

A Study to Assess the Effectiveness of a Planned Teaching Programme on Body Mechanics in Selected Nursing Interventions in Terms of Knowledge and Practice among Staff Nurses Working in General Ward of Selected Hospitals, Kolkata and West Bengal

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ABSTRACT

Background: Body mechanics is a term used to describe the ways we move as we go about our daily lives. Poor body mechanics are often the cause of back problems. Nurses do experience a significantly increased incidence of back problems, back pain, or injury, in comparison with other occupational groups. The study is to find the effectiveness of a planned teaching programme on body mechanics in selected nursing interventions in terms of knowledge and practice among staff nurses working in general ward of selected hospitals, Kolkata, West Bengal.

Materials and Methods: Pre-experimental one group pre-test post-test design was adopted for the study. In this study 30 staff nurses who were working in general ward were selected by using convenience sampling technique. The tool used for the study were observational check list on practice of body mechanics in selected nursing interventions and Structured knowledge questionnaire on body mechanics in selected nursing Interventions. The analysis was done by using both descriptive and inferential statistics in terms of frequency distribution, percentage, mean, standard deviation, paired 't' test and chi-square and Co-efficient correlations.

Result: Result shows that in practice of occupied bed making the mean, median of the post-test practice score (17.7, 18.3) were found to be slightly higher than the mean, median of pre-test practice score (10.4, 10.3). In lifting and shifting of client from bed to stretcher, the mean, median of the post-test practice score (9.8, 9.9) were found to be slightly higher than the mean, median of pre-test practice score (5.7, 6.3). Also shows that the mean, median of post-test knowledge score were (28, 28.4) was higher than the mean, median of pre-test knowledge score (17.3, 16.7). The data also shows that the mean difference of pre-test and post-test practice score of occupied bed making was 7.3 Computed 't' (18.7) was found statistically significant at the level of 0.05 significance ('t' ₍₂₉₎ =2.05 p<0.05) and data also shows that the mean difference of pre-test and post-test practice score In lifting and shifting of client from bed to stretcher, was 4.1 Computed 't' (12.8) was found statistically significant at the level of 0.05 significance ('t' ₍₂₉₎ =2.05 p<0.05). The mean difference of pre-test and post-test knowledge score was 10.7. Computed 't' (11.8) was found statistically significant at the level of 0.05 significance ('t' ₍₂₉₎ =2.05 p<0.05). So, study findings revealed that structured teaching programme regarding body mechanics in selected nursing intervention is effective in improving knowledge and practice of staff nurses. The study showed that there was no significant association between pre-test level of knowledge and practice with selected variables. But there is significant association between pre-test level of knowledge with selected variable like total year of clinical

experience in general ward. Study also revealed that there is correlation between the improvement knowledge and practice of staff nurses regarding body mechanics in selected nursing interventions.

Conclusion: The structured teaching programme will help to improve the knowledge and practice of staff nurses and thereby prevented the staff nurses from developing musculoskeletal injuries.

Keywords: Effectiveness, planned teaching programme, body mechanics, nursing interventions, knowledge, practice, staff nurses & general ward

INTRODUCTION

Nurses are arguably the most critical element in the delivery of primary care within any healthcare organisation, either private or public. Within this environment, despite the availability of various types of lifting equipment and aids, the nurse's role will frequently involve manually lifting or assisting in movement and lifting of patients as part of routine activities such as toileting or bed to chair transfer, or mobilising.¹

Work-related low back disorder in nurses is significant problem worldwide. The incidence of Work-related low back disorder is also high in Italy and in the U.S nurses have the highest incidence of disabling work-related low back disorders among all professionals. Bending, twisting, lifting heavy weights and making forceful movements, as during patient handling and transfers, are risk factors for work-related low back disorders. The study found that approximately 70% of the work-related low back disorders in nurses resulting in time of work happened while transferring or moving patients; orthopedics and Intensive care unit were the departments where work-related low back disorder happened most often.²

MATERIALS AND METHODS

In this study Pre-experimental one group pre-test post-test design was adopted. In this study 30 staff nurses who were working in general ward were selected by using convenience sampling technique. A study was conducted by using Observational check list on practice of body mechanics in selected nursing interventions and structured knowledge questionnaire on body mechanics in selected nursing Interventions. The analysis was done by using both descriptive and inferential statistics in terms

of frequency distribution, percentage, mean, standard deviation, paired 't' test and chi-square and Co-efficient correlations. To ensure the reliability of the tool, observational checklist was established for equivalence by interrater reliability. Occupied bed making reliability was 'r' 0.84 and Lifting and shifting of patient from bed to stretcher reliability was: - 'r' 0.83. The reliability of internal consistency was computed by using split - half technique followed by Spearman Brown prophecy formula. The reliability was found 'r' 0.83. Thus the tool developed was found to be reliable.

