Knowledge and Practice of Body Mechanics Techniques among the Nurses

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Abstract: <u>*Purpose*</u>*: Poor body mechanics are often the cause of various musculoskeletal problems. Nursing is a job that needs lot of muscle exersion, because of which many are at risk for developing physical strains and spinal injuries. So purpose of the study was to assess the knowledge and practice of nurses regarding body mechanics. The secondary objective of the study was to find out correlation between the knowledge and practice of nurses regarding body mechanics. Relevance: Awareness can be created and advises can be given for different body mechanics principles in during work. Ergonomic training can be arranged according to the requirement.* <u>*Participants*</u>*: Data was collected from 301 nurses including 184 nursing students and 117 nursing staff with the non-probability purposive sampling. Methods: Descriptive approach was used with structured knowledge questionnaire and practice checklist from various government and non government hospitals and colleges. Analysis: Cross sectional Survey and descriptive correlation design was adopted for the study. Result: The extent of knowledge in 301 nurses are,56.4%-Good,41.4%-Moderate and 2.1% are having poor knowledge; 3.6%-Good, 62.9%-Average and 33.6% are doing Poor practice. There was a weak positive correlation between knowledge and practice of body mechanics, that was r=0.270. Correlation was significant at 0.001 the level (2-tailed).* <u>*Conclusion*</u>*: Though the nurses were having knowledge about body mechanic but less practicing it. Further studies can be done with the major sample size, including many areas of various citie, specific according to experience and according to specific demographic variable so that to generalise the results.Implications: Nurses need to be more educated about body mechanic technique and they should be emphasized to practice it in performing nursing procedure. This is important to ensure that the implications of the misuse of body mechanics such as back pain can be avoided.*

Keywords: Knowledge and Practice, Body Mechanics, Nurses

1. Introduction

Body mechanics is a term used to describe the ways we move as we go about our daily lives. It includes how we hold our bodies when we sit, stand, lift, carry, bend, and sleep. Body mechanics can be both good and bad and can have direct effects on back.[2] Proper body mechanics are vitally important for keeping our spine healthy. Poor body mechanics are often the cause of back problems.[1]

Musculoskeletal disorders are an important public health problem. Among them are back conditions, a complex problem for certain occupational groups, such as nursing personnel. Risk factors for back pain can be either of individual origin or related to the work place.[1] 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.[1]

According to Menzelet. al., musculoskeletal injuries can begin in nursing schools, with clinical activities that require lifting heavy patients, sustained awkward positions, and repeated stressful movements.[4] So Nurses need to know that manually lifting patients places them at tremendous risk of permanent spinal disability.

2. Purpose

So purpose of the study was to assess the knowledge and practice of nurses regarding body mechanics. The secondary objective of the study was to find out correlation between the knowledge and practice of nurses regarding body mechanics.

3. Methodology

Cross Sectional Survey study was conducted with probablity Purposive Sampling at various government and non government hospital's Operation theaters, ICUs, ICCUs and general and Special wards and colleges of Gandhinagar and Ahmedabad. Study was done over a period of 3 months 347 nursing students and nursing staff out of them 185 were students and 162 were Nursing staff

Staff nurses who were currently working at Hospitals, and has no mental or physical disabilities were included. Subjects who are not willing to participate and Severe musculoskeletal and Neurological and Other disabilities were excluded.

After obtaining permission from the concerned authority the research was started obtaining data from selected participants. Initially, the participants were explained in detail about the purpose of the study.

After obtaining individual participant's consent the confidentiality of the data was also ensured.

The equipment used in the form of questionnaire is divided into 2 parts, which must be completed by the respondent. It consists of 20 questions to describe the mechanics of the body, principles of body mechanics and back pain relationship with body mechanics.

The knowledge and Practice level was arbitrarily divided into three categories based on self administered knowledge and Practice questionnaire and accordingly scores were allotted.

	Knowledge	Practice
Poor	0-4	0-3
Average	5-8	4-6
Good	9-12	7&8

4. Result

The study findings revealed that 53.3% students and 46.7% were staff nurses. 89.6% were female and 10.4% were males. Almost all the working nurses were having years of experience between 15-30 yrs including staff as well as senior nurses working full time. 73% are having back pain, 10% are having neck pain and 17% are having pain at other regions of the body.
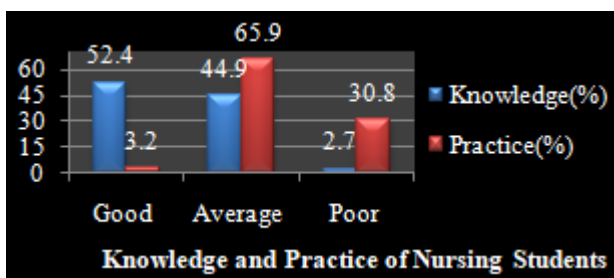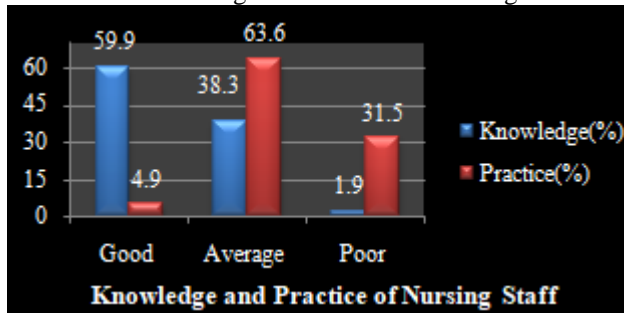

Table 1.1: Knowledge and Practice of Nursing Students

Knowledge and Practice of Nursing Staff

Pearson Correlation Coefficient was used to find out the correlation between Knowledge and Practice of body mechanics techniques amongst the student and Staff nurses.

The data showed that there is a Strong positive Correlation between knowledge and practice of body mechanics among staff nurses, that is $r = 0.346$ and also among student nurses ,that is $r=0.281$. Correlation is significant at 0.01 level (2-tailed).

5. Discussion

The result of the present stydy for staff nurses were supported by the study done by Moody et al on nurses working in elderly care wards and the cardiac care unit.

It was observed that each year 12% of nurses would prefer to move jobs to reduce back pain and 12 -18% is leaving nursing because of chronic back pain condition, even after National institute for safety and health occupation has issued

a work practices guide for manual lifting in 1981, to introduce healthy workers without risk of back pain.(5)

The result of the present study for practice of body mechanics was supported by a study designed to identify the usage of body mechanics in clinical settings and the occurrence of back pain among 56 nurses working in the medical, surgical, emergency and intensive care units of a state hospital in Turkey.

That study concludes that some of the nurses do not use body mechanics correctly and the majorities have low back pain. (6)

Those who have Average knowledge may arbitrarily practice it in their work.

6. Conclusion

The study result shows that almost all students and staffs have good knowledge regarding body mechanics but they did not practice it well even though they know the importance of this practice.

7. Clinical Implications and further studied

- The body mechanics principles should be applied regularly in daily work activities so that nurses become more aware and make a habit for it.
- During nursing studies, body mechanics principles should be explained during a demonstration by the instructor or staff so that nurses better understand how to use proper body mechanics.
- The hospital must provide posters related to body mechanics techniques while performing various working tasks.
- Develop and implement nurse benefit programs that would improve the work life of nurses
- Ergonomic Safety programmes for Nurses can be administered to prevent the occupational health hazards.
- Further studies can be done by analysing the other demographic variables like age, gender, religion, place of residence, type of family, previous knowledge and source of information and designation

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