A STUDY TO ASSESS THE EFFECTIVENESS OF THE EDUCATIONAL PROGRAMME ON KNOWLEDGE AND PRACTICE REGARDING BODY MECHANICS AMONG STAFF NURSES IN SELECTED HOSPITAL AT BAREILLY (U.P.).

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Abstract

The aim of study sought to increase the knowledge and practice regarding body mechanics among staff nurses working in Ganga Sheel Advance Medical Institute, Bareilly, U.P. The objective of study was To assess the knowledge and practice regarding body mechanics among staff nurses, To evaluate the effectiveness of educational programme on knowledge and practices regarding body mechanics among staff nurses, To find association between the post-test level of knowledge and practice regarding body mechanics and selected demographic variables. The sample was conducted at Gangasheel advance Ganga Sheel Medical Institute, Bareilly, U.P. Sample size: 60 samples were collected by a convenient sampling technique. Method: Data was collected using self-structured knowledge questionnaires and observational practice checklist. The collected data was organized in master data sheet and analyzed using descriptive and inferential statistics as per the objectives of the study. Results- the sample characteristics in the present study showed that out of 60 staff nurses, the majority of the participants majority of Staff Nurses 21(35) % were in the age group of 22-25 years, 18 (30%) were in the age group of 26-29 years 9 (15) % were in the age group of 30-33 years, and 12 (20%) were in age group of above 33 years. In gender, 22 (37%) were male and 38 (63%) were female, the majority of educational status, 36 (60%) were GNM, 12 (20%) were B.Sc. Nursing 9 (15) % were Post B.sc nursing and 3 (5%) were in M.sc nursing. Majority of staff nurses i.e. 25 (42%) were having 1-3 year experience, 14 (23 %) were having 4-6 years and 12(20%) were having <6 years. 9 (15) % were having experience of <1 years Staff nurse 45 (75 %) have area of working in ward, 8 (13%) were having area of working in ICU, 4 (7%) were having area of working in O.T and 3(5%) were having area of working in OPD. Majority of staff nurses, 9(15%) were fresher staff nurses, 28(47%) junior staff nurses, 17 (28%) were senior staff nurses and 6(10%) were nurse in-charge. The result revealed that There is no significant association between mean pre-test knowledge score with the age, gender, education of staff nurses as P value is greater than 0.05 level of significance, while there is significant association between mean pre-test knowledge score with year of experience, area of working and position of staff nurses as calculated P value is lesser than 0.05 level of significance. The obtained mean difference was found to be statistically significant. The calculated "t" value (7.74) is which are greater than the table value at 0.05 level of significance at df 59 (1.67). The mean Post test practice score of Staff Nurses is 21, which is higher than the mean Pre -test practice (15.5), with the mean difference of 5.5. The obtained mean difference was found to be statistically significant. The calculated "t" value is 8.1 which are greater than the table value at 0.05 level of significance at df (59).

Keywords: Educational programme, knowledge, Practice, Staff nurses.

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INTRODUCTION:

The term body mechanics is described as the ways to move while doing activities of daily living. It includes the technique for how someone holds the body when sitting, stands, lifts, carries, bend, and sleep.[2]

Utilizing proper body mechanics lowers the risk of suffering musculoskeletal injuries, improves body moments while physical activity, and prevents muscle strain and energy loss.[3]The movements we perform throughout the day when engaging in routine activities, such as sitting, standing, lifting, tugging, and walking, are referred to as body mechanics.

A nurse should possess in-depth scientific understanding of body mechanics and how to utilize it properly in daily practice. Muscles that are unable to give the optimum support and strength are pushed to exert themselves, which can lead to strain, injury, and weariness of the body's tissues.[4]

According to the World Health Organization, 800,000 disabilities adjusted Life Years are lost because of the LBP problem in the world One-third of the work loss occurring due to work accidents and occupational diseases is happening because of these disease group.[3]

According to biomechanical study, there are key human activities that increase the chance of developing LBP. maintain good physical health, refrain from being overweight, and have a supple and solid body. [4]

MATERIAL AND METHODS

Research design:
A pre-experimental research design is used in the study.

