

A STUDY TO ASSESS THE EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON THE KNOWLEDGE AMONG STAFF NURSES REGARDING CARE OF THE PATIENTS WITH SKELETAL TRACTION OF THE LOWER EXTREMITY

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ABSTRACT

Fractures of lower extremity adversely affect daily activities of a person because of limited freedom of movement, which occasionally result in various complications and psychological problems to the patient. The basic criteria in the treatment of fracture is to give rest to the fractured bone in neutral functioning position, by elevating the affected extremity and in a therapeutic environment in order to obtain bony union without deformity. Application of skeletal traction is the most used conservative treatment for fractures of lower extremity. It involves a pulling force applied directly to the bone. Since nurses are available with the patients round the clock it is their foremost responsibility to safeguard the patients with skeletal traction of lower extremity from potential complications. A quasi-experimental study was conducted with single group pre-test post-test design. Using purposive sampling techniques, a sample of 50 staff nurses was selected from Adesh Group of Hospitals at Bathinda and Sri Muktsar Sahib. A pre-test was conducted to assess the baseline knowledge scores using self administered questionnaire followed by the implementation of SIM. The post-test was carried out approximately 7 days after the administration of SIM to evaluate its effectiveness. The overall pre-test and post-test mean knowledge scores were found to be 15.38 ± 3.398 and 25.94 ± 2.342 respectively indicating enhancement of knowledge which was statistically significant at $p < 0.01$. The self instructional module on the knowledge among staff nurses regarding care of the patients with skeletal traction of lower extremity was found to be effective.

Key Words: Knowledge, Skeletal traction, Staff nurses, Self Instructional Module.

About Author



The Author Ms Harpreet Dhatt has four years of teaching experience. She has presented papers in various seminars. She is currently working as Assistant Professor in Baba Farid College of Nursing, Kotkapura.

INTRODUCTION

Accidents are a leading cause of mortality and morbidity all over the world involving all types of people and communities. There are almost 885,438 deaths from road accidents all over the world every year (WHO, 2007). Incidentally, India holds the dubious distinction of registering the highest number of road accidents in the world, where the number is as high as 35 accidents per 1000 vehicles. Accidents result into trauma, most common of which includes fracture of bones leading to long term disability. Out of the bones affected, fracture of lower extremity is the commonest one, being 46% in India. Fractures of lower extremity adversely affect the activities of daily living of the patient because of limited freedom of movement. The basic criteria in the treatment of fracture is to give rest to the fractured bone in neutral functioning position, by elevating the affected extremity and in a therapeutic environment in order to obtain bony union without deformity. Application of skeletal traction is the most widely used conservative treatment for fractures of lower extremity. It involves a pulling force applied directly to the bone. Since nurses are available with the patients round the clock so it is their foremost responsibility to safeguard the patients with skeletal traction of lower extremity from potential complications.

OBJECTIVES

1. To assess the knowledge of staff nurses regarding care of patients with skeletal traction of lower extremity before and after the administration of module.
2. To find out the association between the selected socio-demographic variables and knowledge of staff nurses regarding care of the patients with skeletal traction of lower extremity.

MATERIALS AND METHODS

Research approach: Quasi-Experimental approach

Research Design: Single group pre-test and post-test design

Setting of the study: Adesh Group of Hospitals, Bathinda and Sri Muktsar Sahib, Punjab

Population: Staff nurses working in different wards/ clinical areas of Adesh Group of Hospitals at Bathinda and Sri Muktsar Sahib, Punjab

Sample & Sample size: The proposed sample was collected from 50 staff nurses (Table 1.) who fulfilled the inclusion criteria working in different wards/ clinical areas of Adesh Group of Hospitals at Bathinda and Sri Muktsar Sahib, Punjab during the study period.

Sampling technique: Purposive sampling technique was employed to select the sample.

DEVELOPMENT OF TOOL

Tool was selected and developed by keeping in mind the objectives of the study, reviewing theoretical sources, previous studies, internet and thorough discussions with the guide and co-guide. Content validity of the tool was determined by expert's opinion. The tool was given to the nine experts in the field of Medical (Orthopaedics), Medical and Surgical Nursing, Physiotherapy and language experts in English to ascertain the content

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appropriateness, clarity and relevance. The reliability was established by using split half method where $r = 0.9$, which was highly significant.

