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Research Article

A STUDY TO ASSESS THE EFFECTIVENESS OF A SELF INSTRUCTIONAL MODULE ON THE KNOWLEDGE & PRACTICE REGARDING PROPER BODY MECHANICS AMONG THE CRITICAL CARE NURSES IN SELECTED HOSPITALS OF PUNE

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ABSTRACT

Nursing is known as an occupation with high risk of musculoskeletal injury. Nurses' perceptions about the risk of injury may have a role in preventing such injury.A study to assess the effectiveness of a self instructional module on the knowledge & practice regarding proper body mechanics among the critical care nurses in selected hospitals of Pune.

The study was conducted to assess the knowledge and practice regarding body mechanics among critical care nurses, to evaluate the effectiveness of self instructional module on knowledge and practice regarding body mechanics and to associate the post test findings with the demographic data.

There is remarkable improvement in the knowledge & practice of critical care nurses regarding proper body mechanics after self-instructional module. Corresponding p-value was 0.000 which is small (less than 0.05), the null hypothesis is rejected. Since p-value corresponding to educational qualification is 0.021, which is small (less than 0.05), the null hypothesis is rejected. Since all the p-values are large (greater than 0.05), there is no evidence against null hypothesis. None of the demographic variable was found to have significant association with practices regarding proper body mechanics.

The findings of the study showed that100% nurses experience job related backache. There was a significant association of the educational qualification of the critical care nurses with their knowledge regarding proper body mechanics. The post test score was significantly higher than the pre-test score. Thus the self instructional module was found to be effective.

Keywords: Self instructional module, body mechanics, critical care nurses.

1. INTRODUCTION

The body is one multi-functioning unit, comprised of the kinetic chain. The kinetic chain is the combination of the nervous, muscular and skeletal systems. All systems must work together to produce movement [1].

Body mechanics are the coordinated effort of the musculoskeletal and nervous systems to maintain balance, posture and body alignment during lifting bending, moving and performing activities of daily living. Use of proper body mechanics reduce risk of injury to the musculoskeletal system and also facilitates body movement allowing physical mobility without muscle strain and excessive use of muscle energy [2].

Low backache is mostly caused by musculoskeletal problems e.g. acute lumbosacral strain, unstable lumbosacral ligaments and weak muscles, wrong postures, unnecessary strain and fatigue of back muscles. Pain in the back is a complex multifaceted health problem that represents excitatory challenges to health care provider. Back pain affects the physical, psychological, emotional, financial, and social aspects of a person's life [3].

This is a usual problem faced by bed-side Nurses because many patient care activities require Nurses to push, pull, carry and lift [4].

Back injuries and other musculoskeletal disorders related to patient handling are the leading cause of workplace disability for nurses and other direct patient care providers. Each year approximately 40,000 nurses report work-related back pain. This represents over three-quarters of a million lost workdays annually due to back injuries among nurses. Many of these injuries are related to manual patient transfer and repositioning tasks. Nursing aides, orderlies, and attendants had the highest rate of injuries and illnesses with 456 per 10,000 full-time workers [5].

If a patient is unconscious, nurses will try to turn him every two hours or so to prevent him from getting bedsores. If you consider that nurses often work 12 hours shifts, the amount of lifting in one shift adds up a lot, and you can see how the job could be very hard to manage physically. Preventing work related low back pain is a humanitarian issue, and efforts to address the controllable risk factors are essential [5].

Nursing staffs have one of the highest incidences of work-related back problems of all occupations. The incidence rates continue to climb and the direct and indirect costs associated with back injuries for nurses are estimated to be $20 billion annually. Over three quarters of a million work days are lost annually as a result of back injuries in nursing, with an estimated 40,000 nurses reporting illnesses from back pain each year [6].

