث والمتاحين خلال تسعة أشهر من الأماكن السابق ذكرها. وقد تم استخدام أداتين لجمع البيانات. **الأولى**: استمارة استبيان لتجميع ممارسات الممرضين. **والثانية**: استمارة استبيان لقياس اتجاهات الممرضين تجاه مرضى العظام المعالجين بالشد. ولقد كشفت النتائج أن معظم الممرضين لديهم مستوى مرضى من الممارسات تجاه مرضى العظام المعالجين بالشد وأيضا هناك أكثر من ثلاثة أرباع الممرضين كان لديهم اتجاه إيجابي تجاه مرضاهم فور تطبيق النموذج التعليمى. وأوصت هذه الدراسة بضرورة توفير خدمات التعليم والتدريب المستمر لزيادة وتحديث ممارسات وإتجاهات ممرضى العظام تجاه الرعاية التمريضية للمرضى المعالجين بالشد.

الكلمات المرشدة:نموذج تعليمى، ممارسات وإتجاهات الممرضين، مرضى العظام، الشد.