TOOL 1: Self Instructional Module (SIM)

Since there was no standardised teaching tool available in Adesh Group of Hospitals on care of the patients with skeletal traction of lower extremity for staff nurses, a self instructional module was developed to provide necessary information. The final draft of the SIM was developed after incorporating the experts' suggestions. It included the following:

- I. Introduction to skeletal traction
- II. Application of skeletal traction
- III. Nursing care of the patient with skeletal traction
- IV. Prevention of associated complications
- V. Rehabilitation

TOOL 2: Questionnaire

It consisted of two parts:

PART I : (9 items)	PART II : (30 items)
Socio-demographic data: 2 items	Definition : 1 item
Professional Information: 7 items	Purposes of traction: 2 items
	Counter traction and traction weights : 3 items
	Pins and wires used in skeletal traction : 1 item
	Application of skeletal traction: 7 items
	Exercises: 3 items
	Complications of skeletal traction: 9 items
	Care of patient with skeletal traction: 4 items

Statistics

Statistical analysis was performed using SPSS version 15.0 software. The data was analysed by using Descriptive and Inferential statistics through frequencies, percentages, Pearson, t-test and Chi-square test;

p value ≤ 0.05 , 0.01, 0.001 was considered significant. SPSS version 15.0 was used for analysis of the data.

Hypotheses

H₁- There will be a statistically significant difference between the pre-test and the post-test knowledge scores regarding skeletal traction of lower extremity.

H₀- There will be no association between gained knowledge of staff nurses in terms of clinical experience.

RESULTS

The analysed data was organised and presented as follows:

Section I: Socio-demographic variables and professional characteristics of the sample.

Section II: Evaluation of effectiveness of SIM on the knowledge of staff nurses regarding care of the patients with skeletal traction of lower extremity.

Section III: Assessment of the association between the selected socio-demographic variables and post-test knowledge scores of staff nurses regarding care of the patient with skeletal traction of lower extremity.

The study consisted of the subjects, majority (98 percent) of whom were females. Majority of the subjects, 64 percent were in the age group of 20-24 years followed by 20 percent in 29-32 years and 16 percent in the age group of 25-32 years. Majority, 96 percent of the staff nurses were diploma holders in General nursing and midwifery and the remaining 4 percent were graduate nurses. As per their professional characteristics, majority, 48% of the study subjects had less than 1 year of professional experience followed by 40 percent 1-2 years, 8 percent with 5-6 years and remaining 4 percent had 3-4 years of professional experience. With regard to their clinical posting, majority, 28 percent of the subjects were posted in Intensive care unit, 18 percent in private ward, 16 PERCENT IN Emergency ward, 14 percent in Surgical wards, 5 percent in cancer ward, 3 percent each in operation theatre and De-addiction ward and remaining 2 percent was posted in labour room during the study period.

Regarding effectiveness of SIM on the knowledge of staff nurses regarding care of the patients with skeletal traction of lower extremity.

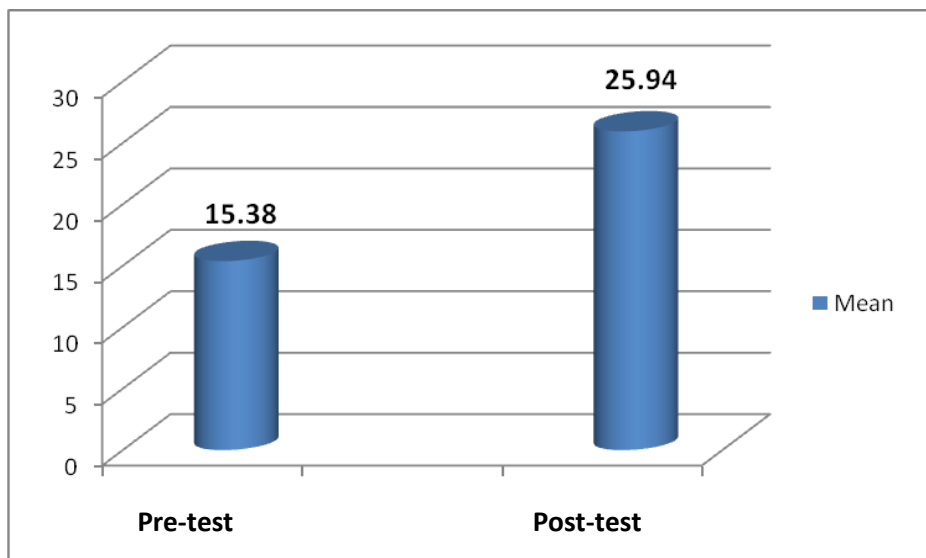


Figure 1: Bar graph showing the effectiveness of Self Instructional Module on the knowledge of staff nurses regarding care of the patients with skeletal traction of lower extremity by mean scores of pre-test and post-test

