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Knowledge, attitude and practice on body mechanics among staff nurses in critical care units

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Abstract

Musculoskeletal disorders are the important health problems among nurses. It's mainly because of following improper body mechanics while providing care to the patient and lifting heavy objects. Nurses should use the scientific knowledge on body mechanics to practice in their daily activities.

Objectives: To Assess the Level of Knowledge, Attitude and Practice on Body Mechanics Among Staff Nurses, To find the Correlation between Knowledge, Attitude and Practice on Body Mechanics among Staff Nurses, To find out the Association between the Level of Knowledge, Attitude and Practice with the Selected Demographic Variables.

Methodology: Non- Experimental Descriptive method was used and the study was conducted in Critical Care Units at PIMS, Puducherry in the month of September & October 2019. 70 Staff nurses were selected using purposive sampling technique. Self-administered questionnaire was used to assess the level of knowledge, 3 point Likert's scale was used to assess the level of attitude and checklist was used to observe the practice on Body Mechanics.

Result: Showed 5(7%) had Inadequate Knowledge, 54(77%) had Moderately Adequate knowledge and 11(16%) had Adequate knowledge, 6 (9%) had unfavourable attitude, 61(87%) had favourable attitude and 3(4%) had most favourable attitude and 3(4%) had inadequate Practice, 65(93%) had moderately adequate practice, 3 (4%) had adequate practice on Body Mechanics. There was significant association found between age and level of Practice (p= .012).

Conclusion: The study result showed that majority of staff nurses had moderately adequate knowledge, favourable attitude and moderately adequate practice. Therefore the study concluded that there is need for in-service education program and training on body mechanics among Health Care Professionals.

Keywords: Body mechanics, staff nurses, critical care units

Introduction

Body mechanics means the way of moving the body parts during the daily living activities. It includes how the person holds the body parts when they sit, stand, lift, bend and sleep. Body mechanics is very important to keep the persons spine in a healthy manner. Health care professionals should have adequate knowledge about body mechanics. Nurse's work requires pushing, lifting and pulling while providing care to the patient. When these activities are performed for prolonged period can cause muscle strain which can leads to muscle injury [1].

At International level a descriptive study was conducted to spot the incidence of musculoskeletal disorders among female nurses in rural hospital, Japanese. Data was collected among 305 female staff nurses through interview method. Result showed that 59% were reported as having low back pain, 47% had shoulder pain, 28% had neck pain, 16%had knee pain and 12% had upper leg pain. And result also

reveals that staff nurses working in surgical department are more prone to develop musculoskeletal disorder and it's common among registered nurses [2].

At National level a study was done to spot the incidence and risk factor for back pain among nurses in chandigar. It was conducted among 250 staff nurses, result shows that 87% had the complaints of back pain after 2 years of complete service within the same department [3].

Objectives

1. To Assess the Level of Knowledge, Attitude and Practice on Body Mechanics Among Staff Nurses
2. To find the Correlation between Knowledge, Attitude and Practice on Body Mechanics among Staff Nurses
3. To find out the Association between the Level of Knowledge, Attitude and Practice with the Selected Demographic Variables

Methodology

Non- Experimental Descriptive method was used to assess the level of knowledge, attitude and practice on body mechanics among staff nurses in critical care units. The study was conducted in critical care units (ICU-I, ICU-II and CCU) at Pondicherry Institute of Medical Sciences (PIMS), Puducherry in the month of September & October 2019. 70 Staff nurses were selected by using purposive sampling technique. Self-administered questionnaire was used to assess the level of knowledge, 3 point Likert's scale was used to assess the level of attitude and checklist was used to observe the practice on Body Mechanics.

Data was collected for 4 weeks during the month of September to October2019. Per day 3 to 5 Staff Nurses were observed for 3 times on 2 procedures like moving the patient to one side of the bed and transferring the patient from bed to stretcher. In 22 days 70 Staff Nurses were observed. The average of 3 observations was taken for the analysis. After completing the observation on the practice from the entire study participant, participant information sheet was provided the purpose and procedure was explained clearly and informed consent was obtained from the Staff Nurses to assess the level of knowledge and attitude on body mechanics. The self-administered questionnaires which consist of demographic variables, knowledge and attitude regarding body mechanics were given to the staff nurses and information was obtained from them. Each staff nurses were given 20 minutes to answer the questions. The data was collected from the study participants within 3 days. Data was analyzed for frequency, percentage, mean and standard deviation. Correlation between level of knowledge, attitude and practice was analyzed by using Spearman's correlation coefficient. Association between the demographic variables and level of knowledge and attitude was analyzed by using Fisher's exact test.

