



**Ministry of Higher Education and  
Scientific Research University of  
Babylon College of Nursing**



# **Nursing student knowledge related to skeletal traction care**

**Graduation Project Submitted**

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بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

قُلْ اَعْمَلُوا فِی سَبِیْلِ اللّٰهِ عَمَلِكُمْ وَرِسُوْلَهُ وَالْمُؤْمِنُوْنَ وَسَتُرَدُّوْنَ اِلَى  
عَالَمِ الْغَيْبِ وَالشَّهَادَةِ فَيُنَبِّئُكُمْ بِمَا كُنْتُمْ تَعْمَلُوْنَ

صَدَقَ اللّٰهُ الْعَظِیْمُ

الآیة ۱۰۵ التوبة

## **Supervisor Certification**

I certify that the project which is en-tiled " nursing student knowledge related to skeletal traction " was prepared under my supervision.

**Signature**

**Prof. Dr. Sahar Adham Ali**

## *Dedication*

*We dedicate this work to*

Dear parents whom supported as all time

Dear brothers and sisters with love

# Acknowledgements

To Allah Almighty first for the blessing of patience and the ability to complete the work, praise be to Allah for these blessings.

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## **Abstract**

**Background :** Treatment of fractures include one or more methods: traction closed or open reduction, internal or external fixation. cast application. The or treatment method depends on several factors, including the first aid given. the location and severity of the break, and the age and overall physical condition of the client.

**Objective:** To assess the nursing student knowledge related to skeletal traction .

**Methods :** Descriptive study design selected to obtain the study objectives . Purposive sample from (136 ) nursing student were assigned to participate in the study . Special questionnaire form prepared to collect the data

**Results:** The nursing student who participate in the study were between (19-23 ) age group, female 97 (88 % ) and 39 (62 %) male , most of them s, and have (4-6) years of employment in nursing field.

**Conclusion :** Related nursing student knowledge regarding skeletal traction shows that general information and

complication recorded good level , While their knowledge related to caring recorded unsatisfied level

**Recommendation :**

This study recommended the following :

Clinical training program should extended to this field to improve caring skills



**Chapter One**

**Introduction**

**and**

**Review of literature**

# Chapter One

## 1.1. Introduction and review of literature :

Traction is a common method used for the treatment of patients with hip fractures and is applied two ways: skin traction or skeletal traction. Traction is usually used before surgery to reduce pain and facilitate the process of surgery (Foster,2006).The annual incidence of mid shaft femur fractures in USA is about 10 per 100,000 person. Each year, more than 340,000 cases of hip fractures occur in America and 1.6 million cases worldwide, out of which 13% to 37% lose their lives (Evans PJ and McGrory BJ,2002).

Morbidity and mortality of these fractures are high. Following hip fractures, 50% of patients are unable to walk without aid. 25% require long-term care, and 20% die during the first year (karaca s etal,2012)(Lewis etal,2007).Treatment of fractures include one or more methods: traction closed or open reduction, internal or external fixation. cast application. The or treatment method depends on several factors, including the first aid given. the location and severity of the break, and the age and overall physical condition of the client. Traction is one of the most common methods of immobilization. The use of traction was

once a common method of treating patients with hip fractures (Ignatavicius and workman,2013)(Foster K,2006).

The annual incidence of hip fracture was estimated to be 1.66 million worldwide in 1990 and is expected to reach 6.26 million by 2050 because of aging of the global population. (Endo etal ,2012). More than 350.000 hip fractures occur in the United States every year (Watters CL and Maron WP,2006).Severe complications such as damage to the neurovascular structure, physical damage, ligament damage, and pin loosening and infection in pin tract may occur following skeletal traction(Althausen and Hak,2002). Also in skin traction, pressure exerted on the skin can cause skin damage and there is a risk of ischemia(Parker and Handoll 2006).Other possible adverse effects of skin traction are damages to the skin by mechanical shearing, ischemia to the limb from tight bandages or allergy to adhesive strapping. In one study, it was found that pin tract infection rate was 20% and the rate of pin loosening was 15%. Rates for pin tract infections were reported to be 11.2% to 63%, by other studies(Along etal,2003).

