

Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Respiratory Tract Infections among Plywood Industry Workers

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Abstract: ***Objective:** To evaluate the effectiveness of structured teaching programme on knowledge regarding prevention of respiratory tract infections among plywood industry workers. **Methods:** Pre-experimental study was carried over a period of 3 months on 40 plywood industry workers at Industrial area of Holenarsipura, Hassan Karnataka. All 40 plywood workers enrolled in study. **Results:** Result revealed that, the overall mean knowledge score in the pre-test was 46.8% and 78.1 % in the post test with enhancement of 31.3% and it is significant at 5% level. Among demographic variables analysed in the study it was inferred that there is a significant association between knowledge score and the selected demographic variables regarding prevention of respiratory tract infections among Plywood industry workers knowledge scores at 5% level. **Conclusion:** Structured Teaching Programme is the best methods to improve the knowledge which in turn prevents the respiratory tract infections among plywood industry workers.*

Keywords: Respiratory tract infections, Structured Teaching Programme, plywood industry workers, effectiveness

1. Introduction

Health is multifactorial and helps people to live well, work well, and enjoy themselves. It is influenced by both internal and external factors of society in which people live⁴.

Health is a dynamic process involving constant adjustments and adaptations to the changing environment (internal & external). As the preamble to the constitution of WHO defines it "Health is a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity"¹.

The joint committee of ILO/WHO on Occupational Health gave the following statement about occupational health "The general aims of occupational health should be the promotion and maintenance of highest degree of physical, mental and social well being of workers in all occupations; the prevention among workers of departure from health caused by their working conditions; the protection of workers in their respective employments from risks resulting from factors adverse to health; the placing and maintenance of the workers in an occupational environment adopted to their physiological and psychological needs"¹.

Occupational environment is the sum total of external conditions and the influence which exists in the work place and which may affect the health of people in that environment. There are varieties of hazards to which workers may be exposed and which may cause various diseases. These are physical hazards, chemical hazards, biological hazards, mechanical hazards and psycho-social hazards. Physical hazards include all those physical factors/agents which may affect the health of workers. Chemical agents are harmful to skin, respiratory system and gastrointestinal system. Biologic hazards in work environment include variety of infective and parasitic agents. Mechanical hazards refer to mechanical agents such as unprotected machines, their protruding moving parts, lack

of safety measures and Psycho-social hazards include human relationship among workers, job security, conditions of employment, working for long hours in same posture etc¹.

Occupational health nursing cover a wide field. The nurse may come across various situations requiring nursing interventions. This may include pre-placement examinations, periodical health checkups, education and counseling of workers and their family members about various health issues; interaction with the management to initiate any health activity, persuasion for and implementing immunization and safety measures; investigation of health hazards, diseases and carrying treatment and rehabilitate measures etc¹

Literature has revealed that since the 1980s, the governments have not paid major attention to the concerns regarding occupational health in developing countries, because of inadequate strategies and policies for occupational workers. From the National Health Report it has been found that until 1983 India had no formal health policy, and therefore, lacked the formation of a health program design and all the existing services remained grossly underutilized because of poor facilities, a lack of community involvement, and the lack of a proper monitoring mechanism. A new National Health Policy was announced in 2002. However, this also failed in its mission, as the planning for public health systems was debilitated⁴.

To summarize, in most cases budget allocations are inadequate to support the occupational health activities set up by governments and enterprises, which tends to kill occupational health in its stage of implementation, as exemplified in many developing countries. In order to deal with this problem, it is necessary to understand the concepts of occupational health in India, supported by the working conditions of the labourers in India. Hereby, it is also important to identify the existing and traditional conditions of the workers before and after independence. It is also necessary to understand why a developing country like India

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lacks significant occupational health policies. To accomplish this, data was collected mainly from documentary sources, especially publications on occupational health, and also scrutinized from direct observation using in-depth interviews⁴.

The place of work, like home and the school is an important part of man's environment. The health and efficiency of workers working in any organization get influenced in large measures by conditions prevailing in their work environment. The prevailing conditions are related to physical, biological, chemical and social agents. A worker is usually exposed to these agents for about 6-8 hours daily. It is therefore, essential that this environment should be wholesome and free from any kind of harmful agents as far as possible. The aim of occupational health is to provide a safe occupational environment to promote and preserve the health of workers and to step up their efficiency and productivity¹.

Wood is one of our most useful commercial products. People have always worked with wood. Most people have considered wood and wood dust to be relatively harmless, but they do not know some of the health problems that may occur due to wood dust and taking appropriate precautions will help to protect the health of woodworkers⁴.

2. Materials and Methods

This was Pre-experimental study carried out at Industrial area of Holenarsipura, Hassan Karnataka for a period of 3 months. The study was approved by the institutional research committee.

The tool used for the data collection consisted of: The self administered structured questionnaire to assess the effectiveness of structured teaching programme on knowledge regarding prevention of respiratory tract infections among plywood industry workers at Industrial area of Holenarsipura, Hassan Karnataka

Tool was divided into two parts section I & section II

Section I - Demographic data

Section II - Self administered structured questionnaire on prevention of respiratory tract infections

Research Design:

Pre- Experimental one group pretest posttest research design has been adopted for the present study.

Major Findings of the Study were

Descriptive and inferential statistics had been used for data analysis. The data was presented in the form of tables and diagrams. Data was analyzed by computing mean, standard deviation, t value and chi - square.

Significant findings of the Study

Demographic Data of the Respondent

Age:

In group of 40 samples 10(25%) of the Plywood Industry workers found in the age group of below 31 years followed by 15(37.5%) in the age group of 31-40 years and 15(37.5%)

Plywood industry workers were in between 41-50 years of age.