The actions of walking, turning, lifting and carrying are essential component in the provision of nursing care. Such activities require to the muscle exertion by nurse. The nurse must know and practice proper body mechanics. Using principles of body mechanics during routine activities prevent injury. The nurse is moving immobilized patient, assisting a client from bed to chair [7].

The goal of nursing is healing the sick, so it's ironic that nursing as a profession sees some of the highest rates of muscular-skeletal injuries. A muscular-skeletal injury might disrupt a nurse's career [8].

In India, a study conducted on occupational musculoskeletal injuries in nurses (n=103) stated that 62% had back injury both lower back and upper back. Improper work habits were found to be the reason for their back pain [9].

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. When viewed from the outside, the back looks straight with a hollow in the low back. Everyday activities can place undue stress on the spine. Learning how to use good body mechanics will minimize these stresses and decrease the incidence of back and neck injuries. Good body mechanics are not just for the work site but should be used at all times [10].

Musculoskeletal disorders are an important public health problem. Among them are back conditions, a complex problem for certain occupational groups, such as nursing personnel. Historically, back pain has been a major complaint, and nursing professionals are one at the highest risk. Risk factors for back pain can be either of individual origin or related to the work place. The main occupational risk factors are lifting and handling of patients, uncomfortable and immobile postures, inadequate equipment, improper work place design, heavy physical work and inadequate work organization [11].

"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 [12].

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 [13].

Tasks are recognized as the primary cause for musculoskeletal disorders among the nursing workforce. Of primary concern are back injuries and shoulder strains. Numerous studies have documented a high prevalence of back, knee, shoulder and other joint pain among healthcare workers. Based on workers' compensation claims for back injuries, nursing aides and licensed practical nurses (LPNs) ranked fifth and ninth, respectively, among all occupations as those most at risk for such injuries. Nursing aides are at a higher risk for back injuries than construction laborers, lumbermen, material handlers and laborers. Most programs for the prevention of back and joint injury to healthcare personnel tend to focus on proper lifting techniques, body mechanics and back care. Patient handling can both be severely debilitating. Lifting and transferring of patients are the most commonly reported causes of back pain and knee and shoulder injury among healthcare workers [10].

Nurses need to educate themselves on how and why patient lifting causes spinal injury. It has long been said that for nurses "back injury is part of the job" without clearly defining "back injury." Nurses need to know that manually lifting patients places them at tremendous risk of permanent spinal disability, not just at risk of muscle strain, which would be expected to heal in a matter of days or weeks [14].

It is crucial for nursing students early in their education to be aware of correct body mechanics. Clinical nursing requires a strong theoretical knowledge base, coordinated psychomotor skills, and physical endurance. Nurses assist clients to turn, walk, and increase their activity. On occasions a nurse is faced with a client who is physically unable to move and must be positioned and transferred by the nurse. The best self-protection for the nurse while administering care is to consistently and habitually incorporate the principles of sound body mechanics into practice, thus reducing the risk of musculoskeletal injury [15].

2. MATERIALS AND METHODS

2.1. Approach

The research approach for this study is qualitative evaluative approach. Research design consists of one group pre-test post-test design selected for the study O1 - X - O2.

Pre test

O1 = Administration of structured knowledge questionnaire on proper use of body mechanics & assessment of use of proper body mechanics while providing bedside care.

Intervention

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

Post test

O2 = Administration of same structured knowledge questionnaire on proper use of body mechanics & assessment of proper body mechanics while providing bedside care on 7th day.

For the study various Dependent and Independent variables were observed where the dependent variable is the knowledge & practice of critical care nurses regarding body mechanics and the independent variable is the self instructional module on body mechanics.

The study was conducted in the critical care units of D. Y. Patil Memorial Hospital & Y. C. M. hospital in Pune and the population under study was the bed side nurses. A total of 60 nurses were included in the study.

The study was based on non probability purposive sampling technique and the subject were 60 nurses working in the critical care units, who can read Marathi or English while the nurses with the prevalence of spinal cord or musculoskeletal disorders of the back were excluded from the study.