The use of skeletal traction devices to treat musculoskeletal injuries and deformities dates to the time of Hippocrates with the use of wooden rods, levers, and ropes to aid in the reduction of fractures (flynn S,2018).

Skeletal traction systems became more sophisticated over generations with important figures like Russell, Steinmann, and Kirschner credited for advancing skeletal traction systems in the early 1900s (Peltier LF,1968).

The standard medical treatment of femur fractures at that time was a combination of closed reduction, continuous traction, and splinting. Patients would spend weeks in the hospital requiring continuous labour-intensive care, often being left with poor outcomes and long-term complications(Hernigou P,2017). Nursing knowledge and management of skeletal traction systems was crucial to achieve proper function and prevent complications. JE With the advent of anesthesia, antisepsis, and skeletal imaging in the late 19th century, more fractures began to be treated with some form of internal fixation. Consequently, skeletal traction became more of a temporary measure used prior to definitive surgical fixation(kennedy RH,1938).

## **1.2.Purpose**

Skeletal Traction attaches directly to the bone, with the use of pins, wires, halo frame or tongs. This provides a strong steady continuous pull, skeletal traction is used for unstable fractures, soft tissue injuries

or cervical injuries, it's applied under a General Anesthetic, a traction bed and equipment will need to be sent to theatres. Traction reduces muscle spasm and maintains proper alignment of the affected limb, it's also used to lengthen ligaments prior to operative correction of developmental hip dysplasia, or post operatively for some forms of anal surgery.(SCHN,2002).

The most common types of traction are skin and skeletal traction. Skin traction involves the use of a Velcro boot(buck's traction) belt, or halter, which is usually secured around the affected leg. The primary purpose of skin traction is to decrease painful muscle spasms that accompany hip fractures (Ignatavicius and workman,2013).

Additionally, mechanical traction can be either continuous as in fracture treatment or intermittent for relief of muscle spasm in other types of musculoskeletal/ neurologic trauma .such as cervical nerve root compression. (6). Traction can be applied with the hands (manual traction). This is temporary traction that may be used when applying a cast, giving skin care, or adjusting the traction apparatus(Smeltzer etal,2010).

### **1.3.Types of traction:**

Schoen ,2000, stated that traction generally classified as :

**1.3.a.Skin traction:** is attached directly to the patient's skin to immobilized a body part continuously or intermittently over a short or extended period. The direct application of a pulling force to the patients skin and soft tissues may be accomplished by using adhesive or no adhesive traction tape or other skin traction devices such as a cast, a boot, a belt or a halter.

**1.3.b.Skeletal Traction:** is attached directly to the patients skeletal system to immobilized a body part. The direct application of the pulling force may be accomplished by attaching pins, screws, wires or tongs.  
(Schoen 2000)

**1.3.c.Manual Traction:** is traction that is accomplished by a person's hands exerting a pulling force. It is utilized to reduce fractures and dislocations and to apply a steady pull while mechanical traction is released for adjustment or while a cast is being applied.

**1.3.d.Fixed Traction:** The pull is exerted against a fixed point; for example, the tapes are tied to the crosspiece of a Thomas splint and pull the leg down.

**1.3.e.Balanced Traction:** The pull is exerted against an opposing force provided by the weight of the body when the foot of the bed is raised.

**1.4.Responsibility of all Nursing Staff providing care to an Orthopedic patient started by:**

1.4.a.Providing information helps alleviate anxiety and enables the patient to retain further information and instructions.

1.4.b.monitor the effectiveness of the prescribed analgesia

1.4.c.Assess the patient's level of pain and administer analgesia as prescribed.

1.4.d. Explain that traction decreases muscle spasms and will gradually help lessen pain.

1.4.e.Eliminate additional sources of pain by providing comfort measures.

1.4.f.Assess for correct positioning of traction and alignment of affected extremity. Frequent repositioning is required to alleviate pressure pain and discomfort. A thorough skin assessment should be carried out each time the patient is repositioned. These measures help to minimize the risk of complications of skin breakdown.

