

A Study to Assess the Effectiveness of a Self Instructional Module on the Knowledge Regarding Proper Body Mechanics among the Critical Care Nurses in Selected Hospitals of Moradabad

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Abstract: A research titled A study to assess the effectiveness of self instructional module regarding proper body mechanics among critical care nurses at selected hospitals of Moradabad The present study is an attempt to determine the knowledge regarding proper body mechanics among critical care nurses, which in turn will help the critical care nurses to practice proper body mechanics. The objectives of this study were- • To assess the knowledge regarding proper body mechanics among critical care nurses. • To assess the effectiveness of self instructional module regarding proper body mechanics among critical care nurses. • To find out the association between demographic variables and level of pre test knowledge score regarding proper body mechanics among critical care nurses. The conceptual framework for this study was based on General system theory. A quantitative research approach was undertaken to assess the effectiveness of self instructional module regarding proper body mechanics among critical care nurses. The total Sample was 60. The tools developed for this study were background information, self instructional module & knowledge questionnaire to assess critical care nurses Knowledge. To ensure the content validity, the tools were submitted to 06 experts with the blue print of the tool and modifications were made as per the expert's suggestions. After validation, the modified tools were subjected to the pretesting. The pilot study was conducted at Teerthanker Mahaveer Hospital, Moradabad among 06 samples from 1st December to 3rd Dec, 2018. The study was found to be feasible. The main study data was collected from 4th Dec, 2018 to 10th Dec, 2018 from critical care nurses. The association between pretest knowledge score among critical care nurses with their selected demographic variables was determined by using chi square test. Analysis of the data was done by using both descriptive and inferential statistics. The data was analyzed using SPSS (Statistical Package).

Keywords: self instructional module, knowledge, body mechanics, critical care, Moradabad

Statement of Study

A study to assess the effectiveness of a self instructional module on the knowledge regarding proper body mechanics among the critical care nurses in selected hospitals of Moradabad.

Objectives of the Study

- 1) To assess the knowledge regarding body mechanics among critical care nurses
- 2) To evaluate the effectiveness of self instructional module on knowledge regarding body mechanics.
- 3) To associate the post test findings with the demographic data.

Need for the study

Good body mechanics means using the safest and most efficient methods to lift and move patients or heavy items. Efficiency is more important than strength. Most people are aware that when they bend or lift something, they should bend their knees. While it is important to bend the knees, attention must also be paid to the position of spine. In order to avoid injury, either at the moment of lifting something or, more likely, as a result of poor body mechanics over time, care must be taken to maintain the neutral spine. A neutral spine means that the three normal curves-at the neck, middle and lower back-are maintained.

"Nurses suffer from work-related low back pain more often than workers in other professions," Most often, nurses hurt their backs while turning bed-ridden patients or transferring them among stretchers, beds and chairs, adding that orthopedic and intensive care unit (ICU) nurses have the highest rates of low back pain among all nurses. According to a study, 65 per cent of orthopedic nurses and 58 per cent

of ICU nurses develop debilitating low back pain at some point in their career.

Taking care of your back is a lifelong project! With the prevalence of back pain at an alarming 60% among U.S. adults, preventative measures are needed. The use of proper body mechanics is an effective way to prevent further injury to back and when it is incorporated into activities of daily living, body mechanics help decrease the amount of stress on the spine. Education in body mechanics is therefore, essential in prevention of back pain

1. Review of Literature

a. Assess knowledge and practice of body mechanic technique among Nurses.

Thomas, Anugrah, Chitra K et.al (June 2017) conducted a quantitative experimental study on knowledge regarding practice of body mechanics among the staff nurses. The study sample consists of 60 staff nurses in selected hospital in Moradabad. The knowledge was assessed using structure knowledge questionnaire. The result revealed that the staff nurses have 93% adequate knowledge post test experimental group. The unpaired 't' test value (5) post-test mean knowledge score of experimental and control group was obtained. It shows that there was a significant difference between mean post test knowledge score in experimental and control group at the level of $p < 0.05$ after video assisted teaching program. Nurses with expertise in body mechanics must share their knowledge with other nursing staff and ensure that their practice is based on the best evidence available and for these various in service.

