

## Effect of Instructional Programme on Knowledge and Practice of Body Mechanics and To Assess The Health Related Outcome Among Staff Nurses



### Nursing

KEYWORDS :

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**INTRODUCTION:** Health is a fundamental human right. Every human being has the right to enjoy the highest attainable standard of health. Health to a certain extent not only a matter of cleanliness, proper diet and exercise; but it is more than that. It is also the conscious and subconscious recognition and well-being that comes from doing every day, a full measure of one's duty. Disease can be described as an alteration in body function resulting in reproduction of capabilities or shortening of normal life span. The ability to perform complex and precise movements permits human beings to take interest and adopt to the environment. Proper functioning of the musculoskeletal system makes such movements possible. The musculoskeletal system is the largest organ system of the human body consisting of bones, muscles, joints, cartilage, ligaments, tendon, fascia and bursae.

The musculoskeletal system is particularly vulnerable to external forces. These forces can cause alteration in structure of bone or soft connective tissue resulting in functional disruption. The consequences may be deformity, alteration of body image, alteration in mobility, pain or functional disability. These problems may produce long term health problems that interfere with daily activities and quality of life. As nurses, we often expect to make sacrifices for our careers and for our patients. While sacrificing, our health should never be on that list, it is often a sad consequence of outdated teaching methods and ill-equipped facilities that do not offer devices known to protect staff from musculoskeletal disorders. The problem is far from personal—in addition to affecting individual nurses, musculoskeletal disorders contribute to the nursing shortage and to insufficient patient care.

Body mechanics is the efficient use of the body as a machine and as a means of locomotion. Body mechanics is directly related to the effective functioning of the body. The correct use of body mechanics should be evident in every activity and even during rest periods. The coordinated efforts of musculoskeletal and nervous system to maintain balance, posture and body alignment during lifting, bending, moving, and performing activities of daily living provide the foundation for body mechanics. The proper implementation of these activities reduces the risk of injury to the musculoskeletal system and facilitates body movements, allowing physical mobility without muscle strain and excessive use of muscle energy. Correct body mechanics are essential and help to avoid work related musculoskeletal injuries, diminish excessive strain and fatigue. The actions of walking, turning, lifting and carrying are essential components in nursing care. Such activities require muscle exertion. Knowledge and practice of body mechanics and remain known of current research, standards and guidelines on carrying safe transfer and push techniques help to reduce the risk for injury. This includes co-ordination of body movements and familiarity with the integrated functions of the skeletal, muscular and nervous systems.

### OBJECTIVES OF THE STUDY

To assess the effectiveness of instructional programme on knowledge and practice of body mechanics among staff nurses.

To assess the health related outcome due to improper body mechanics among staff nurses.

To find out the association of the pre test knowledge and practice score with selected demographic variables.

### RESEARCH METHODOLOGY

Setting of the study : St. Joseph's college of nursing, kothamangalam

Research approach : Quantitative approach

Research design : Pre-experimental, one group pretest – posttest design

Sample : 50

Sampling technique : Simple random sampling

Data collection instrument : Structured knowledge questionnaire, observation checklist, and interview schedule

### DATA COLLECTION

After getting formal permission from the administrator of St. Joseph's Hospital, Kothamangalam, the data were collected during the time period of 1.12.2013- 31.12.2013. After conveniently selected the settings, based on inclusion criteria, the samples were selected by using simple random sampling (lottery method). Investigator introduced herself to the samples and gave an explanation of the study. Confidentiality of the data were ensured and informed consent was taken from the selected samples. Pretest knowledge and practice of selected nursing procedures regarding body mechanics among sample were assessed by using the questionnaire and observational check list on the same day. Health related outcome was assessed by using structured interview schedule. After that the sample were divided into five groups consisting of 10 members each. Instructional programme was given to five groups on different occasions on the next day.

After 7 days posttest knowledge and practice of staff nurses regarding body mechanics was assessed using the same questionnaire and check list. The data collection process was concluded by thanking the subjects. The data collected were compiled for data analysis.