Research variables:

Independent variables:
The independent variable is the variable that is purposely manipulated or changed by the researcher also called the manipulated variable. In the present study an independent variable introduced by the investigator is administration of educational programme on body mechanics among staff nurses.

Dependent variables:
The variable known as the dependent variables also referred to as the criteria variable changes as the independent variable is altered by the researcher Dependent variable are the outcome variable of interest, the variable that are hypothesized to depend on or be caused by another variable, the attribute variable. In the present study the dependent variables and practice regarding body mechanics among staff nurses working in selected hospital.

Demographic variables:
It consists of six items such as age, gender, education level, year of experience, area of working, and position of staff nurses regarding body mechanics.

Setting:
In the research setting is selected hospital at Bareilly.

Sample:
Sample comprised of staff nurse's working in selected hospital at Bareilly.

Sample size:
Sample size in the research study consists of 60 staff nurses working in selected hospital at Bareilly.

SAMPLE CRITERIA:
Inclusion criteria:
- The Staff nurse who are working in selected hospital Bareilly.
- The staff nurse who are eager to take part in the study.
- The staff nurse who are available at the time of data collection.

Exclusion criteria:
- The staff nurses who were not available at the time of data collection.
- Staff nurses who were not willing to participate.

DEVELOPMENT OF THE TOOL:
Based on the objectives and conceptual framework of the study the tool used to collect data are structured knowledge questionnaire.
The following steps were involved in the development of the tool:
1. Review of research and non-research literature and opinion of experts
2. Developing questionnaire, checklist and Structured teaching programme
3. Establishing scoring of tools.

DESCRIPTION OF THE TOOL:

The tool is categorized into three categories which are as follows:

Section A: Demographic variables: `

It consists of six items such as age, gender, education level, year of experience, area of working, and position of staff nurses regarding body mechanics.

Section B: Structured knowledge questionnaire:

This section consists of 30 multiple choice questions. The scoring for each item is like '0' for wrong answer and '1' for right answer. structured observational checklist is an observational practice checklist was prepared to assess and evaluate the practice of staff nurses regarding body mechanics.

Section C: Structured observational checklist:

An observational practice checklist was prepared to assess and evaluate the practice of staff nurses regarding body mechanics

SECTION-I FINDING RELATED TO FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES

This section describes the demographic characteristics of the sample subjects under the study. The sample consisted of staff nurses. The data obtained described the characteristics pertaining to their age, gender, education status, years of experience, area of working and position of staff nurses. Frequency and percentage were computed for describing the sample characteristics. Table 1 represents the characteristics of samples.

Table 1: Frequency and percentage distribution of demographic variables

N=60

S. No.	DEMOGRAPHIC DATA	FREQUENCY (f)	PERCENTAGE (%)
1.	**Age of staff nurses** a. 22-25 years b. 26-29 years c. 30 -33 years d. Above 33 years	21 18 9 12	35% 30% 15% 20%
2.	**Gender of staff nurses** a. Male: b. Female:	22 38	37% 63%
3.	**Education of staff nurses** a. G.N.M Passed b. B.SC Nursing passed c. Post B.SC Nursing passed d. M.SC Nursing passed	36 12 9 3	60% 20% 15% 5%
4.	**Years of experience** a. <1 years b. 1-3 years c. 4-6 years d. <6 years	9 25 14 12	15% 42% 23% 20%
5.	**Area of working** a. Ward b. ICU c. O.T d. OPD	45 8 4 3	75% 13% 7% 5%
6.	**Position of staff nurses** 1. Fresher staff nurses 2. Junior staff nurses 3. Senior staff nurses 4. Nurse In charge nurses	9 28 17 6	15% 47% 28% 10%

SECTION II

FINDING RELATED TO KNOWLEDGE AND PRACTICE REGARDING THE BODY MECHANICS AMONG ICU STAFF NURSES BEFORE AND AFTER ADMINISTERED THE EDUCATIONAL PROGRAMME.

