

**Effectiveness of Planned Teaching on Knowledge and Practices of Body Mechanics on Prevention of Physical Hazards among Staff Nurses in Selected Hospitals of Gandhinagar District**

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**Abstract**

Body mechanics or Posture is any position in which the body resides. It is the study of proper body movement to prevent and correct posture problems, reduce stress and enhance physical capabilities. Good body mechanics may be able to prevent or correct problems with posture. Good body mechanics may also protect your body, especially your back, from pain and injury. Using good body mechanics is important for everyone. It is further defined by the relationship of body segments to one another. Body mechanics is posture in motion. Though posture is often thought of as a stationary position, control of moving postures is perhaps even more important in task performance and injury control. Body mechanics refers to the correct or most efficient way to perform daily activities that are safe, energy conserving and help prevent the physical strains that may cause injury. It involves the use of good posture, balance, and the strongest and largest muscles of the body to perform work. Some of the most common injuries sustained by members of the health care team are severe musculoskeletal strains. Many injuries can be avoided by the conscious use of proper body mechanics when performing physical labor.

The research approach used was quantitative research approach was adopted. Quasi experimental study design was used. In this study non probability convenient sampling technique was used to select the samples. A Questionnaire to assess the knowledge of the sample regarding body mechanics. An observation checklist to assess the nurses' practices of body mechanics on prevention of physical hazards. A planned teaching module on Body mechanics

Knowledge of the nurses on relation to body mechanics.

a. In the pre teaching phase 74% of the nurses had poor Knowledge score (1-5) in the pretest, whereas in the post-test, the samples (62%) showed an Excellent knowledge score (11-15).

b. Nurses have obtained an average score of 9.53% in the post-teaching phase compared to 5.96% in the preteaching phase. This means that planned teaching was effective in improving

the knowledge of nurses.

2. Practices of nurses regarding body mechanics on prevention of physical hazards.

In the Pre observation before teaching phase, almost 65.7% of the sample had poor practice score (1-5), whereas in the post-intervention observation score 68% of the nurses have an excellent practice score between 11-15. This means that planned teaching was effective in improving the practice of the staff nurses.

This study shows that there is a positive correlation and marked relationship between knowledge and practice of the nurses. This implies that with the increase in the knowledge, there is corresponding improvement in the practices of nurses.

## INTRODUCTION

Health could be a basic right. It's a foundation on that the essential human desires area unit happy and improves quality of life. Health still continues to be a neglected entity in spite of such a lot being talked and printed. Health happiness whereas health problem brings sorrows, misery; suffering and large loss is incurred. Thence healthy people area unit associate degree plus to the family, industry, community and to the total nation by and enormous. We will say – "Health is Wealth".

The goal of body mechanics is to find out a way to move the body therefore on stop additional injury to the spine. Awareness of common mistakes and correct principles will solely facilitate to attain this goal. Poor posture is one amongst the most causes of neck and back injuries. Forward head position and rounded shoulders contribute to poor posture. Any table or PC worker has in all probability been guilty of poor posture at some purpose in their career and may attest to the actual fact that it is a laborious habit to

interrupt. Luckily, here area unit of some easy exercises which will facilitate.

The investigator's main purpose of the study is to boost the data and apply concerning body mechanics on bar of physical hazards among the nurses World Health Organization are operating in numerous units of hospital and supply adequate and skilled talent for maintaining sensible body mechanics.

## OBJECTIVES:

**The study objectives are:-**

1. To assess the Knowledge and Practice of nurses on body mechanics to prevent physical hazards before giving planned teaching.
2. To assess the Knowledge and Practice of nurses on body mechanics to prevent physical hazards after giving planned teaching.
3. To compare the Knowledge and practice of nurses on body mechanics to

prevent physical hazards before and after giving planned teaching.

4. To find out association between pre test knowledge and practice of nurses on body mechanics to prevent physical hazards with selected demographic variable.

### RELATED WORK

March, Volume 4, Promoting Bone Health: A Nursing Perspective (In response to the significant number and severity of work-related back injuries and other musculoskeletal disorders among nurses, the American Nurses Association has launched the Handle With Care campaign.

Karahan A et-al, Conducted study on Determination of the usage of body mechanics in clinical settings and also the prevalence of low back pain in nurses. This alpha study was designed to spot the usage of body mechanics in clinical settings and also the prevalence of low back pain in nurses. The sample was care units of a state hospital in Bolu, Turkey. Knowledge collected through observation and interviews were evaluated victimisation percentages, Chi-square and Mann-Whitney U tests. Results of the study showed that the bulk of the nurses (87.5%) old low back pain at a while in their lives. Among the contributive factors for back pain, the link between carrying high heels, work and back pain was vital statistically. consistent with the observations, the bulk of the nurses used body mechanics properly whereas sitting (53.6%), standing (58.7%), carrying (64.3%), actuation or pushing (79.4%)

moving the patient to the aspect of the bed while not associate assistant (53.4%), moving the patient to a sitting position in bed (71.4%) and helping the patient to a standing position (66.6%). However 57.1% of the nurses upraised and eighty two extended incorrectly. The conclusion from this analysis was that a number of the nurses don't use body mechanics properly and also the majority has low back pain.