1.4.g. Continuously assess the pin-sites for migration, assess the skin around the pin for tears and assess for pain at the pin-sites.

1.4.h. Monitor the patient for signs and symptoms of neurovascular compromise, comparing findings to the unaffected limb.

1.4.i. Assess usual pattern of elimination. Evaluate usual dietary habits and compare with hospital regime.

1.4.j. Evaluate current medication usage, which may contribute to constipation e.g. narcotics, antacids, antidepressants, iron and calcium supplements.

1.4.k. To promote healing and well-being. Fluid intake of 2-3 liters per day (if not medically contraindicated). Encourage a high fiber diet e.g. fruit, vegetables, bran etc. (Schoen, 2000).

## **1.5. Complications**

1.5.a. Avascular necrosis is the most common complication in fracture neck femur in children

1.5.b. Coxa vara deformity of the hip where the femoral neck-shaft angle is decreased.

1.5.c. Skin breakdown



-pressure points

-allergic reactions to skin extensions.

1.5.d. Neurovascular impairment

1.5.e. Joint contractures.

1.5.f. Pin site infections associated with skeletal traction.

1.5.g. Respiratory problems associated with semi-recumbent positions

1.5.h. Constipation from immobility and analgesics.

## **Objectives**

This study directed to achieve the following objectives:

1 To assess the nursing student knowledge related to skeletal traction.

2. Identify the demographic characteristics of the study sample.

# **Chapter Two**

## **Methodology**

## Chapter two

### **2. Methodology:**

Study design: descriptive study design was used in this quantitative study to assess nursing students knowledge related to skeletal traction from the period 15 Aug 2022 to 30 April 2023

#### **Administrative Arrangement :**

To conduct the study formal administrative permission has been obtained before data collection. First of all the family and community health Nursing and mental Nursing assigned the student groups department permission obtained from the scientific committee of adult nursing department to start study a after review the study title ( appendix :a)

#### **Setting of the study:**

The study has been conducted in the University of Babylon College of Nursing at Al-Hilla city.

#### **Sample of the study:**

Non-probability (purposive) sample from (130) under graduated student were selected from third and fourth stage student who agree to participate in the study . From morning program ( 80 )on the other hand (56 ) from evening program include ( 39 ) male, ( 97 ) female. The selection criteria include the following:

1.Student who involved to study in the -University of Babylon – College of Nursing

2. Third and fourth stage student
3. Agree to participate in the study

**Questionnaire of the study:**

Special questionnaire prepared after comprehensive review of related literature in order to assess nursing students knowledge related to skeletal traction , the related questionnaire include three parts as the following:

**Part I:** demographical data include ( 4 )

**Part II:** knowledge related to skeletal traction consist ( 36 ) , which distributed as the following :

First domain : general information includes ( 19) items

Second domains totally includes ( 15 ) items.

Third domain related to complication ( 2) items

The rating and scoring system which selected were yes takes (2) and no takes (1).  
( appendix :b )

**Validity:**

The content validity of the questionnaire which prepared assess nursing students to knowledge toward skeletal traction obtained by (4) expert panel, all experts were nursing faculty members , all suggestion take under consideration to reach the relevance of the content. (appendix :c)

**Ethical consideration :**

Ethical Considerations can be specified as one of the most important parts of the research.. Research participants should not be subjected to harm in any ways whatsoever. Respect for the dignity of research participants should be prioritized. Full consent should be obtained from the participants prior to the study.

**Data collection :**

: In order to achieve the objectives of the study electronic consent and questionnaire form sent to all the students who agree to participate in the study. Each participant need about (20- 30 min ) for re-sent the filled form by self-report method form with reminded available opened for 15 days

**Statistical analysis**

Descriptive statistical method used to tabulate the collected data as (frequency and percentage mean score), which presented structured tables and bar charts.