Figure 1 depicts the effectiveness of Self Instructional Module on the knowledge of staff nurses regarding care of the patients with skeletal traction of lower extremity by mean scores of **pre-test** and **post-test**. The mean knowledge scores were increased after administration of SIM from 15.38 ± 3.398 to 25.94 ± 2.342 , which is an enhancement of 31.86% in the knowledge of staff nurses. In order to explore the effectiveness of SIM on knowledge, paired t test value was computed. The t value 22.201 was found to be statistically significant at $p < 0.01$ level.

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It's seen from the scores, that administration of SIM is effective in increasing the knowledge of staff nurses.

Table 1: Distribution of subjects according to their level of knowledge scores in pre-test and post-test

(N=50)			
Post test knowledge scores			
Level of knowledge	Pre-test Frequency (percentage)	Post-test Frequency (percentage)	
Very good (25-30)	-	35(70%)	
Good (19-24)	10(20%)	15(30%)	
Average (13-18)	30(60%)	-	
Below average (8-12)	10(20%)	-	
Poor(0-7)	-	-	

Table 2: Association between the level of knowledge of the study subjects and their selected socio-demographic variables

Selected socio-demographic variable	Post test knowledge scores					Chi square value	p
	E	D	C	B	A		
Length of professional experience (in years)							
<1	16	07	01	-	-	2.5654 ^{NS}	p>0.05
1-2	12	08	-	-	-		
3-4	02	-	-	-	-		
5-6	04	-	-	-	-		
>6	-	-	-	-	-		
Current clinical posting							
Intensive care Unit	10	03	01	-	-	5.1789 ^{NS}	p>0.05
Cancer ward	03	02	-	-	-		
Emergency ward	06	02	-	-	-		
Surgical ward	05	02	-	-	-		
Private ward	05	04	-	-	-		
Operation theatre	02	01	-	-	-		
Labour room	01	-	-	-	-		
De-addiction ward	01	02	-	-	-		

A- Very poor, B- Poor, C- Average, D- Good, E- Excellent

NS- Not Significant ($p>0.05$)

Regarding the association between the level of knowledge of the study subjects and their selected socio-demographic variables such as length of professional experience and current clinical posting, **Table 2** depicts the association did not reach the level of significance ($p>0.05$).

DISCUSSION

Assessment of knowledge of staff nurses is followed by effectiveness of self instructional module regarding the knowledge of staff nurses. The findings of the pre-test analysis showed that 60% of the staff nurses had average knowledge and 20% each had good and below average knowledge scores. Whereas in post-test, among 50 staff nurses, 70% scored very good knowledge scores and 30% had good knowledge scores regarding care of the patients with skeletal traction of lower extremity. The mean pre-test knowledge score of the subjects was 15.38 ± 3.398 whereas the mean post-test knowledge score was 25.94 ± 2.342 , thereby having 31.86% enhancement in the knowledge of the study subjects after the administration of SIM. These findings were consistent with a study conducted by Sukhda who found out a significant improvement in the knowledge of staff nurses after introduction of self instructional module.

In the present study, the association between the level of knowledge of the study subjects and their selected socio-demographic variables such as length of professional experience and current clinical posting was found to be statistically insignificant ($p>0.05$).

CONCLUSION

On the basis of the findings of the present study the following conclusions are drawn:

1. There is significant increase in the knowledge of staff nurses regarding care of the patients with skeletal traction of lower extremity after introduction of self instructional module.
2. The study showed that there was no significant ($p>0.05$) association between the level of knowledge of the study subjects and their selected socio-demographic variables such as length of professional experience and current clinical posting.

RECOMMENDATIONS

1. Similar study can be undertaken with a larger sample over a longer period of time.
2. True experimental approach can be used.
3. Similar study can be conducted to assess the clinical nursing practices of staff nurses on patients with skeletal traction of lower extremity.

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