This section deals with the findings related to frequency and percentage distribution of knowledge and practice regarding the body mechanics among staff nurses before and after educational programme. The knowledge score was obtained through educational programme. The data were described and analysed using descriptive statistics.

Table 2: Frequency and percentage distribution of pre-test and post-test knowledge regarding the use of body mechanics.
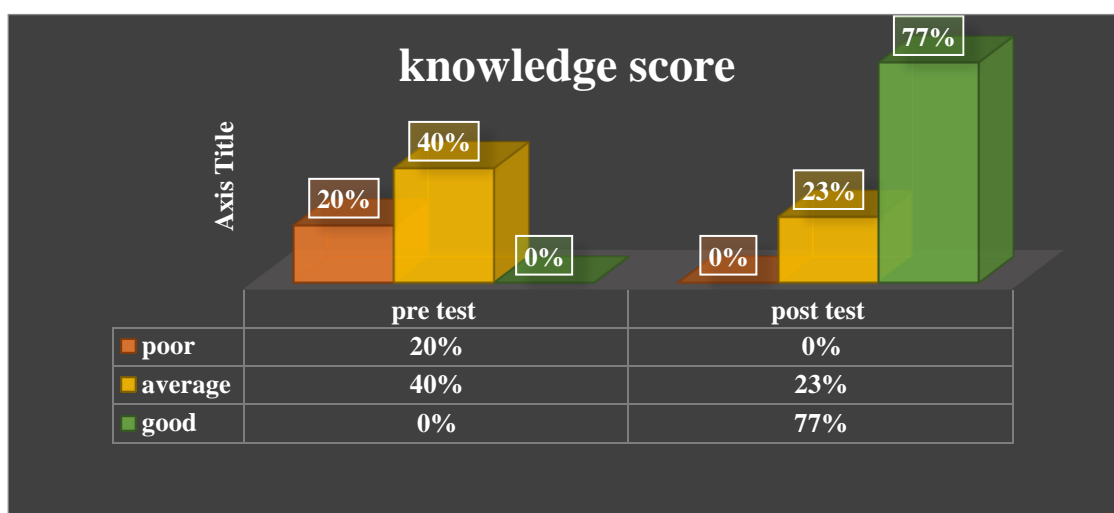
N=60

GRADING OF SCORE	GRADING OF KNOWLEDGE	PRE-TEST		POST-TEST	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
0-9	Poor	20	33%	0	0%
10-19	Average	40	67%	16	27%
20-30	Good	0	23%	44	73%

Data presented in the Table 2 shows that:

1. In Pre-test, maximum number of Staff Nurses i.e., 40 (67%) were having average knowledge, 20 (33%) were achieving a typical practise score and no were having good knowledge

2. In post-test the maximum number i.e., 44 (73%) were having good knowledge, 16 (27%) of nurses having average knowledge and no were having poor knowledge.

Fig-1: Bar diagram showing Frequency and Percentage distribution of pre-test and post-test knowledge score regarding body mechanics among staff nurses.

Table-3 Frequency and percentage distribution of pre-test and post-test practice score regarding Body mechanics

N=60

| GRADING OF SCORE	GRADING OF PRACTICE	PRE-TEST		POST-TEST	
		Frequency(f)	Percentage(%)	Frequency(f)	Percentage(%)
0-9	Poor	11	18%	2	3%
10-18	Average	31	52%	20	34%
19-27	Good	18	30%	38	63%

Data presented in the table 3 shows that-

1. In Pre-test practice, 11 (18%) were having poor practice, Majority of staff nurses. 31 (52%) were having average practice score and 18 (30%) having good practice score.

2. In post-test practice majority of staff nurses i.e 38 (63%) were having good knowledge, 20 (34%) were having average practice and 2(3%) were having poor knowledge.