Sex:

In group of 40 samples 27(67.5%) of the workers are males followed by 13 (32.5%) are females.

Education:

In group of 40 samples 20(50%) of Plywood Industry workers were 1-5thstd and 20(50%) Plywood Industry Workers were found 6-10thstd

Religion

In group of 40 samples Plywood Industry Workers result shows that 40(100%) of workers belong to Hindu Religion.

Type of family:

In group of 40 samples 35(87.5%) workers belong to nuclear family and 05(12.5%) workers belong to joint family.

Family Income:

In group of 40 samples 33(82.5%) of workers have the income below Rs. 10,000 and 7(17.5%) workers are in the range between Rs. 10,001-15,000/-

3. Results

Analysis of the data shows that majority of Plywood Industry workers in Pretest knowledge score was inadequate 67.5% ($\leq 50\%$), Moderate 32.5% (51-75 %) and Adequate was 0.0% ($> 75\%$).

But in post test 35.0% of them had moderate knowledge (51-75 %), 65.0% of them had adequate knowledge ($> 75\%$) and none of them had inadequate knowledge ($\leq 50\%$), which indicates that the Structured Teaching Programme improved the knowledge of Plywood Industry workers regarding Prevention of respiratory tract infections.

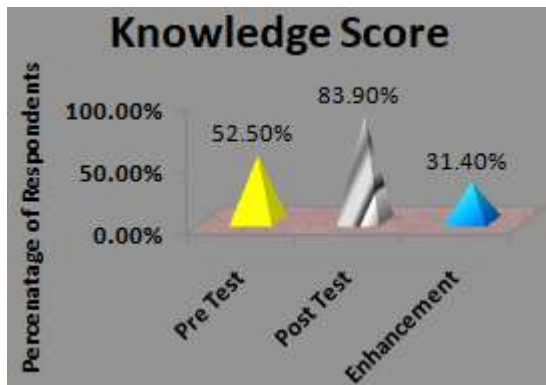
Association between knowledge on Prevention of anemia and selected demographic variables:

Analysis showed that the demographic variables such as Sex, total experience in years, type of family, monthly income e, suffered from respiratory infections and type of treatment pattern has statistically significant association with Knowledge regarding Prevention of respiratory tract infections.

Mean, standard deviation and t value regarding over all Pre test and Post test Knowledge on Prevention of Respiratory tract infections, n=40

Aspects	Max. Score	Respondents Knowledge				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	40	18.70	2.0	46.8	5.1	52.09*
Post test	40	31.23	1.9	78.1	4.7	
Enhancement	40	12.53	1.5	31.3	3.8	

* Significant at 5% level, $t(0.05, 39df) = 1.96$



The data presented shows that overall mean percentage of posttest knowledge score was 31.23(78.1%) with 1.9(4.7%) SD significantly higher than overall mean of pretest knowledge score was 18.70(46.8%) with 2.0(5.1%) SD. There was an enhancement of 12.53(31.3%) mean with 1.5(3.8%) SD. 't' value computed between pre-test and post-test knowledge score is statistically significant (t (Cal) = 52.09, table value t (39) = 1.96, $p < 0.05$). The calculated 't' value was greater than table value. Hence research hypothesis was accepted. There was significant difference between the mean pre-test and post-test knowledge score of Plywood industry workers regarding Prevention of Respiratory tract infections. However, the findings reveal that the structured teaching programme on Prevention of Respiratory tract infections was effective teaching strategy as revealed by statistical results.

4. Discussion

The discussion is accordance with the objectives and hypotheses of the study to evaluate the effectiveness of structured teaching programme on knowledge of plywood industry workers on prevention of respiratory tract infections.

Demographic variables: majority of workers 37.5% were in the age group of 31-40, 67.5% workers are males, 100% were from Hindu religion, 50% of workers were had secondary education, 87.5% were from nuclear family, and 82.5% workers suffered from respiratory infections.

In the present study the pre-test knowledge scores of workers revealed that inadequate 67.5% (≤ 50 %), Moderate 32.5% (51-75 %) and Adequate was 0.0% (> 75 %) . The post test knowledge scores 35.0% of them had moderate knowledge (51-75 %), 65.0% of them had adequate knowledge (> 75 %) and none of them had inadequate knowledge (≤ 50 %).

Effectiveness of structured teaching programme on knowledge regarding prevention of respiratory tract infections among Plywood industry workers:

According to stated hypothesis (H1) the overall mean knowledge in pretest was found to be 46.8% and mean knowledge in post test was 78.1%, the mean knowledge enhancement was found to be 31.3% . Hence, the stated hypothesis H₁ is accepted.

Association between pre-test scores and selected demographic variables:

The findings of the study showed that Sex, total experience in years, type of family, monthly income, suffered from respiratory infections and type of treatment had significant association, and hence H₂ was accepted.

The investigator assumed that industrial workers had some knowledge about prevention of respiratory tract infections, it was also assumed that STP will be effective for increasing their knowledge regarding prevention of respiratory tract infections.

The study attempted to examine the following research hypothesis:

H₁- The mean post-test knowledge scores of industrial workers exposed to structured teaching programme will be significantly higher than their mean pre-test knowledge scores at 0.05 levels.

H₂- There will be significant association between pre-test knowledge scores and selected demographic variables at 0.05 levels.

5. Conclusion

The findings of final study revealed that there was a significant gain in knowledge scores of the industrial workers after the session of STP at 0.05 level. The study concluded that STP had a great potential for accelerating the awareness regarding the prevention of respiratory tract infections.

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