### DATA ANALYSIS

The data were analyzed, interpreted and organized under the following headings

Section I- Description of sample characteristics

Section II- Effectiveness of instructional programme on knowledge and practice of body mechanics among staff nurses

Section III- Assess the health problems related to improper body mechanics among staff nurses

Section IV- Association of the pre test knowledge and practice score with selected demographic variables

**Section I: Description of demographic variables of nurses**

Majority of the sample (60%) belong to the age group of 20-24 years

Majority of sample (92%) were females

Majority of sample (54%) belongs to general nursing and midwifery

Majority of sample (38%) were having 1-2 years of experience

Majority of sample (48%) were working in medical unit

Section II- Effectiveness of instructional programme on knowledge and practice of body mechanics among staff nurses

**Table 1: Frequency and percentage distribution of knowledge level among sample regarding body mechanics n=50**

Post test Knowledge		Pre test	
f	%	f	%
Poor	0	9	18
Average	3	32	64
Good	47	9	18
	94		

Table 1 shows that 18% of staff nurses had poor knowledge, 64% had average knowledge and 18% had good knowledge regarding body mechanics in pre test. In post test 94% of staff nurses had good knowledge and 6% had average knowledge.

**Table 2: Frequency and knowledge distribution of practice level among staff nurses regarding body mechanics n=50**

Post test Practice		Pretest	
f	%	f	%
Poor	0	6	12
Average	1	38	76
Good	49	6	12
	98		

Table 2 shows that 6% of staff nurses had poor practice, 38% had average practice and 6% had good practice in pre test. In post test 98% of staff nurses had good practice and 2% had average practice regarding body mechanics.

**Table 3: Mean, standard deviation and t value of knowledge regarding body mechanics among staff nurses n=50**

Group	Mean	SD	Mean difference	Paired t test	p
Pre test	15.06	4.37			
			9.66	14.19**	0.00
Post test	24.72	3.19			

\*\* Significant at 0.01 level  
Table 3 shows that mean post test score regarding body mechanics among staff nurses is significantly higher than the mean pre test score. It revealed that instructional programme has significant influence in improving the knowledge level of staff nurses regarding body mechanics.

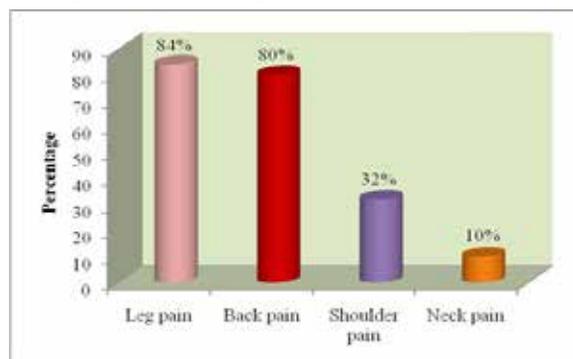
**Table 4: Mean, standard deviation and t value of practice regarding body mechanics among staff nurses n=50**

Group	Mean	SD	Mean difference
Paired t test	p		
Pre test	11.24	1.68	
	23.55**	0.00	8.18
Post test	19.42	2.26	

\*\*Significant at 0.01 level

Table 4 shows that the mean post test score regarding body mechanics among staff nurses is significantly higher than the mean pre test score. It revealed that the instructional programme has significant influence in improving the practice level of staff nurses regarding body mechanics

**Section III- Assess the health problems related to improper body mechanics among staff nurses**



Cylindrical diagram represents the prevalence of health problems among staff nurses. It shows that 84% of staff nurses had leg pain, 80% had back pain, 32% had shoulder pain and 10% had neck pain.

**Section IV- Association of the pretest knowledge and practice score with selected demographic variables**

There was no significant association of the pretest knowledge and practice score with selected demographic variables

**CONCLUSION**

The instructional programme has enhanced the knowledge of staff nurses and thereby improved their skills, which is essential for performing the activities and preventing back injuries among staff nurses. The staff nurses expressed that the teaching programme was very informative and it

would help them to prevent back injuries and its complications. Hence the instructional programme is instructionally effective, appropriate and feasible.

#### RECOMMENDATIONS

1. The study can be replicated on a large number of staff nurses for generalization.
2. The study can be conducted in government, private, nursing homes, non medical teaching hospitals etc.
3. The same study can be conducted with an experimental research approach having a control group.
4. Different teaching strategies can be used to educate the staff nurses regarding body mechanics.
5. A comparative study can be conducted between the two hospital organizations.
6. A similar study can be replicated in a different setting.
7. A similar study can be carried out using other teaching strategies like video films, computer assisted instructions, etc.

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