KNOWLEDGE ON BODY MECHANICS AMONG STAFF NURSES IN SELECTED HOSPITALS OF CALICUT DISTRICT

Ms. Anju Joseph[1], Ms. Hima Tomy[1], Ms. Shabana Ali[1],
Ms. Dilna C[2],
Dr. Assuma Beevi TM, M.Sc. (N), Ph.D. (N), CHPE[3]
[1]III year B.Sc. Nursing students, MIMS College of Nursing, Puthukode
[2]Assistant Professor, MIMS College of Nursing, Puthukode
[3]Principal, MIMS College of Nursing, Puthukode,
B.Sc Nursing Students, MIMS college of Nursing,Puthukode,Malappuram,India[1]

Abstract

The present study was aimed at assessing the knowledge on body mechanics among staff nurses working in selected hospitals of Calicut. The objectives of the study were to find out the level of knowledge regarding body mechanics among staff nurses and to prepare an information booklet on body mechanics for staff nurses. A sample of 80 staff nurses were selected conveniently for the study. The conceptual framework of the study was based on Nola. J. Pender's Health Promotion Model. A non-experimental descriptive approach was chosen for the study. The data for the present study were collected using semi-structured questionnaire. The finding of the study shows that 97.5% of the selected sample had poor knowledge and 2.5% had average knowledge on body mechanics. The study revealed that there is significant association between knowledge on body mechanics and selected demographic variables like year of experience and educational status.

Key words: Body mechanics.

INTRODUCTION

Body mechanics is the term used to describe the efficient, coordinated, and safe use of the body to move objects and carry out the activities of daily living**.** The major purpose of body mechanics is to facilitate the safe and efficient use of appropriate muscle groups to maintain balance, reduce the energy required, reduce fatigue, and decrease the risk of injury. Good body mechanics is very much essential for the nurses.[1] Nursing profession is one of the most physically demanding profession, which results in high prevalence of musculoskeletal disorders.[2]

Providing nursing care is often related to frequent flexion and extension of the body, including manual lifting.[3] Activities associated with lifting and transferring patients represent major physical demands for nursing personnel, which in many cases result in injuries. [4]

Biomechanical research shows that the human effort in manual lifting, change of patient position in bed, patient transfer from bed to wheelchair or stretcher, patient transfer from wheelchair to toilet and vice versa are the major risks for developing Low Back Pain.[5]

Everyday ten nurses have to leave the profession as a direct result of back injury. Back injury accounts for more time away from work than any other single complaint. Patient handling, lifting and moving exerts more pressure on nurses back than other aspects of their daily working routine.[6]

PROBLEM STATEMENT

A study to find out the knowledge on body mechanics among staff nurses in selected hospitals of Calicut district.

OBJECTIVES

1. To find out the level of knowledge regarding body mechanics among staff nurses.

2. To find out the association between the knowledge on body mechanics and selected demographic variables

3. To prepare an information booklet on body mechanics for staff nurses.

Hypothesis
H_1: There will be a statistically significant association between knowledge of staff nurses regarding body mechanics and selected demographic variables.

Assumptions
- Staff nurses have some knowledge regarding body mechanics.
- Knowledge on body mechanics among staff nurses will help them to apply it in their practice and to prevent complications to both nurses and patients.
- Application of improper body mechanics may lead to complication among both health care workers and patients.

MATERIALS AND METHODS

The study was conducted among 80 staff nurses who were selected conveniently for the study. A non-experimental descriptive approach was chosen for the study. The data for the present study was collected by using semi- structured questionnaire consisting of two parts- part A Demographic data and Part B Knowledge Questionnaire. Score 1 (one) for correct answer and 0(zero) for wrong answers. Scores are categorized into poor knowledge (0-15 marks), average knowledge (16-20 marks), good knowledge (21-25 marks). After obtaining permission from institutional ethical committee, the researchers approached the nursing students who met the inclusion criteria and explained the purpose of the study. Informed consent was obtained and the anonymity of the information and confidentiality was assured by the researcher.

RESULTS

The results were categorized as,

Section 1: Analysis of demographic data.

Section 2: Analysis of knowledge of staff nurses on body mechanics.

Section 3: Association between knowledge on body mechanics and selected demographic variables.

Section1: Distribution of staff nurses based on demographic variables

Table 1 Distribution of staff nurses based on age, gender and religion   **(n=80)**

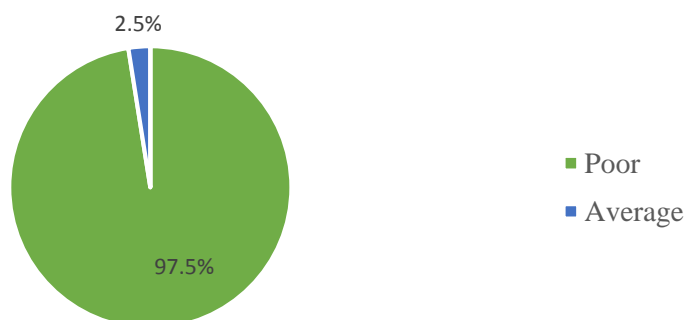| Variables	Frequency (f)	Percentage (%)
Age in years		
20-25	48	60
26-30	23	28.75
31-35	9	11.25
Gender		
Male	10	12.5
Female	70	87.5
Religion		
Hindu	36	45
Muslim	8	10
Christian	36	45

Data depicted in table 1 shows that most of the sample belongs to the age 20-25 years and majority (87.5%) are females.