# **Chapter Three**

## **Results**

## Results

**Table (1):Distribution of the study sample related to their demographical characteristics**

Variable	Frequency	Percentage
<b>Age</b>		
19-23	<b>121</b>	<b>89.00%</b>
24-28	<b>14</b>	<b>10.2%</b>
29-33	<b>0</b>	<b>0</b>
34-38	<b>0</b>	<b>0</b>
39-43	<b>1</b>	<b>0.37%</b>
<b>Total</b>	<b>136</b>	<b>99.97%</b>
<b>Gender</b>		
Male	<b>39</b>	<b>29%</b>
Female	<b>97</b>	<b>71%</b>
<b>Total</b>	<b>136</b>	<b>100%</b>
<b>Stage</b>		
Third	<b>55</b>	<b>40%</b>
Fourth	<b>81</b>	<b>60%</b>
<b>Total</b>	<b>136</b>	<b>100%</b>
<b>Program</b>		
Morning	<b>80</b>	<b>59%</b>
Evening	<b>56</b>	<b>41%</b>

The finding of this table presented that the higher percentage of the study sample 121(89.0) were categorized under (19\_23) years of age group ,most of the participants 97(71%) were female student , 81(60%)were in

fourth stage ,while 80(59%) were involved in morning education program.



**Table (2) : Nursing student knowledge related to general information to skeletal traction**

Number	items	Correct		Incorrect		mean	Level
		F	%				
1	Do you know types of skeletal traction?	99	73%	37	27%	1.79	Good
2	Is the skeletal traction painful?	112	82%	24	18%	2.31	Good
3	Placement of traction need general anesthesia?	92	68%	44	32%	1.62	Good
4	is the skeletal traction better than the skin	93	68%	43	32%	1.67	Good
5	Is it possible to cause bleeding to the patient	102	75%	34	25%	1.75	Good
6	Does it cause damage to the peripheral tissue?	99	73%	35	26%	1.7	Good
7	Does it affect nerves and blood vessels?	101	74%	35	26%	1.73	Good
8	Does the patient suffer from poor movement after traction?	106	78%	30	22%	1.77	Good
9	using deep breathing technique useful?	90	66%	46	34%	1.63	Good
10	Should the amount of fluid entering and leaving should be monitored?	107	79%	29	29%	1.71	Good
11	Should you monitor patient breathing sound?	104	76%	32	24%	1.66	Good
12	encourage diet rich with fiber is necessary ?	100	74%	36	26%	1.73	Good
13	Encourage taking a lot of fluids is necessary ?	100	74%	36	26%	1.73	Good
14	is keeping bed dry and free of wrinkles good for the patient?	107	79%	29	21%	1.78	Good
15	Is a massage useful for the patient?	92	68%	44	32%	1.67	Good
16	know how to do a skin and bone massage correctly?	92	68%	44	32%	1.67	Good
17	Do you need to evaluate the patients breathing sound?	104	76%	32	24%	1.75	Good
18	18-Does it need to assess the blood vessels, skin-color and warmth for the area?	110 20	81%	26	19%	1.79	Good

19	Does it affect sensory and motor position?	108	79%	28	21%	1.78	Good
Total		100.9	74.24%	32.6	26.10 %	1.65	Good

This table shows that the general knowledge of the nursing students related to skeletal traction were good which recorded mean score (1,65).

**Table (3) : Nursing student knowledge related to caring for skeletal traction**

Number	Table 3 caring	yes		No		mean	level
		F	%	F	%		
1	How does skeletal traction work?	74	54%	62	46%	1.45	poor
2	To maintain Bryant's traction, the nurse must make certain that the child's	71	52%	65	48%	1.47	poor
3	A nurse is caring for a patient who is in skeletal traction. To prevent the complication of skin breakdown in a patient with skeletal traction, what action should be included in the plan of care	27	20%	109	80%	1.1	poor
4	A nurse is caring for a patient who is postoperative day 1 right hip replacement. How should the nurse position the patient	66	49%	70	51%	1.4	poor
5	While assessing a patient who has had knee replacement surgery, the nurse notes that the patient has developed a hematoma at the surgical site. The affected leg has a decreased pedal pulse. What would be the priority nursing diagnosis for this patient!	79	58%	57	42%	1.4	poor
6	A patient was brought to the emergency department after a fall. The patient is taken to the operating room to receive a right hip prosthesis. In the immediate postoperative period, what health education should the nurse emphasize	55	40%	81	60%	1.3	poor
7	A patient with a fractured femur is in balanced suspension traction. The patient needs to be repositioned toward the head of the bed. During repositioning, what should the nurse do!	39	29%	97	71%	1.21	poor
8	Which of these nursing actions will best promote independence for the client in	29	21%	107	79%	1.18	poor