Result

Table 1: Frequency and Percentage Distribution of Staff Nurses According to Age, Gender, Educational qualification, years of work experience, area of work n= 70

Sl. No.	Demographic variables	Categories	Frequency (f)	Percentage (%)
1.	Age	21 - 25 yrs	30	43
		26 - 30 yrs	40	57
2.	Gender	Male	10	14
		Female	60	86
3.	Educational Qualification	B.Sc. (N)	59	84
		P.B.B.Sc. (N)	11	16
4.	Years of Work Experience	< 3 yrs	33	47
		≥ 3 yrs	37	53
5.	Area of work	ICU-I	21	30
		ICU-II	26	37
		CCU	23	33

Table: 1 shows that majority of 40 (57%) of staff nurses belongs to age group of 26-30 years. Majority of them 60 (86%) were Females. Majority 59 (84%) of the participants had completed B.Sc. Nursing. Majority 37 (53%) of staff nurses had more than or equal to three years of work experience.

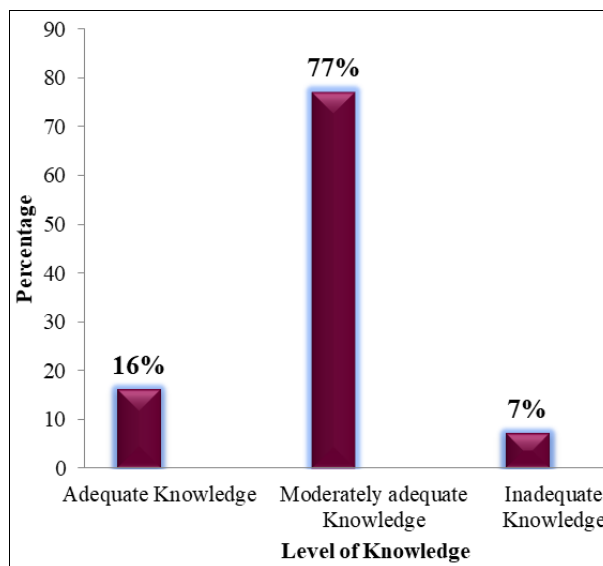**Distribution of staff nurses according to level of knowledge on body mechanics n=70**

Fig 1: Level of Knowledge on Body Mechanics among Staff Nurses in Critical Care Units

Figure 1, indicates that, 11(16%) of staff nurses had adequate knowledge, 54(77%) of them had moderately adequate knowledge and 5(7%) of them had inadequate knowledge regarding body mechanics.

Distribution of staff nurses according to level of attitude on body mechanics n=70
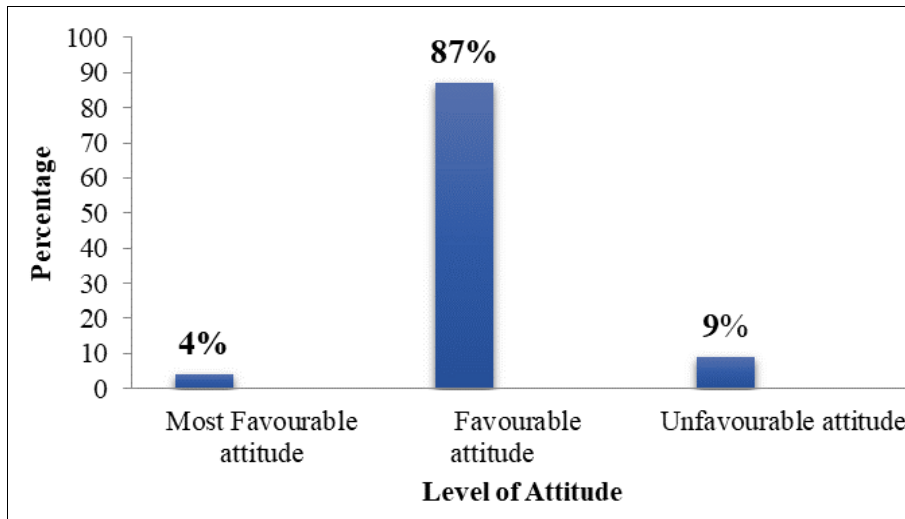

Fig 2: Level of Attitude on Body Mechanics among Staff Nurses in Critical Care Units

Figure 2, shows that, 3(4%) staff nurses had most favourable attitude, 61(87%) of them had favourable attitude and 6 (9%) of them had unfavourable attitude towards body mechanics.

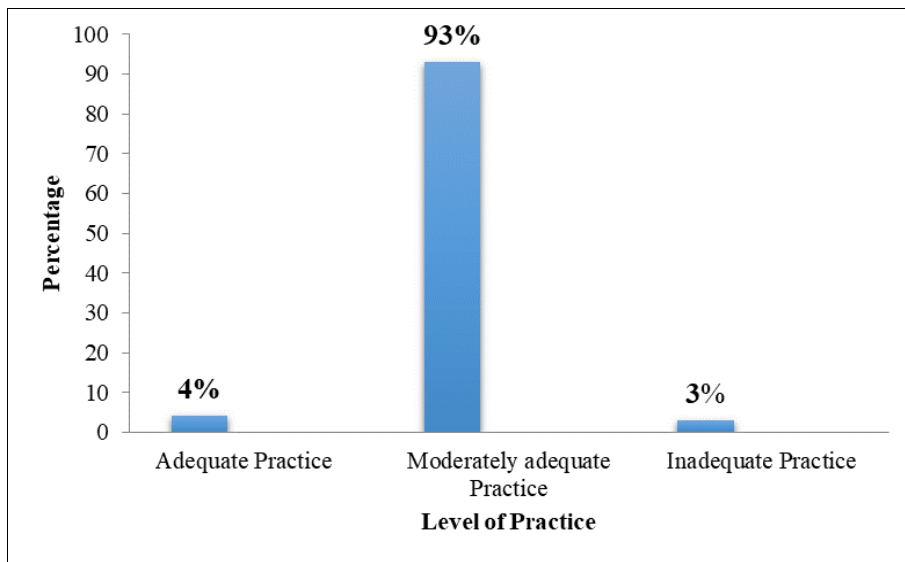**Distribution of staff nurses according to level of practice on body mechanics n=70**