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 three parts;

Section I: Demographic variable

It mainly contained all the demographic aspects of critical care nurses covering the important areas like age, gender, number of children, educational qualification, years of experience & history of job related back pain of the critical care nurses of Y. C. M. Hospital & Dr. D. Y. Patil Memorial Hospital in Pune.

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 mechaics.

Section III: Observational checklist

A twelve point observational checklist was used to assess the practice of proper body mechanics among the critical care nurses.

To ensure the content validity the instrument was given to 10 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 was established out of 06 samples by using test retest method. Pearson's correlation coefficient was found to be 0.85 which was considered to be reliable and adequate.

The feasibility of the study addresses the various practical concerns about the availability of resources, the organizational climate, the need for and availability of external assistance and the potential for clinical evaluation.

In this study it was observed that critical care nurses donot practice proper body mechanics which makes them mre prone to job related musculoskeletal injuries. Other researchers can use this tool and technique time to time to check the knowledge & practice of proper body mechanics & help them to improve knowledge. No problem was encountered while administering the questionnaire and so the study conducted was feasible.

2.2. Pilot study

It is a smaller version of proposed study conducted to develop and refine the research methodology to be used in the larger study. The pilot study was conducted from 1st to 7th Feb 2015 among the critical care nurses, after obtaining permission from the concerned authority and the individual.

Data was collected by self structured questionnaire on proper body mechanics. The analysis for pilot study was done by test retest method. At the end of analysis the study was found to be feasible and practical.

2.3. Data gathering process

It is a precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions or hypothesis of a study.

Before data collection the researcher had completed following the steps:

a. A formal permission letter from college and researcher including brief details of the study were sent to the 4 hospitals in Pune city.

b. The researcher personally approached the medical & nursing superintendents of two hospitals to seek the permission for conducting the actual study.

c. Before starting the actual data collection the researcher had introduced herself to the samples & introduced the topic of the study & its objectives to them.

d. A well informed consent was taken from the critical care nurses for participation in the study. The researcher had given self structure questionnaire for Critical care nurses at a separate place where there are no disturbances and when they were having free time in work hours.

e. The data collection was done between 1st of Feb to 21 of Feb 2015.
f. The self instructional module was administered to the critical care nurses.
g. A post test was conducted on the 7th day using the same tool used for the pre-test.
h. The researcher had scored each question as per the answer given by the Critical care nurses.

2.4. Plan for data analysis

After the data collection master data sheets were prepared for I, II, and III, SECTION. Descriptive and inferential statistics were planned to analyze the data obtained through questionnaire. Demographic variable, knowledge and practice score was calculated with frequency and percentage distribution. Fisher's exact test was used to find association between demographic variables and knowledge and practice of critical care nurses. Pearson's correlation coefficient test was used to find correlation between knowledge and practice.

2.5. Difficulties encountered

As the nurses in the critical care units have more work load it was difficult for them to find time to solve the given questionnaire. They utilized the break time given to them to them & co-operated with the researcher to complete the study.

3. RESULTS

This chapter deals with the analysis and interpretation of the data collected from critical care nurses in Pune. The purpose of data analysis is to organize, provide structure to, and elicit meaning from research data.

Analysis techniques conducted in quantitative research usually include descriptive and inferential statistics

A data analysis is systemic organization and synthesis of research data that gives meaning to the data.

The analysis of the collected data was done with help of descriptive and inferential statistic. The data was first coded and master data sheet was prepared. The data was then processed by using statistical software. Frequency, Percentage, Means, Standard Deviation (SD), Fisher's exact test and Pearson's correlation coefficient was used to fulfill the objectives of the study.

3.1. Organization of Findings

The data collected was organized & presented under the following headings

Section I: Description of samples (critical care nurses) based on their personal characteristics.

Section II: Analysis of data related to knowledge & practice regarding proper body mechanics among the critical care nurses.

