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"A study to assess the knowledge regarding effectiveness of range of motion (ROM) exercises in post-surgical patients among GNM II year students of SGRRU College of Nursing, Patel Nagar, Dehradun."

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Abstract: ***Background****: Range of motion exercise refers to activity aimed to improving movement of a specific joint. This motion is influenced by several structures: configuration of bone surfaces within the joint, joint capsule, ligaments, tendons, and muscles acting on the joint. Range of motion exercises are also called "ROM" exercises. The aim of this study was to improve GNM II-year students' knowledge regarding ROM exercises in post-surgery patients.* ***METHODOLOGY:*** *A quantitative descriptive research design was used on 50 students of GNM II year at SGRRU college of Nursing. A structured questionnaire was used to assess GNM II-year students' knowledge.*
CONCLUSION: *Study revealed that 11 (22%) students have inadequate knowledge, 28 (56%) with moderate knowledge and 11 (22%) are with adequate knowledge.*

Keywords: ROM exercises, knowledge, GNM II-year students, surgery.

1. INTRODUCTION:

One of the major common side effects of surgery is functional decline especially in old and frail people. Older adults have lower muscle mass and subsequently surgery itself severely challenges the physiological system. On top of this post-surgery activities like bed rest contribute to a progressive loss of functional capacity.

ASADULLAH 2013

It is the range through which a joint can be moved usually its range of flexion and extension as determined by the type of joint, articular surface, ligaments, tendons and physiological control of joint.
The way ROM exercises or techniques are applied can help identify which type of structure or tissue may be restricted or injured. Active ROM exercises are used to assess muscular control and motions. These should be performed on both sides, with the unaffected side first. Passive ROM can be used to assess the stability of joint.

There are 3 types of ROM exercises-active, passive and active assists.

1. **Passive range of motion**- is typically practiced on a joint that is inactive. It is the movement of joint solely by another person. This type of exercise can help prevent stiffness from occurring.
2. **Active range of motion**- are highly independent, performed solely by the client. The physical therapist's role maybe simply to provide verbal cues.
3. **Active assisted range of motion**- exercise is more progressive, intended for the client to perform movement around the joint, with some manual assistance from physical therapist or from a strap or band.

- VIJAYARADDI VANDALI

OBJECTIVES:

1. To assess the level of knowledge regarding Range of Motion exercises for post-surgical patient among **GNM 2nd year** students.

2. To find out the association between knowledge scores of GNM 2nd year students regarding Range of Motion exercises for post-surgical patient with their demographic variables

HYPOTHESIS

H1: There will be significant association between pretest knowledge score of GNM 2nd year students with the selected demographic variables.

LITERATURE REVIEW:

1. A randomized controlled experimental single-centre study was conducted at the burns and reconstructive surgical unit, national hospital of Sri Lanka (NHSL) patient from 15-55 years with a total burn injury surface area (TBSA) of 10% to 45% involving the shoulder joint including axilla were eligible participants. They were randomized into 2 groups, intervention and a usual care control group, with 110 patients in each group. A standardized protocol was used in management of intervention group for 14 days. The control group was subjected to usual protocol currently used. The ROM was measured and functional recovery was assessed with the quick DASH questionnaire and the abduction ladder. **Amara D. Perera (2017)**

2. conducted a study in government universities in India to determine the effectiveness of ROM in preventing deep vein thrombosis. The patient was advised to perform ROM 2 hourly. The result showed that patient who were having risk of DVT experienced significant reduction in swelling of the leg. **Betel (2009)**

3. A study was conducted in the University of Montana Missoula, on the effectiveness of breathing exercises or preventing pulmonary and wound complications and was studied in 60 patients undergoing surgeries. The experimental group received one pre-operative teaching session and sterile dressing twice a day for first 4 days. Routine post-operative care was given to all 40 patients. Breathing exercises reduced the incidence of pulmonary complication and wound complication **Janet (2007)**,

METHOD:

RESEARCH APPROACH

A quantitative research approach was used to assess the level of knowledge of GNM II-year students of SGRR college of nursing regarding ROM on post-surgery patients. The main goal is to assess the level of knowledge about ROM in GNM II-year students.

RESEARCH DESIGN

The research design is selected for this study is descriptive research design.

SETTING OF THE STUDY:

The study was conducted in SGRRU college of Nursing Patel Nagar.

POPULATION:

In the present study, the target population is GNM II-year Nursing students.

SAMPLE:

In the present study the sample consist of all the GNM II-year students.

SAMPLE SIZE:

In this study, the sample comprises of 50 students of GNM II year.

SAMPLING TECHNIQUE:

In this study, a Non-probability Convenient sampling Technique was used for sampling.

DEVELOPMENT OF TOOLS

The tool used in the present study consists of following:

Section A:

Demographic Data

This section of tool consists of 07 items for obtaining information of students including Age, Gender, Education board, marital status, Family type, parental occupation, and family income per Anum.