3. Hence, the educational programme was effective in improving the practice regarding the body mechanics.
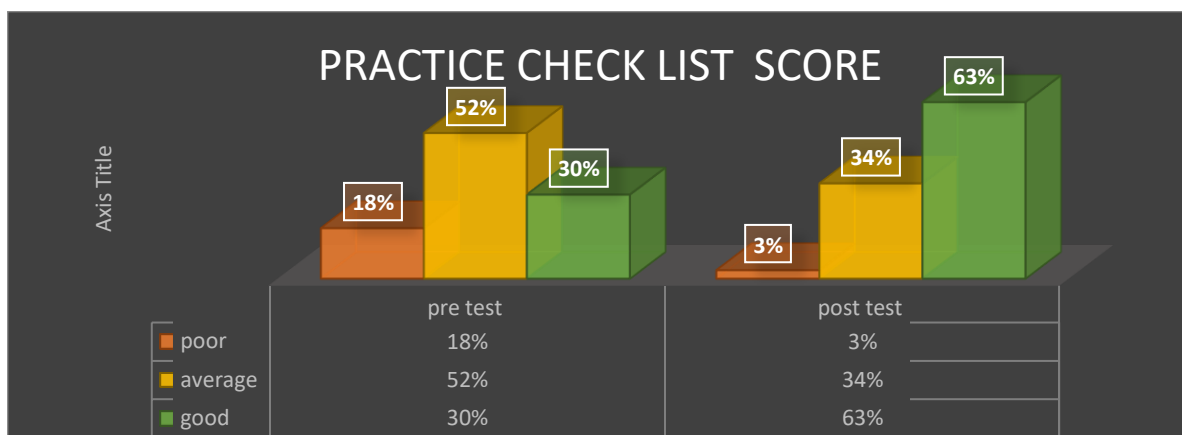
Fig-2: Bar diagram showing Frequency and Percentage distribution of pre-test and post-test practice score regarding the body mechanics among staff nurses.

SECTION III
FINDING THE MEAN, MEAN DIFFERENCE, STANDARD DEVIATION AND "t" VALUE OF KNOWLEDGE AND PRACTICE REGARDING THE BODY MECHANICS AMONG STAFF NURSE'S.

Table-4: Mean, mean difference, standard difference and 't' value of knowledge regarding the body mechanics.

H_{01}. There is no significant difference between mean pre-test knowledge score and mean post-test knowledge regarding the body mechanics among staff nurses at 0.05 level of significant.

N=60

S.NO	MEAN	MEAN DIFFERENCE	SD	*t VALUE
Pre test	11.8	10.2	3.4	
Post test	22		3.16	7.74

df (59) = 1.6 at 0.05 level of significance

The Data presented in table 4 shows that-

1. The mean Post test knowledge score of Staff Nurses is 22, which is higher than the mean Pre-test practice (11.8), with the mean difference of 10.2. The obtained mean difference was found to be statistically significant.

2. The calculated "t" value (7.74) is which are greater than the table value at 0.05 level of significance at df 59 (1.67).
3. Hence, it is concluded that the planned teaching methods were successful in improving staff nurses' understanding of body mechanics.
4. So null H_{01} is rejected and research hypothesis is accepted H_1.

Table- 5 Mean, mean difference, standard deviation and 't' value of practice regarding the body mechanics.

H_{02}. There is no significant difference between mean pre-test practice score and mean post-test practice score regarding the body mechanics among staff nurses at 0.05 level of significant.

N=60

S.NO	MEAN	MEAN DIFFERENCE	SD	t VALUE
Pre test	15.5	5.5	5.4	8.1
Post test	21		4.2	

df (59) = 1.67 at 0.05 level of significance

The Data presented in table 5 shows that
1) The mean Post test practice score of Staff Nurses is 21, which is higher than the mean Pre-test practice (15.5), with the mean difference of 5.5. The obtained mean difference was found to be statistically significant.

2) The calculated "t" value is 8.1 which are greater than the table value at 0.05 level of significance at df (59).
3) Hence, it is concluded that the educational programme was effective in increasing the practice regarding the body mechanics among staff nurses.

4) So null H_{02} is rejected and research hypothesis is accepted H_2.