Section III: Analysis of data related to effectiveness of a self-instructional module on the knowledge & practice regarding proper body mechanics among the critical care nurses.

Section IV: Analysis of data related to association of knowledge and practices of critical care nurses with their demography.

Section I
Description of samples (critical care nurses) based on their demographic data.

Table 1: Description of samples (critical care nurses) based on their demographic data in terms of frequency and percentages

Demographic variable	Freq	%
Age		
21-30 years	6	10.0%
31-40 years	39	65.0%
41-50 years	13	21.7%
51-60 years	2	3.3%
Gender		
Male	3	5.0%
Female	57	95.0%
Number of children		
One	8	13.3%
Two	38	63.3%
Three	13	21.7%
Four and more	1	1.7%
Educational qualification		
ANM	1	1.7%
GNM	41	68.3%
B.Sc.	18	30.0%
Years of experience		
0-4 years	7	11.7%
4-8 years	44	73.3%
8-12 years	9	15.0%
Have you ever experienced job related back ache		
Yes	60	100.0%

N=60

65% of the critical care nurses had age 31-40 years, 21.7% of them had age 41-50 years.

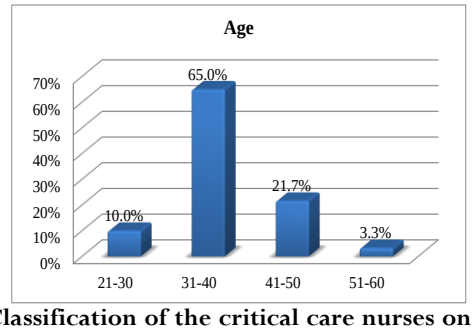

Fig. 1: Classification of the critical care nurses on the basis age.

95% of the sample sizes were females and 5% were males

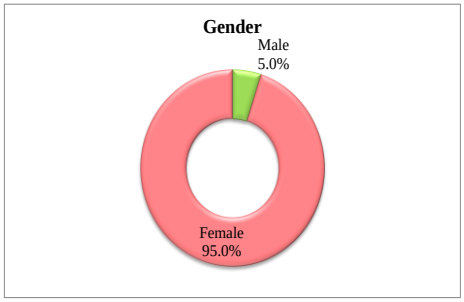

Fig. 2: Classification of the critical care nurses on the basis of gender.

63.3% of the samples had two children, 21.7% had three children, 13.3% had single child and 1.7% had four and more children.

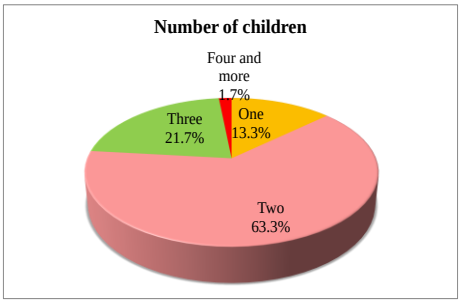

Fig. 3: Classification of critical care nurses on the basis of number of children.

68.3% of the samples were GNM, 30% were B.Sc. and 1.7% were ANM.

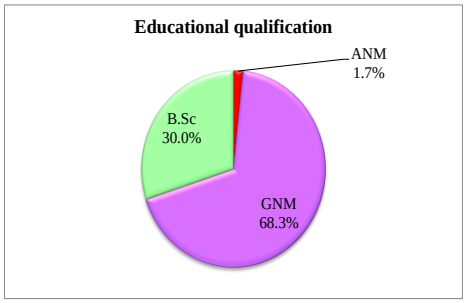

Fig. 4: Educational qualifications of the critical care nurses.

73.3% of the samples had 4-8 years of experience, 15% had 8-12 years of experience and 11.7% had 0-4 years of experience.