	skeletal						
9	The nurse is caring for a client with compound fracture of the tibia and fibula. Skeletal v traction is applied. Which of these priorities should the nurse include in the care plan	45	33%	91	67%	1.32	poor
10	To prevent foot drop in a client with Buck's traction, the nurse should	50	37%	86	63%	1.3	poor
11	Which nursing intervention is appropriate for a client with skeletal traction	67	49%	69	51%	1.4	poor
12	An elderly client has sustained intertrochanteric fracture of the hip and has just returned from surgery where a nail plate was inserted for internal fixation. The client has been instructed that she should not flex her hip. The best explanation of why this movement would be harmful is	18	13%	118	87%	1	poor
13	In order for Buck's traction applied to the right leg to be effective, the client should be placed in which position?	78	57%	58	43%	1.5	Fair
14	What is a late sign of compartment syndrome	67	60%	69	51%	1.4	poor
15	Select all the signs and symptoms that will present in compartment	0	0%	136	100%	1	poor
Total		51	38.14%	78.3	52.40%	1.29	poor

The finding which presented in this table shows that the nursing student knowledge related to the caring for patients with skeletal traction is unsatisfied because they recorded total mean score with in correct answer as (1.29)

**Table (4) Nursing student knowledge related to skeletal traction complications**

Number	items	Yes		No		mean	level
		F	%	F	%		
1	1-When the client is lying supine, the nurse will prevent external rotation of the lower extremity by using a	28	21%	108	79.40%	1.19	Poor
2	2-A client has sustained a fracture of the femur and balanced skeletal traction with a Thomas splint has been applied. To prevent pressure points from occurring around the top of the splint, the most important intervention is to	74	54%	62	45.58%	1.45	Poor
total		51	37.45%	85	62.45%	2.64	good

The results in this table shows that the total means score which recorded related to nursing student knowledge for complication of patient with skeletal traction is good (2.64)

# **Chapter Four**

## **Discussion**

## Chapter Four

Related to the demographical characteristics. of the study sample the findings recorded that. most of them 121(89.0) were between age group (19-23) years, female, involved in morning program and were from the fourth Stage .This results goes equal with cross-sectional study Carried out on nursing student in Mosul, which find out that most of the Student were 28 (56%)between(23-25) years, distributed equally between male and female, involved in third and fourth stage of the education program.

In table (2), which presented the study sample general knowledge related to Skeletal traction were in good level, This finding Lined with goes long with a study Carried out in Suratthani Rajabhat University on Student, the finding Shows that most students understand main points of core content in traction therapy (Rakbamrung et al, 2015).

The findings in table (3), shows that the knowledge related to for patients with traction is unsatisfied because they recorded total mean. score related to incorrect answers as (1.29). This results agree with a study carried out on nursing student Regarding to bone traction which shows that the genera knowledge for patient caring recorded (44.0%) f the sample responses were not acceptable (Fathi et al, 2021).

Related to the findings in table (4) the results shows that the during Student in third and fourth stage presented good level of knowledge regarding traction complication, this results agree with a study carried out in 2021, by fathi et al, which indicated that nursing student reported. acceptable level of knowledge for nursing management and risk of bone traction.



# **Chapter Five**

## **Conclusion and Recommendations**

## Chapter five

### **5. Conclusion :**

After presentation of the findings the following conclusions were crystalized as :

Most of the study sample were female student , between (19-23) age group , morning program student .

Related nursing student knowledge regarding skeletal traction shows that general information and complication recorded good level , while their knowledge recorded unsatisfied level .

