

Assess the Knowledge gain with Planned Teaching Programme on Prevention of Occupational Hazards among Construction workers at Selected Places of Hyderabad

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Abstract

Background:

Health education and early identification of an environment associated disease for a single patient may lead to primary preventive strategies affecting other similarly exposed people who have not yet developed the disease. Construction industry is notorious for its reputation as dirty, difficult and dangerous- the 3 D's. Many studies on occupational health hazards among construction workers revealed that the major diseases/morbidity of concern in India are respiratory diseases, accidental injuries, musculoskeletal symptoms, noise inducing hearing loss and skin problems.

Methods: By quantitative research approach with pre-experimental one group pre and post-test research design. Sixty construction workers are selected by using purposive sampling technique.

Results: In pre-test 90% of workers scored below average marks and rest of 10% scored average marks. In the post-test knowledge scores have improved to average (58.3%) and above average (41.7%). Computed chi-square values shows there is

Significant association between knowledge on prevention of occupational hazards with sex and education of construction workers.

Conclusion: The knowledge gain with planned teaching programme has been estimated by comparing pre-test mean knowledge scores (40.48%) and post-test mean knowledge scores (71.11%). The calculated 't' value was 28.82 at 29 degrees of freedom with 0.05 level of significance is far higher than the table value 2.05, shows that there is a significant difference between pre-test and post-test knowledge scores. Hence, it can be concluded that the planned teaching programme has improved the knowledge of construction workers on prevention of occupational hazards.

Keywords: Planned teaching programme, Occupational hazards, Construction workers

Introduction

Construction workers in many parts of the country are some of the most vulnerable and least legally well protected of all employees. Too often, they are marginalized through sub contract or no contract work. Construction workers are also vulnerable in terms of poor occupational health standards and practices in most of the countries. Migrant construction workers may be subject to exploitation in terms of wages,

weak health and safety standards, social and physical isolation, poor health linked to poor accommodation, food and exposure to infectious diseases. However, the disproportionate human and economic cost of poor health and safety in the construction industry that is borne by construction workers, their families and their communities is also a major drain on global health resources.

Material and methods:

The study was conducted at selected construction sites of Hyderabad. The population of the study is construction workers who are above the age of 14 years and who can understand and speak Telugu. 60 workers were selected through purposive sampling technique. The investigator prepared a structured questionnaire for data collection and teaching module to deliver the teaching programme on Prevention of occupational hazards. The content for teaching programme is developed in various aspects of prevention of occupational hazards including respiratory problems, noise inducing hearing loss, musculoskeletal problems, accidental injuries/fall and occupational dermatitis.

Data collected and the analysis and interpretation of the data was done with the help of descriptive and inferential statistics.

Section-1: Frequency and percentage distribution of construction workers according to variables.

Section-2: Formulating chi-square values to find the relationship between pre-test knowledge scores with selected variables.

Section-3: Variable wise mean and standard deviation of knowledge scores of construction workers on prevention of occupational hazards.

Section-4: Analysis of overall knowledge gain with planned teaching programme among construction workers on prevention of occupational hazards in terms of mean and paired 't' test Findings

Table:1 Chi- square values of pre-test knowledge scores of construction workers with demographic variables

N=60	Variable	Chi-square value of knowledge	Chi-square value at 5% level (d.f)
	Age	3.53	9.49 (4 df)
	Sex	4.27*	3.84 (1 df)
	Education	10.547*	9.49 (4 df)
	Total years of experience	3.118	7.82 (3 df)
	Previous learning experience	2.37	7.82 (3 df)

Note *-significant

Table: 1 show that there is significant relationship between pre-test knowledge scores and age and education level of construction workers.

Table: 2 percentage distribution of construction workers according to knowledge scores in pre-test and post-test.

Level of knowledge	Pre-test	Post-test
Below average (0-50%)	90	0
Average (51-75%)	10	58.3
Above average (76-100%)	0	41.7

Table: 2 shows in the pre-test majority of construction workers have scored below average marks and only 10% of them have scored average marks. In post-test the knowledge scores have improved from below average to average (10 to 58.3%) and above average (0 to 41.7%).

Table: 3 construction workers pre-test and post-test mean knowledge scores and paired t test of significance in each area of knowledge on prevention of occupational hazards.

S. No	Area of knowledge	Pre-test			Post-test			t-test
		Mean	SD	SE	Mean	SD	SE	
1	Respiratory problems	1.56	89	0.16	3.06	78	0.14	11.53
2	Noise inducing hearing loss	2.56	0.83	0.15	4.66	1.39	0.25	7.77
3	Musculoskeletal problems	2.33	1.37	0.25	4.73	1.25	0.22	10.43
4	Accidental injuries/falls	4.96	1.29	0.23	8.13	1.1	0.2	7.18
5	Occupational dermatitis	1.33	.88	0.16	2.96	0.8	0.14	9.05

Table: 3 Shows that in all the areas, the post-test mean knowledge scores were higher than that of the pretest. In all the areas calculated t values are higher than the table 't' values.

Discussion:

Nurse's role has extended and expanded in the various fields related to health care aspects. They are involved in preventive, promotive, curative and rehabilitative services. Similarly occupational health nursing is a specialized nursing service, function of which is to provide primary, secondary tertiary services to workers. As prevention is better than cure, the investigator has undertaken the present study to assess the knowledge gain with planned teaching programme on prevention of occupational hazards among construction workers through single group pre-test and post-test method.

Pretest mean knowledge scores shows 90% of workers has got below average scores and none of them scored above average score. This indicates that, the workers are having poor knowledge on prevention of occupational hazards. After teaching programme, knowledge has drastically increased and the difference between pre-test (40.4%) and post-test (71.11%) mean knowledge scores. The calculated 't' value is 28.82 at 29 degrees of freedom with 0.05 level of significance ($p < 0.05$) is much higher than the table value 2.05.

Conclusion: Most of the construction workers are from low socio-economic status and have poor educational background. They are not aware of health risks and safe practices. The common picture seen

in community is most of the workers are working without wearing protective devices like earplugs, earmuffs, helmets, safety shoes, aprons, gloves etc. and they are at risk of exposure to occupational hazards like dust, heat, cold, radiation, metals, chemicals etc. A most of the occupational hazards at work are preventable and the primary prevention approach is the most effective strategy for elimination and control of these hazards. The primary prevention strategy greatly relies on health education and creating awareness on practices available. In the present study it was concluded that planned teaching programme has improved the knowledge of construction workers on prevention of occupational hazards.

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Conflict of interest: Nil

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