

ABSTRACT

Biomechanics for Staff Nurses

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This is an abstract of a study entitled 'A Study to Evaluate the Effectiveness of a Self-Instructional Module on the Knowledge about Biomechanics for Staff Nurses', conducted in partial fulfilment of the requirements for the degree of Master of Science in Nursing.

Introduction

Nursing is a vital component of Health services and back pain is one of the leading occupational health problems among Nurses. Poor biomechanics is identified as a major factor for back disorders. Though Nurses have some basic knowledge about biomechanics, they need awareness and reinforcement of correct biomechanics in their work and motivation to practise it.

Objectives

The purpose of this study was to evaluate the level of knowledge of the Staff Nurses before and after the introduc-

tion of a SIM developed on the knowledge about correct biomechanics for them and to determine the effectiveness of the SIM.

Methodology

A pre-experimental study has been conducted on 100 subjects randomly selected from various Wards/Departments of the Nehru Hospital, PGIMER, Chandigarh. A SIM was developed to provide the necessary information to Staff Nurses on correct biomechanics and the underlying principles, with special emphasis on Nursing activities. One group pre-test/post-test design was used and the data had been collected using a structured questionnaire.

Analysis and Major Findings

The data have been analysed using percentage, mean and S D, Paired and Unpaired 't' test and ANOVA were computed to determine the level of significance.

Sixty-six (66) per cent of the subjects were back pain sufferers and the main problem was low back pain whereas 19.6 per cent had multiple back

complaints. Baseline knowledge of the subjects about biomechanics were fairly good. There was a significant improvement ($P < 0.001$) in the level of knowledge of the subjects after the introduction of the SIM, irrespective of their socio-demographic and background variables. The increase in the knowledge was significant in terms of the total score as well as in each sub-section as the importance of biomechanics, basic laws of biomechanics and various postures during work. Subject's knowledge regarding the importance of biomechanics was comparatively better in pre-test (82.71 ± 0.86), whereas postures during work was the section where they scored less (63.15 ± 4.05). The percentage of increase in knowledge score after the introduction of SIM was the highest in the section of postures during work (31.85 ± 4.33).

An attempt was made to probe the impact of socio-demographic variables on the knowledge of subjects and found significant in terms of age, marital status, professional qualification and previous exposure to biomechanics training ($P < 0.05$). Area of posting, length

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Table : Comparison of Pre-test and Post-test Scores
(n = 100; total score = 50)

Knowledge about Body mechanics	Pre-test		Post-test		Mean increase in score	SD	t-value	P-value df = (n-1)
	Mean	SD	Mean	SD				
a. Importance of body mechanics	5.79 (82.71)	0.86	6.66 (95.14)	0.59	0.87 (12.43)	1.02	8.53	<0.001
b. Basic laws	5.8 (64.4)	1.77	8.49 (94.3)	0.81	2.69 (29.89)	1.78	15.11	<0.001
c. Postures	21.47 (63.15)	4.05	32.29 (95)	2.20	10.83 (31.85)	4.33	24.96	<0.001
Total score	33.06 (66.12)	5.34	47.44 (94.8)	3.21	14.38 (28.68)	5.66	25.41	<0.001

Value in parentheses indicate percentage.

Relatives of I.C.U. Patients

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happy and verbalised that they felt homely and looked after well. When the patients and their relatives were happy, Nurses were also very happy and got the job satisfaction which could not be explained in words.

Reference

- Kickely, M (1990). 'What are the Needs of Families of Critically Ill Patients? A Review of Literature since 1976', *Heart and Lung*, 19(4), 401-402.
- Meijs, C (1989). 'Care of the Family of the Intensive Care Unit Patient', *Critical Care Nurse*, vol. 9(8), 49-50.
- Suzanne, H (1986). 'Ten Ways to Help the Family of a Critically Ill Patient', *Nursing*, vol. 16(1), 52-53.
- Wilkinsons, P. (1992). 'The Influence of High Technology Care on Patients, their Relatives and Nurses', *Intensive and Critical Care Nursing*, vol. 8, 198-199.

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of experience, academic qualification and previous experience of back pain were non-significant ($P > 0.05$).

Conclusion

There was need for bodymechanics training based on working postures of Staff Nurses. The SIM as an educational instruments was an effective tool to enhance the knowledge of Staff Nurses about correct bodymechanics in their work site. It serves as a cost effective information transfer and as a ready reference.

Recommendations

Nursing administrators may take initiative to train Nurses through inservice education and planned clinical supervision to equip them with the required knowledge, skill and attitude, to practise correct bodymechanics. Every newly appointed Staff Nurse may be given bodymechanics instruction in their orientation programme itself.

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