### **Recommendation :**

This study recommended the following :

Clinical training program should extended to this field to improve caring skills

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# Appendices



## **Appendix :a**

## Appendix :b

# Nurses student Knowledge Related to Skeletal Traction Caring

### Part 1: Demographical Characteristics

1\_ Age  Years

2\_Gender:  Male  Female

3- Stage

4- program  Morning  Evening

### Part 2: Knowledge Related TO Skeletal Traction

N	Question	Yes	No
١	Do you know typesof skeletal traction?		
٢	Is the skeletal traction painful?		
٣	Placement of tractionneed general anesthesia?		
٤	Is the skeletal traction better than the skin?		
٥	Is it possible to cause bleeding to the patient?		

٦	Does it cause damage to the peripheral tissue?		
٧	Does it affect nerves and blood vessels?		
٨	Does the patient suffer from poor movement after traction?		
٩	Is using deep breathing technique useful?		
١٠	Should the amount of fluid entering and leaving should be monitored?		
١١	Should you monitor patient breathing sound?		
١٢	encourage diet rich with fiberis <b>necessary?</b>		
١٣	encourage taking a lot of fluids <b>is necessary?</b>		
١٤	Is keeping bed dry and free of wrinkles good for the patient?		
١٥	Is a massage useful for the patient?		
١٦	know how to do a skin and bone		

	massage correctly?		
17	Do you need to evaluate the patients breathing sound ?		
18	Does it need to assess the blood vessels, skin,color and warmth for the area		
19	Does it affect sensory and motor position		

### Part 3 : Caring

#### 1-How does skeletal traction work?

- a- It helps to stabilize bone fractures.
- b- It moves bones apart.
- c- It's used after a bone fracture is fixed.
- d- It's the same thing as a cast

#### 2- To maintain Bryant's traction, the nurse must make certain that the child's:

- a- Hips are resting on the bed, with the legs suspended at a right angle to the bed
- b- Hips are slightly elevated above the bed and the legs are suspended at a right angle to the bed
- c- Hips are elevated above the level of the body on a pillow and the legs are suspended parallel to the bed
- d- Hips and legs are flat on the bed, with the traction positioned at the foot of the bed

#### 3- A nurse is caring for a patient who is in skeletal traction. To prevent the complication of skin breakdown in a patient with skeletal traction, what action should be included in the plan of care!

- a- Apply occlusive dressings to the pin sites. Encourage the patient to push up with the elbows when repositioning.
- b- Encourage the patient to perform isometric exercises once a shift
- c- Assess the pin insertion site every 8 hours

**4- A nurse is caring for a patient who is postoperative day 1 right hip replacement. How should the nurse position the patient**

- a- Keep the patients hips in abduction at alltimes
- b- Keep hips flexed at no less than 90 degrees
- c- Elevate the head of the bed to high Fowlers

**5- While assessing a patient who has had knee replacement surgery, the nurse notes that the patient has developed a hematoma at the surgical site. The affected leg has a decreased pedal pulse. What would be the priority nursing diagnosis for this patient!**

- a- Risk for Infection
- b- Risk for Peripheral Neurovascular Dysfunction
- c- Unilateral Neglect
- d- Disturbed Kinesthetic Sensory Perception

**6- A patient was brought to the emergency department after a fall. The patient is taken to the operating room to receive a right hip prosthesis. In the immediate postoperative period, what health education should the nurse emphasize**

- a- Make sure you dont bring your knees close together.
- b- Try to lie as still as possible for the first few days
- c- Try to avoid bending your knees until next week
- d- Keep your legs higher than your chest whenever you can

**7- A patient with a fractured femur is in balanced suspension traction. The patient needs to be repositioned toward the head of the bed. During repositioning, what should the nurse do!**

- a- Place slight additional tension on the traction cords.