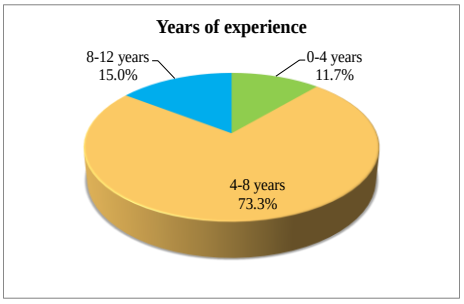

Fig. 5: Years of experience among critical care nurses.

All of them experienced job related backache.

Section II

Analysis of data related to knowledge & practice regarding proper body mechanics among the critical care nurses

Table 2: Practice of proper body mechanics among the critical care nurses.

Practice	Pre-test	
	Freq	%
Poor(Score 0-4)	24	40.0%
Average(Score 5-8)	36	60.0%
Good(Score 9-12)	0	0.0%

N=60

60% of the critical care nurses had average implementation (score 5-8) and 40% had poor implementation (score 0-4) of proper body mechanics.

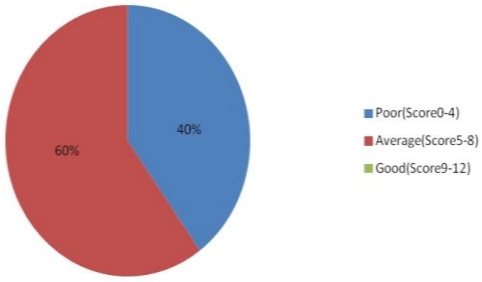

Fig. 6: Practice of proper body mechanics among critical care nurses.

Table 3: Knowledge regarding proper body mechanics among the critical care nurses

Knowledge	Pre-test	
	Freq	%
Poor(Score 0-6)	37	61.7%
Average(Score 7-13)	23	38.3%
Good(Score 14-20)	0	0.0%

N=60

61.7% of the critical care nurses had poor practices (score 0-6) and 38.3% had average practices (score 7-13) regarding proper body mechanics.

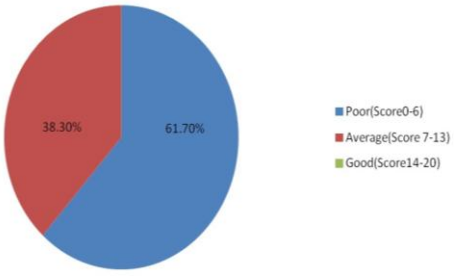

Fig. 7: Pre-test knowledge regarding proper body mechanics among critical care nurses

Section III

Analysis of data related to effectiveness of a self-instructional module on the knowledge & practice regarding proper body mechanics among the critical care nurses

Table 4: Effectiveness of a self-instructional module on the practice of proper body mechanics among the critical care nurses

Practice	Pre-test		Post-test	
	Freq	%	Freq	%
Poor(Score 0-4)	24	40.0%	0	0.0%
Average(Score 5-8)	36	60.0%	0	0.0%
Good(Score 9-12)	0	0.0%	60	100.0%

N=60

In pre-test, 60% of the critical care nurses had average implementation (score 5-8) and 40% had poor implementation (score 0-4) of proper body mechanics. In post test, all of them had good implementation (score 9-12) of proper body mechanics. This shows that there is remarkable improvement in the practice of proper body mechanics among the critical care nurses after self-instructional module.

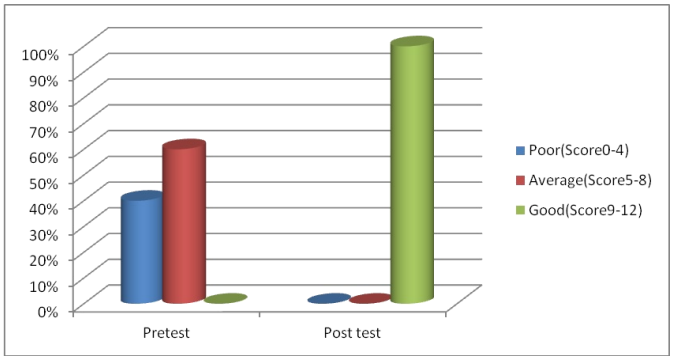

Fig. 8: Effectiveness of the self instructional module on the practice of proper body mechanics among critical care nurses.