Majority (73.75%), of the sample has undergone B.Sc. Nursing program**.** Percentage of sample having an experience of 1-2 years and above 3 years is 41.25 each. Most (66.25%) of the sample are unmarried. Most (62.5%) of the sample had previous history of musculoskeletal disorders and majority (82.5%) has not taken any treatment.

Section 2: Analysis of knowledge of staff nurses on body mechanics.

Figure 5

Distribution of sample based on knowledge on body mechanics.   (n=80)

Data depicted in figure 5 shows that majority (97.5%) of the sample have poor knowledge and 2.5% have average knowledge on body mechanics.

Section 3: Association between knowledge on body mechanics and selected demographic variables.

Table 4 Association between knowledge on body mechanics and selected demogrphic variables.
(n=80)

Variables	Table value	df	Chi-square
Gender	3.84	1	3.22
Educational status	5.99	2	8.637
Year of experience	3.84	1	11.1
Previous history of musculoskeletal disorders	3.84	1	0.820
Previous history of treatment for musculoskeletal disorders	3.84	1	1.5004

Data depicted in table 4 shows that there is a significant association between knowledge on body mechanics and selected demographic variables like educational status and year of experience.

Discussion

The present study revealed majority (97.5%) of the sample have poor knowledge and 2.5% have average knowledge on body mechanics. There is a significant association between knowledge on body mechanics and selected demographic variables like educational status and year of experience. This is consistent with the findings of study conducted to find the extent of knowledge and practice among the staff nurses in IMS AND SUM hospital. Hundred staff nurses were selected by purposive sampling technique and data was collected from the staff nurses who were in age group of 22-25 years, 87% of the sample were female and 49% had diploma in nursing. The extent of knowledge in these 100 staff nurses were 42% staff nurses are having moderate and good degree of knowledge, 14 % of excellent, 2% of staff nurse with slight knowledge. The association between demographic data and knowledge reveals that knowledge is significantly associated with the gender, educational qualification, department of service and year of service. Rest of the other socio demographic variables are having no significant association.[7]

LIMITATIONS
- Sample size is small which may limit the generalization of study findings.
- The present study was limited to a selected hospitals of Calicut district.
- Only the knowledge is assessed and practice is not assessed.

RECOMMENDATIONS
- Similar study can be replicated on a large sample.
- A study can be conducted on the effectiveness of teaching program on knowledge of staff nurses regarding the body mechanics.
- A study can be conducted regarding the practice of body mechanics among staff nurses.

CONCLUSION
The present study conclude that nurses have poor knowledge regarding body mechanics and due to this reason they are suffering from various health issues like back pain. So it is necessary to improve their knowledge through in-service education.

REFERENCES

1. Kozier B,Erb G,Berman A,Burke K. Fundamentals of Nursing:concepts,process and practice.5thEd.New Delhi:Pearson education;2007.[1]
2. Kee D,Seo S R.Musculoskeletal disorders among nursing personnel in Korea.International journal of industrial Ergonomics .2007 : 37.Available from : http://www.sciencedirect.com/science/article/pii/S01698141060024.[2]
3. Cromie J E, Robertson V.J,Best M O.Work related musculoskeletal disorders in physical therapists.Physical Therapy.2000 : 80(4) Available from : https://cdn.intechopen.com/pdfs-wm/36697.pdf.[3]
4. Marras W S,Davis K G,Kirking B C,Bertsche P K. A Comprehensive analysis of low-back disorder risk and spinal loading during the transferring and repositioning of patients using different techniques.Ergonomics.1999 July: 42(7). Available form : https://spine.osu.edu/sites/spine.osu.edu/files/uploads/Publications/1999/Ergonomics_1999_42-7_904-926.pdf.[4]
5. Toraman A, Ardahan M, Balyac O. The Effect of the Body Mechanic Behaviors on the Low Back Pain. Nursing Practice Today. 2014; 1(2).Available from : file:///C:/Users/friends/Downloads/16-31-1-SM.pdf.[5]
6. Sara.Ten more reasons every day.Nursing times.1996 Dec 4: 92 (49)[6]
7. Jayakrishnan K.Knowledge and practice among staff nurses regarding body mechanics.International journal of advances in nursing management.2016 Sep 1:4(3):p259-2636.Available from: http://www.ischolar.in/index.php/Ijanm/article/view/127458[7]