James D. Ramsay, Ph.D., MA Academic of Safety and Health Protection, University of Wisconsin reports that across the nation, an important nursing shortage looms. Additionally to the very fact that nurses are more and more in brief offer, the aging of the nursing profession combines to gift a frightening challenge to the attention field. Precisely why students might not be selecting the nursing profession in adequate numbers isn't framed. However, many factors inherent to nursing are suspected. As an exam., the robust chance of experiencing severe activity injuries (i.e., back injury, Neck injuries) or Physical hazards and diseases that nurses face daily, are arguably primary motivators for nurses to go away from the profession, therefore adding to the shortage. Presumably, the protection of nurses themselves and afterwards, that of their patients, rely directly on the degree to that nurses will establish and manage various activity hazards specific to jobs.

Thomas reported that a lot of personalized kind of diffusive info like varied AV aids, flash cards, planned teaching lecture, bodily fluid, discussion and demonstration associated with Body Mechanics could facilitate to extend the data and practices. This fashion {the information| the data| the data} seekers gain knowledge at their own pace and time.

Seetha M.A. et al says that health education is one amongst the recognized manner of Health promotion within the primary interference of sickness and injuries within the country.

## METHODOLOGY

This enabled the researcher to formulate the research methodology for the study. The research approach used was quantitative research approach and quasi experimental design was adopted.

### Setting of the study:

The present study was conducted in a selected hospital in Gujarat District for assessing the knowledge and practice on body mechanics on prevention of physical hazards among staff nurses.

### Population

In this study population comprises of staff nurses from selected hospital in Gandhinagar District.

### Sample

All the staff nurses of the selected hospital were selected for the study.

### Sampling technique

In this study non- probability convenient sampling technique was used to select the hospital to assess the knowledge and practice on body mechanics on prevention of physical hazards among staff nurses.

### Sampling criteria

#### Inclusion criteria

1. This study is limited to selected hospitals of Gandhinagar District.
2. Trained nurses included in this study.
3. Nurses who are willing to participate in the study.

#### Exclusion criteria

1. Nurses who are not willing to participate in the study

2. Untrained nurses.

### Plan for data analysis

It was decided to analyze the data by both descriptive and inferential statistics on the basis of objectives and hypothesis of the study. Master data sheet would be prepared by the investigator to analyze the data. The data will be analyzed in terms of descriptive (mean, percentage, standard deviation, mean percentage), inferential statistics and correlation.

## ANALYSIS

### Section I - Sample characteristics:

- ❖ 64% of sample was from female.
- ❖ 42.7% of sample was from 26-30 year of age.
- ❖ 75.3% of sample was married.
- ❖ 75.3 % of sample professional qualification were GNM.
- ❖ 79 % of samples were working in private hospital.
- ❖ 65 % of samples were working in General ward.

### Section II: - Knowledge Score & Practice Score

The data that in the pre teaching phase, 74% of the samples had knowledge score in the range of 0-5 & 24 % in the range of 6-10 .The knowledge score of the sample shows remarkable improvement in the post test score that is 62 % of the samples had knowledge score in the range of 11-15 that is excellent and 33.3 % in the range of 6-10.

The above table 4.9 shows that in the Pre observation before teaching phase, 65.7% of the sample had practice score in the range of 0-5 and 27.7 % in the range of 6-10. The practice score of the samples shows remarked increase in the post teaching observation phase. The score of 68 % range between 11-15 that is excellent.

### **Section-III Effectiveness of Plan teaching program**

Findings in section indicate the significant difference between the Pre-test and Post-test scores. The mean score obtained by the sample in the pre-test phase was 5.96 and in the post-test Phase, it was 9.53 .The improvements in the knowledge score in the post teaching phase indicate that planned teaching is effective in increasing the knowledge of the samples. Since p-value < 0.05, reject H<sub>0</sub> i.e. accept H<sub>1</sub>. There is significant difference between the Pre-test and Post-test scores.

Findings in section indicate the significant difference between the Pre-test and Post-test scores. The mean score obtained by the sample in the Pre-Observation phase was 6.63 & in the Post-Observation phase were 9.93. The improvement in the practice score in the post teaching phase indicate that planned teaching module is effective in improving the practice of the Nurses regarding body mechanics.

### **CONCLUSIONS**

The present study showed that planned teaching is effective in improving the knowledge and practices of nurses. Regular education will assist nurses to overcome fears and follow good body mechanics regards to prevention of physical hazards

### **Nursing Implications:**

The findings of the study have implications in the field of nursing practice, nursing education, nursing administration and nursing research.

### **RECOMMENDATIONS**

1. A comparative study can be done to find out the effect of different teaching methods

in improving knowledge and practice of Nurses.

2. A comparative study can be done between Nurses working in ICU and in general ward.

3. A descriptive study can be done on the management to find out their attitudes and perceptions on prevention of health hazard

4. Longitudinal study on long-term effect of hazards can be studied.

5. Action research on small project regarding a single component of health or health hazards can be studied.

6. Study can be replicated with larger sample size.