Table 5: Paired t-test for effectiveness of a self-instructional module on the practice of proper body mechanics among the critical care nurses

	Mean	SD	t	df	p-value
Pre-test	7.0	1.7	38.9	59	0.000
Post-test	16.5	1.4			

Researcher applied paired t-test for comparison of pre-test and post-test knowledge scores of critical care nurses regarding proper body mechanics. Average practice score in pre-test was 7 which increased to 16.5 in post-test. T-value for this comparison was 38.9 with 59 degrees of freedom. Corresponding p-value was 0.000 which is small (less than 0.05), the null hypothesis is rejected. Self-instructional module was found to have more significant effect on the practice of critical care nurses regarding proper body mechanics.

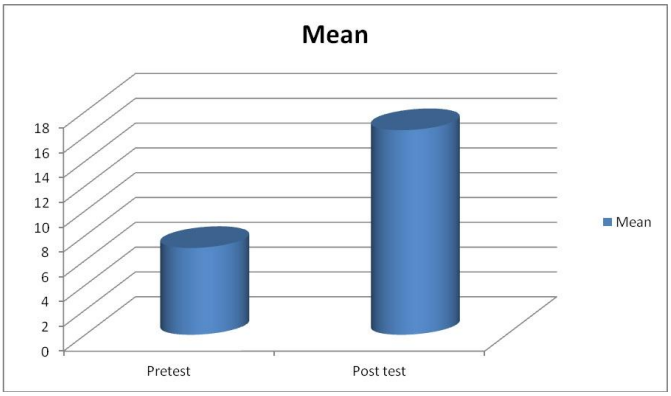

Fig. 9: Average scores of the practice of proper body mechanics among critical care nurses

Table 6: Effectiveness of a self-instructional module on the practice regarding proper body mechanics among the critical care nurses

Knowledge	Pre-test		Post-test	
	Freq	%	Freq	%
Poor(Score 0-6)	37	61.7%	1	1.7%
Average(Score 7-13)	23	38.3%	59	98.3%
Good(Score 14-20)	0	0.0%	0	0.0%

In pre-test, majority of 60% of the critical care nurses had average implementation (score 5-8) and 40% of them had poor impletation (score 0-4) regarding proper body mechanics. In post-test, all of them had good implementation (score 9-12) regarding proper body mechanics. This shows that there is remarkable improvement in the practice of critical care nurses regarding proper body mechanics after self-instructional module.

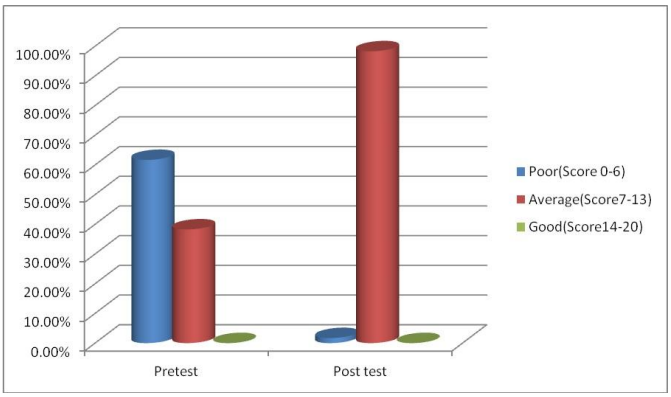

Fig. 10: Effectiveness of the self instructional module on the knowledge regarding proper body mechanics among critical care nurses.