RESULTS:

- Revealed that majority of staff nurses 21(35) % were in the age group of 22-25 years, 18 (30%) were in the age group of 26-29 years, 9 (15) % were in the age group of 30-33 years, and 12 (20%) were in age group of above 33 years.
- In gender, 22 (37%) were male and 38 (63%) were female
- With regards of educational status, 36 (60%) were GNM, 12 (20%) were B.Sc. Nursing 9 (15) % were Post B.sc nursing and 3 (5%) were in M.sc nursing.
- Staff Nurses of 9 (15) % were having experience of <1 years, 25 (42%) were having 1–3-year experience, 14 (23 %) were having 4-6 years and 12(20%) were having <6 years.
- Staff nurse 45 (75 %) have area of working in ward, 8 (13%) were having area of working in ICU, 4 (7%) were having area of working in O.T and 3(5%) were having area of working in OPD.
- With regards of position of staff nurses, 9(15%) were fresher staff nurses, 28(47%) junior staff nurses, 17 (28%) were senior staff nurses and 6(10%) were nurse in-charge.

DISCUSSION:
SECTION -1
FINDINGS RELATED TO DEMOGRAPHIC CHARACTERISTICS OF STAFF NURSES

- Majority of Staff Nurses 21(35) % were in the group of 22-25 years, 18 (30%) were in the age group of 26-29 years, 9 (15) % were in the age group of 30-33 years, and 12 (20%) were in the age group of above 33 years.
- In gender, 22 (37%) were male and 38 (63%) were female
- With regards of educational status, 36 (60%) were GNM, 12 (20%) were B.Sc. Nursing 9 (15) % were Post B.sc nursing and 3 (5%) were in M.sc nursing.
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- With regards of position of staff nurses, 9(15%) were fresher staff nurses, 28(47%)

junior staff nurses, 17 (28%) were senior staff nurses and 6(10%) were nurse in-charge

SECTION II
FINDING RELATED TO KNOWLEDGE AND PRACTICE THE BODY MECHANICS AMONG ICU STAFF NURSES BEFORE AND AFTER ADMINISTERED THE EDUCATIONAL PROGRAMME.

1. In Pre-test, maximum number of Staff Nurses i.e., 40 (67%) were having average knowledge, 20 (33%) were having poor knowledge and no were having good knowledge
2. In post-test the maximum number i.e. 44 (73%) were having good knowledge, 16 (27%) of nurses having average knowledge and no were having poor knowledge.
3. In Pre-test practice, 11 (18%) were having poor practice, Majority of the nursesi.e. 31 (52%) were having average practice score and 18 (30%) having good practice score.
4. In post-test practice majority of staff nurses i.e 38 (63%) were having good knowledge, 20 (34%) were having average practice and 2(3%) were having poor knowledge.
5. Hence, the educational programme was effective in improving the practice regarding the body mechanics.

SECTION III
FINDING THE MEAN, MEAN DIFFERENCE, STANDARD DEVIATION AND "t" VALUE OF KNLOLEDGE AND PRACTICEREGARDING THE BODY MECHANICS AMONG STAFF NURSE'S

1. The mean Post test knowledge score of Staff Nurses is 22, which is higher than the mean Pre-test practice (11.8), with the mean difference of 10.2. The obtained mean difference was found to be statistically significant.
2. The calculated "t" value (7.74) is which are greater than the table value at 0.05 level of significance at df 59(1.67).
3. Hence, it is concluded that the planned teaching programme was effective in increasing knowledge regarding the body mechanics among staff nurses. SO null H_{01} is rejected and research hypothesis is accepted H_1
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5. The calculated "t" value is 8.1 which are greater than the table value at 0.05 level of significance at df (59).
6. Hence, it is concluded that the educational programme was effective in increasing the practice regarding the body mechanics among staff nurses. So null H_{02} is rejected and research hypothesis is accepted H_2.

CONCLUSION:
To conclude the main aims of this study was to assess the effectiveness of educational programme on level of knowledge and practice regarding body mechanics among staff nurses. In order to fulfil this objective a questionnaire and checklist was administered and data was obtained and then analysis of the data was done. The conclusion was drawn on the finding that the educational programme was effective by observing the significant difference between level of pre-test and post-test knowledge**.**

CONFLICTS OF INTEREST:
Regarding the publishing of this work, the authors state that they have no conflicts of interest.

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