K. Jaya Krishnan (2016) conducted a descriptive study with cross sectional survey approach was undertaken to find the extent of knowledge and practice among the staff nurses with OT, ICU and ward experience in IMS and Sun Hospital. The sample consisting 100 staff nurses were selected by purposive sampling technique and data collected from the staff nurses who were 87% of female and 49% of staff nurses with diploma in nursing. The results shows 42% staff nursing having moderate and good degree of knowledge, 14% excellent, 2% of staff nurses with slight knowledge the association between demographic data and knowledge is significantly associated with the gender educational qualification position department of service and year of service. Rest of the other socio demographic variables are having no significant association with the age, department of service, year of service and rest are not showing any significant association. The major finding depicts that there is significant association between ages, department of service with practice of staff nurses regarding body mechanics.

Research Methodology

The methodology is most important part of research as it is the framework for conducting a study. A research methodology defines what the activity of research is, how to proceed, how to measure progress, and what constitutes success.

Research methodology indicates the general pattern for organizing the procedures together valid and reliable data for an investigation. It is a way to systematically solve the research problem.

This chapter deals with description of methodology and different steps which are adopted for the study. It includes research approach, research design, setting of the study, population, sample and sampling technique, development and description of tool, content validity, reliability, pilot study, data collection process and plan for data analysis.

Research Approach

Research approach is a systemic, objective method of discovery with empirical evidence & rigorous control. The research approach spells out the basic strategies that the researcher adopts to develop information that is accurate and interpretable. The control is achieved by holding conditions constant & varying only the phenomenon under study.

It involves the description of the plan to investigate the phenomenon under study in a structured (quantitative) and unstructured (qualitative) or a combination of these two methods. The investigator adopted a structured approach for the study since the aim of the study was to assess the effectiveness self instructional module on the knowledge regarding proper body mechanics among critical care nurses.

The research approach for this study is quantitative evaluative approach.

Research Design

One group pre-test post-test design will be selected for the study

$O_1 - X - O_2$

Pre test

O_1 = Administration of structured knowledge questionnaire on proper use of body mechanics.

Intervention

X = Administration of self instructional module on proper use of body mechanics

Post test

O_2 = Administration of same structured knowledge questionnaire on proper use of body mechanics & assessment of knowledge regarding proper body mechanics on 7th day.

Variables

A variable is measurable or potentially measurable component of an event that may fluctuate in quantity or quality that may be different in quantity or quality from one individual object or event to another individual object or event of the same general class. Researchers call the properties that they are study 'variables'. Such properties take on different values. Thus, a variable is, as the name suggest, something, varies. This variable is a concept defined by operations in such a way that changes or variations can be observed and measured.

Dependent variable:

According to Suresh K Sharma, (Nursing Research & Statistics)

It is the outcome or response due to the effect of the independent variable, which researcher wants to predict or explain.

According to study, the dependent variable is the knowledge of critical care nurses regarding body mechanics.

Independent variable:

According to Suresh K Sharma, (Nursing Research & Statistics)

It is a stimulus or activity that is manipulated or varied by the researcher to create the effect on the dependent variable.

According to study, the independent variable is the self instructional module on proper body mechanics.

Research Setting

According to Suresh K Sharma, (Nursing Research & Statistics)

- The study setting is the location in which the research is conducted- it could be natural, partial controlled, or highly controlled.
- The study was conducted in the critical care units of Teerthanker Mahaveer hospital in Moradabad.

Population

According to Suresh K Sharma, (Nursing Research & Statistics)

A population is a complete set of persons or objects that possess some common characteristic that is of interest to the researcher. The population for a study usually is described as being composed of one.

Target population: It is also called the universe, is composed of the entire group of people or objects to which the researcher wishes to generalize the findings of a study.

Accessible population: The aggregate of cases that conform to designated inclusion and exclusion criteria and that are accessible as subjects of the study.

In this study, the populations under study are the critical care nurses.