Table 7: Paired t-test for effectiveness of a self-instructional module on the knowledge regarding proper body mechanics among the critical care nurses

	Mean	SD	t	df	p-value
Pre-test	4.1	1.1	47.7	59	0.000
Post-test	9.4	1.5			

N=60

Researcher applied paired t-test for comparison of pre-test and post-test knowledge scores of critical care nurses regarding proper body mechanics. Average knowledge score in pre-test was 4.1 which increased to 9.4 in post-test. T-value for this comparison was 47.7 with 59 degrees of freedom. Corresponding p-value was 0.000 which is small (less than 0.05), the null hypothesis is rejected. Self-instructional module was found to have significant effect on the knowledge of critical care nurses regarding proper body mechanics.

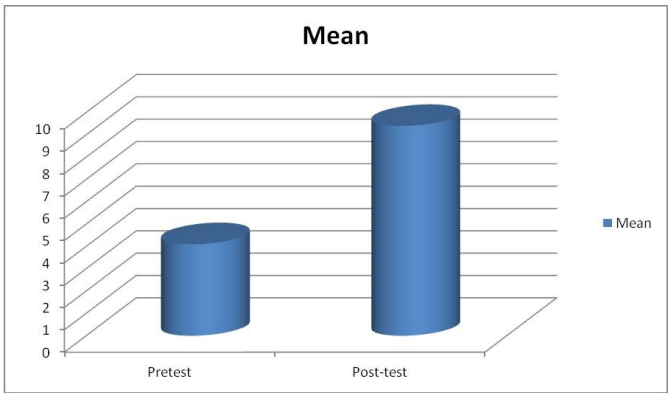

Figure11: Effectiveness of the self instructional module on the knowledge regarding proper body mechanics among critical care nurses.

Section IV

Analysis of data related to association of knowledge and practices of critical care nurses with their demography.

Association of knowledge and practices of critical care nurses with their demography was assessed using Fisher's exact test. Summary of Fisher's exact test is given in table 8.

Since p-value corresponding to educational qualification is 0.021, which is small (less than 0.05), the null hypothesis is rejected. Education was found to have significant association with knowledge of critical care nurses regarding proper body mechanics.

Table 8: Fisher's exact test for association of knowledge of critical care nurses with their demography

Demographic variable		Knowledge		p-value
		Poor	Average	
Age	21-30 years	2	4	0.436
	31-40 years	15	24	
	41-50 years	5	8	
	51-60 years	2	0	
Gender	Male	0	3	0.268
	Female	24	33	
No. Of children	One	3	5	0.691
	Two	14	24	
	Three	6	7	
	>Three	1	0	
Educational qualification	ANM	0	1	0.021
	GNM	21	20	
	B.Sc.	3	15	
Years of experience	0-4 years	2	5	0.757
	4-8 years	19	25	
	8-12 years	3	6	

Table 9: Fisher's exact test for association of practices of critical care nurses with their demography

Demographic variable		Knowledge		p-value
		Poor	Average	
Age	21-30 years	2	4	0.387
	31-40 years	24	15	
	41-50 years	9	4	
	51-60 years	2	0	
Gender	Male	2	1	1.000
	Female	35	22	
No. Of children	One	5	3	0.680
	Two	23	15	
	Three	9	4	
	> Three	0	1	
Educational qualification	ANM	1	0	0.860
	GNM	24	17	
	B.Sc.	12	6	
Years of experience	0-4 years	5	2	0.835
	4-8 years	26	18	
	8-12 years	6	3	

Since all the p-values are large (greater than 0.05), there is no evidence against null hypothesis. None of the demographic variable was found to have significant association with practices of critical care nurses regarding proper body mechanics.

The major findings of the study are as follows:

Section 1: Demographic Characteristics

- Majority (65%) of the critical care nurses had age 31-40 years.
- Majority (95%) of the sample size were females.
- Majority (63.3%) of the samples had two children.
- Majority (68.3%) of the samples were GNM.
- Majority (73.3%) of the samples had 4-8 years of experience.
- All of them were experiencing job related backache.