- b- Release the weights and replace them immediately after positioning
- c- Reposition the bed instead of repositioning the patient.
- d- Maintain consistent traction tension while repositioning
- e- Elevate the head of the bed to high Fowlers
- f- Seat the patient in a low chair as soon as possible

**8- - Which of these nursing actions will best promote independence for the client in skeletal.**

- a- Instruct the client to call for an analgesic before pain becomes severe
- b- Provide an overhead trapeze for client use
- c- Encourage leg exercise within the limits of traction
- d- Provide skin care to prevent skin breakdown
- e- Provide an overhead trapeze for client use

**9- The nurse is caring for a client with compound fracture of the tibia and fibula. Skeletal v traction is applied. Which of these priorities should the nurse include in the care plan**

- a- Order a trapeze to increase the client's ambulation
- b- Maintain the client in a flat, supine position at all times
- c- Remove traction weights for 20 minutes every two hours
- d- Provide pin care at least every hour

**10 - To prevent foot drop in a client with Buck's traction, the nurse should**

- a- place pillows under the client's heels
- b- Tuck the sheets into the foot of the bed
- c- Teach the client isometric exercises
- d- Ensure proper body positioning
- e- Ensure proper body positioning

**11-"Which nursing intervention is appropriate for a client with skeletal traction 1**

- a- Prone positioning
- b- Intermittent weights
- c- Pin care

- d- 5lb weight limit
- e- In order for Buck's traction applied to the right leg to be effective, the client should be.

**12. An elderly client has sustained intertrochanteric fracture of the hip and has just returned from surgery where a nail plate was inserted for internal fixation. The client has been instructed that she should not flex her hip. The best explanation of why this movement would be harmful is:**

- a- It will be very painful for the client
- b- The soft tissue around the site will be damaged
- c- Displacement can occur with flexion
- d- It will pull the hip out of alignment

**13. In order for Buck's traction applied to the right leg to be effective, the client should be placed in which position?**

- a- Supine c
- b- Sim's.
- c- Prone d.
- d- Lithotomy.

**14- "What is a late sign of compartment syndrome**

- a- Pain MX
- b- Paralysis
- c- Paresthesia
- d- Pulselessness

**15 - Select all the signs and symptoms that will present in compartment syndrome A**

- a- Capillary refill less than 2 seconds
- b- Palloy
- c- Pain relief with medication
- d- Feeling of tingling in the extremity

e- Affected extremity feels cooler to the touch than the unaffected extremity.

### **Complication**

**1- When the client is lying supine, the nurse will prevent external rotation of the lower extremity by using a :**

- a- Trochanter roll by the knee
- b- Sandbag to the lateral calf
- c- Trochanter roll to the thigh
- d- Footboard
- e- Trochanter roll to the thigh

**2- A client has sustained a fracture of the femur and balanced skeletal traction with a Thomas splint has been applied. To prevent pressure points from occurring around the top of the splint, the most important intervention is to:**

- a- Protect the skin with lotion
- b- Keep the client pulled up in bed
- c- Pad the top of the splint with washcloths
- d- Provide a footplate in the bed



## المستخلص

**الخلفية:** يشمل علاج الكسور طريقة أو أكثر: الشد المغلق أو المفتوح ، التثبيت الداخلي أو الخارجي. تطبيق يلقي. تعتمد طريقة العلاج أو العلاج على عدة عوامل ، بما في ذلك الإسعافات الأولية المقدمة. موقع الكسر وشدته ، والعمر والحالة البدنية العامة للمريض

**الهدف:** تقييم معرفة طالب التمريض المتعلقة بالجر الهيكلية.

**الأساليب:** تصميم الدراسة الوصفي المختار للحصول على أهداف الدراسة. تم تخصيص عينة هادفة من (١٣٦) طالب تمريض للمشاركة في الدراسة. استمارة استبيان خاصة معدة لجمع البيانات

**النتائج:** تراوحت أعمار طلاب التمريض الذين شاركوا في الدراسة بين (١٩-٢٣) سنة ، الإناث ٩٧ (٨٨٪) و ٣٩ (٦٢٪) من الذكور ،

**الاستنتاج:** معرفة طلاب التمريض ذات الصلة فيما يتعلق بالجر الهيكلية تظهر أن المعلومات العامة والمضاعفات سجلت مستوى جيد ، بينما سجلت معرفتهم مستوى العناية ضعيف

**توصية:** أوصت هذه الدراسة بما يلي:

يجب أن يمتد برنامج التدريب السريري إلى هذا المجال لتحسين مهارات الطلبة

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## معارف طالبة التمريض فيما يتعلق برعاية الجر الهيكلي

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