Fig 3: Level of Practice on Body Mechanics among Staff Nurses in Critical Care Units

Figure 3, shows that 3(4%) of Staff Nurses were having adequate Practice, 65(93%) had moderately adequate practice and 3 (4%) had inadequate practice with regard to Body Mechanics.

Correlation between knowledge attitude and practice on body mechanics among staff nurses in critical care units

Table 2: Correlation between Level of Knowledge, Attitude and Practice on body mechanics among staff nurses n=70

The study variables	Mean	SD	r Value	p-Value
Level of Knowledge	11.57	2.20	0.236	0.049* S
Level of Attitude	14.81	2.74		
Level of Practice	14.77	2.17	-0.185	0.126 NS

NS = Statistically Not Significant (>0.05 p value)
S = Statistically Significant (<0.05 p value)

Table 2 shows that there was a correlation between the level of knowledge and attitude on body mechanics and p-value were 0.049 which was statistically significant and there is no correlation between the level of knowledge and Practice.

Association between knowledge, attitude and practice on body mechanics with selected demographic variables

Table 3: Association between Level of Knowledge on Body Mechanics with Age, Gender, Educational qualification and Years of work Experience n=70

Sl. No.	Demographic variables		p- Value
1.	Age	21-25 yrs	0.572 NS
		26-30 yrs	
2.	Gender	Male	0.075 NS
		Female	
3.	Educational Qualification	B.Sc. (N)	0.176 NS
		P.B.B.Sc. (N)	
4.	Years of Work Experience	< 3 yrs	0.107 NS
		≥ 3 yrs	

NS = Statistically Not Significant (>0.05 p value)

Table 3, Shows that there was no significant association between level of knowledge with Age, Gender, Educational Qualification and years of work experience.

Table 4: Association between Level of Attitude on Body Mechanics with Age, Gender, Educational qualification, years of work Experience n=70

Sl. No.	Demographic variables		p- Value
1.	Age	21 - 25 yrs	0.203 NS
		26 - 30 yrs	
2.	Gender	Male	0.738 NS
		Female	
3.	Educational Qualification	B.Sc. Nursing	0.287 NS
		P.B.B.Sc. Nursing	
4.	Years of Work Experience	< 3 yrs	0.395 NS
		≥ 3 yrs	

NS = Statistically Not Significant (>0.05 p value)

Table 4, Shows that there was no significant association between level of Attitude with Age, Gender, Educational Qualification and years of work experience

Table 5: Association between Level of Practice on Body Mechanics with Age, Gender, Educational qualification, years of work Experience n=70

Sl. No.	Demographic variables		p- Value
1.	Age	21 - 25 yrs	0.012* S
		26 - 30 yrs	
2.	Gender	Male	0.549 NS
		Female	
3.	Educational Qualification	B.Sc.(N)	0.586 NS
		P.B.B.Sc. (N)	
4.	Years of Work Experience	< 3 yrs	0.407 NS
		≥ 3 yrs	

S = Statistically Significant (<0.05 p value).

Table 5, Shows that there was significant association between Level of Practice with age of the staff nurse (p= 0.012).

Implications, recommendations
Implications
Nursing Practice
- In service education can be planned for staff nurses to update the level of knowledge regarding Body Mechanics.
- The new employees can be oriented during induction about Body Mechanics.

Nursing Education
- Training program for nursing student regarding Body Mechanics can be planned.
- Continuous nursing education can be planned for nursing fraternity to update knowledge and importance of Body Mechanics.

Nursing Administration
- The necessary information regarding Body Mechanics can be displayed through poster and boards.
- The nurse administrator can encourage the staff nurses to follow the principles of Body mechanics while providing care to the patient.

- Policy/ protocol to be made for credit based learning on body mechanics

Nursing Research
- This study can serve as a further reference for nursing personnel

Recommendations
On the basis of the finding of the study the following recommendation were made-
- A similar study can be done in general wards.
- A comparative approach can be used to know the level of knowledge, attitude and practice among staff nurses in critical care units and in general wards.
- The study can be replicated with a large number of staff nurses for generalization.
- In-service education on Body Mechanics can be organized for staff nurses.

Conflict of Interest
Not available

Financial Support
Not available

Conclusion
The study results showed that majority of staff nurses had moderately adequate knowledge, favourable attitude and moderately adequate practice on Body Mechanics. Therefore the study concluded that there is a need for in-service education program and training on Body Mechanics among staff nurses.

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