Section B:

Structured Questionnaire

This section consists of structure questionnaire to assess the level of knowledge regarding Range of motion exercises in post-surgery patients among GNM II-year students, SGRRU college of Nursing, Dehradun. It consists of 26 multiple choice questions. Each correct answer was given a score of 1 and wrong answer score 0.

PLAN FOR DATA ANALYSIS

The collected data was analysed by using both descriptive and inferential statistics on the basis of objectives and hypothesis of the study.

1. **Descriptive Statistics; -**

- Frequency and Percentage were used for the analysis the GNM II-year students' knowledge.

2. **Inferential Statistics:** -.

- **"Chi-square "test"** was used to find out association between pre- test scores of their selected demographic variables

ANALYSIS:

The data analysis was presented under the following tables:

Percentage wise distribution according to their level of knowledge.

N-50

Level of knowledge	Total No. Of Sample (n)	Percentage (%)
Inadequate	11	22%
Moderate	28	56%
Adequate	11	22%

MAXIMUM SCORE- 26
MINIMUM SCORE- 1

Table 2: Association between knowledge score with their selected demographic variables.

N=50

Demographic data	Inadequate knowledge	Moderate knowledge	Adequate knowledge	Df	Tabular value	Calculated chi square	Level of association
Age							
. 17-24	20	17	10				
. 25-30	0	03	0	04	11.87	-0.45	#
. 31-35	0	0	0				
Gender							
. Male	05	02	0	02	7.82	0.22	#
. Female	08	25	10				
Education board							
. State board	04	07	04				
. CBSE	08	11	01	06	15.03	0.34	#
. ICSE	01	02	0				
. Others	06	05	01				

Marital							
. Married	02	0	0	02	7.82	-0.22	#
. Unmarried	16	27	5				
Family type							
. Nuclear	3	8	4				
. Joint	4	9	4	04	11.87	0.08	#
. Extended	3	13	2				
Parent's Occupation							
. Government	4	6	0				
. Private	18	16	0	04	11.87	4.99	#
. Others	2	3	1				
Family income							
. <50,000	5	7	3				
. 50,000-1lakh	7	9	4				
. >1lakh	2	6	7	04	11.87	0.34	#

*** Significant at p<0.05 level**

#Not significant at p>0.05 level

DISCUSSION: Finding of the study

OBJECTIVE 1: To assess the level of knowledge regarding Range Of Motion exercises for post-surgical patient among **GNM 2nd year** students.
Data presented in table 1 shows that 22% of GNM II yr students have inadequate level of knowledge, 56% have moderate level of knowledge and 22% have adequate level of knowledge.

OBJECTIVE 2: To find out the association between knowledge scores of GNM 2nd year students regarding Range of Motion exercises for post-surgical patient with their demographic variables.

AGE: Data represented that calculated chi-square is -0.45 is less than table value 11.87 at 0.02% of significant level.

Therefore, there is non-significant association between the levels of knowledge with their age.

GENDER: Data represented that calculated chi-square is 0.22 is less than table value 7.82 at 0.02% of significant level. Therefore, there is non-significant association between the levels of knowledge with their gender.

TYPE OF FAMILY: Data represented that calculated chi-square is 0.34 is less than table value 15.03 at 0.02% of significant level. Therefore, there is non-significant association between the levels of knowledge with their education board.

MARITAL STATUS: Data represented that calculated chi-square is -0.22 is less than table value 7.82 at 0.02% of significant level. Therefore, there is non-significant association between the levels of knowledge with their marital status.

TYPE OF FAMILY: Data represented that calculated chi-square is 0.08 is less than table value 11.87 at 0.02% of significant level. Therefore, there is non-significant association between the levels of knowledge with their family type.

PARENT'S OCCUPATION: Data represented that calculated chi - square is 4.99 is less than table value 11.87 at 0.02% of significant level. Therefore, there is non-significant association between the levels of knowledge with their parent's occupation.

FAMILY INCOME: Data represented that calculated chi-square is 0.34 is less than table value 11.87 at 0.02% of significant level. Therefore, there is non-significant association between the levels of knowledge with their family income.

8.RECOMMENDATIONS:

Based on the findings of the study the following recommendations have been recommended for further research:

- A large-scale study can be conducted on larger samples to generalize the findings.
- A comparative study can be conducted among GNM and B.Sc. Nursing students regarding ROM exercises.
- Government should take actual steps to sponsor/ fund more similar studies to improve knowledge of nursing students.
- The study can be used as reviews for further studies.

CONCLUSION:

The conclusion was derived from the finding from the study. The following conclusion was drawn from the study. It was found that 11(22%) students having Inadequate knowledge, 28(56%) students having moderate knowledge and 11(22%) students having adequate knowledge.

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