Sample

According to Suresh K Sharma, (Nursing Research & Statistics)

Sample is a small proportion of population selected for observation and analysis.

In this study, the samples are nurses working at bedside in the critical care units

Sample Size

In this study the sample size is 60.

Sampling Technique

The study is based on simple random sampling technique.

In this study the subject were 60 nurses working in the critical care units, fulfilling the sampling criteria.

Inclusion Criteria

- Nurses working in critical care units.
- Nurses who can read Hindi or English.

Exclusion Criteria

- Nurses with the prevalence of spinal cord or musculoskeletal disorders of the back.
- Nurses who were absent at the time of sampling.

Tool

The tool for the study was prepared by referring books, journals and related research reviews. Blue print for the section was prepared and then the items were finalized. The tool is validated from experts and also checked reliability.

The tool consisted of two parts;

Section I: Demographic variable

It mainly contained all the demographic aspects of critical care nurses covering the important areas like age, gender, educational qualification, previous knowledge of the critical care nurses of Teerthanker Mahaveer Hospital in Moradabad.

Section II: Self Structured Questionnaire Based On Assessment of Knowledge regarding proper body mechanics.

This section is the second part of self-structured questionnaire, which consists of questions assessing knowledge about proper body mechanics.

Validity

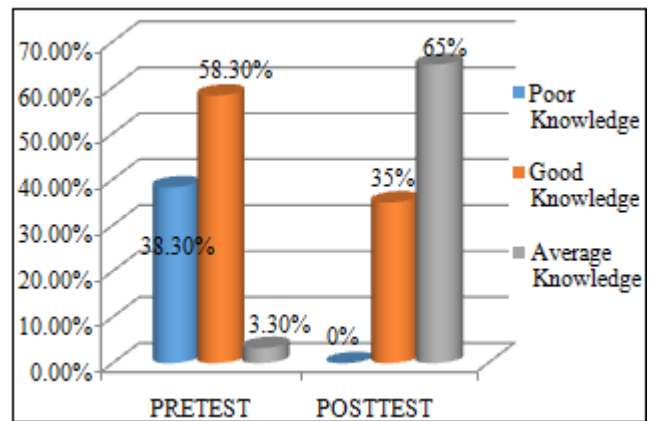
Content validity is a self evident measure which shows that the researcher can demonstrate an adequate coverage of the related topic and an expert should be able to judge whether or not the tool is adequate. To ensure the content validity the instrument was given to 06 experts along with blue print, objectives, of the study and evaluation criteria checklist. As per the suggestions of experts necessary modification were made in research tool particularly in content sequence and framework of the questions.

Reliability

It refers to the degree of consistency or dependability with which instruments measure an attribute. Reliability was established out of 06 samples by using test retest method. Pearson’s correlation coefficient was found to be 0.78 which was considered to be reliable and adequate.

2. Research Findings

Cylindrical Diagram Showing Comparison Of Distribution Of Critical Care Nurses On The Basis Of Their Level Of Knowledge Regarding Proper Body Mechanics In Pretest And Posttest.



The data presented in figure 1 depicts that, In pretest, 38.3% of the critical care nurses had poor knowledge (score 8-14), 58.3% had average knowledge (score 0-7) and 3.3% had good knowledge of proper body mechanics. In post test, 35.5% had average knowledge (score 8-14) and 65% had good knowledge (score 15-20) of the proper body mechanics. This shows that there is remarkable improvement in the knowledge of proper body mechanics among the critical care nurses after self-instructional module.

Table 1: Comparison of Mean Pre-Test and Mean Post Test Level of Knowledge Regarding Proper Body Mechanics among Critical Care Nurses

Group	Mean	Std deviation	p value	df	“t” value
Pretest	7.91	2.49	0.000	59	20.9
Posttest	15.21	1.51	-	-	-

Table 1 depicts that the mean pre test level of knowledge regarding proper body mechanics is 7.91 which is increased to 15.21 at post test. There is effectiveness of self instructional module to improve the knowledge regarding proper body mechanics among critical care nurses at $p = 0.05$ significant level is 0.00, that indicates our research hypothesis is accepted.