RESULTS AND DISCUSSION

Characteristics of demographic variables of the staff nurses

With regards to age Majority of the staff nurses 24(80%) were within the range of 21-25 years of age. Majority of the staff nurses 23(77%) were female. Majority of the staff nurses 16(53%) were G.N.M qualification. Majority of the staff nurses 30(100%) were unmarried. Majority of the staff nurses 15(50%) have less than 1 year total experience in general ward. Majority of the staff nurses 22(73%) did not participated in in-service programme related to body mechanics

Mean, mean difference, 't' value of pre-test and post-test of practice scores of staff nurses on body mechanics

Table: 1. Occupied bed making n=30

Practice score	Mean	Mean Difference	't' Value
Pre-test	10.4	7.3	18.7
Post-test	17.7		

't' ₂₉ = 2.05 value.p< 0.05, * Significant

The data presented in table 1 shows that the mean difference of pre-test and post-test practice score in occupied bed

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making was 7.3 Computed 't' (18.7) was found statistically significant at the level of 0.05 significance ('t' (29) =2.05 p<0.05). So, there was significant gain in practice scores of staff nurses on body mechanics in occupied bed making after administration of planned teaching programme.

Table: 2. Lifting and shifting of the patient from bed to stretcher n=30

Practice score	Mean	Mean Difference	't' Value
Pre-test	5.7	4.1	12.8
Post-test	9.8		

't' 29 = 2.05 value.p< 0.05, * Significant

The data presented in table 2 shows that the mean difference of pre-test and post-test practice score in Lifting and shifting of the patient from bed to stretcher was 4.1 Computed 't' (12.8) was found statistically significant at the level of 0.05 significance ('t' (29) =2.05 p<0.05). So, there was significant gain in practice scores of staff nurses on body mechanics in lifting and shifting of the patient from bed to stretcher after administration of planned teaching programme

Table: 3. Mean, mean difference, standard deviation of difference, standard error of mean difference and 't' value of Knowledge scores of staff nurses on body mechanics n-30

Knowledge scores	Mean	Mean D	SD _D	SE	't' value
Pre-test	17.3	10.7	2.2	0.9	11.8
Post-test	28				

t(29)=2.05, at 0.05 level of significant.

The data presented in table 3 shows that the mean difference of pre-test and post-test knowledge score was 10.7. Computed't' (11.8) was found statistically significant at the level of 0.05 significance ('t' (29) =2.05 p<0.05).So, there was significant gain in knowledge scores of staff nurses on body mechanics in selected nursing interventions after administration of planned teaching programme.

Association between the level of practice with selected variables among staff

There were no significant association between level of practice with selected variable like age, gender, professional qualification, marital status, and total year of clinical experience in

general ward and Participation in in-service programme relate to body mechanics.. Hence the researcher accepted the null hypothesis and rejected the research hypothesis.

Association between the pre-test knowledge score with selected variables among staff nurses on body mechanics in selected nursing interventions

There were no significant association between level of knowledge with selected variable like age, gender, professional qualification, marital status, and participation in in-service programme related to body mechanics. And there is association between level of knowledge with selected variable like total year of clinical experience in general ward. Hence the researcher accepted the null hypothesis and rejected the research hypothesis.

Table: 4. Correlation between knowledge and practice score of staff nurses on body mechanics. n-30

	Mean	r value	significance
Knowledge score	28	* 0.8	Significance at 0.05 level
Practice score	27.3		

*Significant

The data presented in the table 4 shows that there was significant correlation between the post test knowledge score and post test practice score. The co-relation was computed using Pearson Product moment co-relation coefficient formula. There was positively significant co-relation between the post test knowledge score and post test practice score, and the 'r' value is 0.8. The co-relation indicated that staff nurses gained in knowledge and practice on body mechanics in selected nursing interventions after administration of planned teaching programme on body mechanics in selected nursing interventions

CONCLUSION

From the findings of the present study it can be concluded that planned teaching programme was effective in terms of gain in knowledge and practice on maintenance of

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body mechanics in selected nursing interventions.

REFERENCES

1. The importance of proper body mechanics-keeping your spine healthy [internet]. 2011 [cited 2012 oct 12]
2. Available from:<http://www.coloradospineinstitute.com/subject.php?pn=wellness-body-mechanics>.
3. Is lower back pain in nurses a preventable problem? [Internet]. 2010 [cited 2012 oct 12].
4. Available from:<http://www.lumbacurve.co.uk/357/lower-back-pain-in-nurses/>
5. Admin B. Work –related low back disorders in nurses: frequency of occurrence, causes and prevention [internet]. 2006 [updated 2010 Aug 26; cited 2012 dec 05]. Available

from: <http://www.allnurses.com/nursing-news/work-related-low>

6. Smith D R. Musculoskeletal disorders among female nurses. *Nursing Health Science*. 2003Sep; 5(3): 185-188.
7. Maul I, Läubli T, Klipstein A, Krueger H. Course of low back pain among nurses. *Occup Environ Med*. 2003 Mar 29;60(1): 497-503.

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