Section II: Knowledge

In pre-test, majority (60%) of the critical care nurses had average knowledge (score 5-8) and 40% of them had poor knowledge (score 0-4) regarding proper body mechanics. In post test, all of them had good knowledge (score 9-12) regarding proper body mechanics. This shows that there is remarkable improvement in the knowledge of critical care nurses regarding proper body mechanics after self-instructional module.

Section III: Practice

In pre-test, 60% of the critical care nurses had average implementation (score 5-8) and 40% had poor implementation (score 0-4) of proper body mechanics. In post test, all of them had good implementation (score 9-12) of proper body mechanics. This shows that there is remarkable improvement in the practice of proper body mechanics among the critical care nurses after self-instructional module.

Section IV: Comparing the pre-test & post test findings.

Researcher applied paired t-test for comparison of pre-test and post-test knowledge scores of critical care nurses regarding proper body mechanics. Average knowledge score in pre-test was 4.1 which increased to 9.4 in post-test. T-value for this comparison was 47.7 with 59 degrees of freedom. Corresponding p-value was 0.000 which is small (less than 0.05), the null hypothesis is rejected. Self-instructional module was found to have significant effect on the knowledge of critical care nurses regarding proper body mechanics.

Section IV: Association of knowledge with the demographic data.

Since p-value corresponding to educational qualification is 0.021, which is small (less than 0.05), the null hypothesis is rejected. Education was found to have significant association with knowledge of critical care nurses regarding proper body mechanics.

Section V: Association of practice with demographic data.

Since all the p-values are large (greater than 0.05), there is no evidence against null hypothesis. None of the demographic variable was found to have significant association with practices of critical care nurses regarding proper body mechanics.

4. DISCUSSION

The findings of the study show that100% nurses experience job related backache among which 95% of the nurses were females, majority of which had 4-8 years of work experience in the critical care units, among which 68.3% were GNM having 2 two children.

It was seen that majority of the nurses were educated & had adequate experience in the critical care units.

There was a significant association of the educational qualification of the critical care nurses with their knowledge regarding proper body mechanics (p-value-0.021).

Implication

The findings of the present study have implications for all the fields such as Nursing practice, Nursing Research and Administration as it mainly deals with knowledge and practice proper body mechanics among the critical care nurses.

Nursing Practice

With the help of Information booklet on proper body mechanics, the staff nurses, student nurse can improve their knowledge on proper body mechanics & implement it in the clinical field. This will help them complete their tasks without injuring the patients as well as themselves.

Nursing education

Nursing education should emphasize on preparation of nurses with proper knowledge of body mechanics in order to improve their skills at the bed side. Arrange workshops or health programs for students. The findings of the study should be used as a basis of in-service education programs for nurses so as to make them aware of the impact of improper use body mechanics on the patient as well as self safety.

Nursing Administration

Nurses play the role of efficient administrator and managers and hence she can contribute to decision making at higher level. She can spread information about the hazards of improper body mechanics on nurses. She also contributes in planning the supply of needed assistance (manual as well as mechanical) in order to reduce the work load related injuries to nurses.

Nursing Research

Nursing research is an essential aspect of nursing as it uplifts the profession and develops new nursing norms and a body of knowledge. More researchers should be conducted on the various problems that nurses face while working at the bedside .The research design, findings and the tool can be used as avenues for further research. The finding of the study will

serve as a basis for the professional and student nurse to conduct further interventional studies proper body mechanics.

Recommendations:

1. A study can be conducted to assess the factors contributing towards the improper use of body mechanics in nurses.
2. A similar study may be conducted using visual aid teaching on knowledge & practice of critical care nurses regarding proper body mechanics.
3. A comparative study may be conducted to evaluate the effectiveness of SIM (self instructional module) versus effectiveness of VAD (Video Assisted Teaching) on the similar problem.

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