

“A Study To Assess The Knowledge Regarding Prevention Of Occupational Hazards Among Carpenters Working In Timber Areas From Sangli Miraj Kupwad corporation”

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Abstract

Introduction: Workers in the sawmill and other wood industries exposed to a variety of natural chemicals, fungi, and bacteria in raw barks and woods, and all these have been associated with diverse occupational illnesses and hazards, including cancers.

Research methodology: The quantitative research approach and Non- experimental (Exploratory) design was used for the study. The present study was conducted in Sangli, Miraj and Kupwad corporation area. The Non- probability, convenient sampling technique was used and the study consists of 60 samples were selected as per criteria.

Based on the study objectives structured questionnaire was used for collecting data. The tool was divided into two sections. The first section contained demographic variables and the second section contained 19 multiple choice questions with four options for assessing the knowledge.

A total of 15 experts did the content validity of the tool. Karl Pearson correlation coefficient formula was used for estimation of reliability coefficient 'r' of the questionnaire was 0.82 which is more than 0.7, hence it was found to be reliable.

Results: 48 (80%) of the carpenter had average knowledge. The association was found between the knowledge score and age as well as sex at 0.05 levels of significance.

Conclusion: The findings concluded that the knowledge developed by researchers found to be enhancing the knowledge of carpenters regarding the prevention of occupational hazards.

Keywords: Assess knowledge, occupational hazards, and carpenters.

Introduction and need for the study.

Occupational health can be defined as the total of all the activities and programs that are engaged upon to attain and maintain the highest level of health and safety for all people who are engaged in any type of work whatsoever.

Wood dust is one of the oldest and one of the most common occupational exposures in the world. The present analyses examine the effect of lifetime exposure to wood dust in diverse occupational settings on lung cancer risk.³

Sawmilling is the process of breaking down of timbers into further different sizes of boards after passing through various machines in the carpenters' plant. Carpenters are grouped into machine operators; saw technicians, dust packers, overseers, wood loaders, machine off-loaders and administrative staff with different duration of exposure to wood dust at the workplace.

Several studies have shown a direct relationship between various occupational-related diseases and carpenters' work. Therefore, assessing knowledge of hazards among carpenters would be cardinal in providing promotive, preventive, curative and rehabilitative occupational health services to carpenters.

Adverse health effects of wood dust arose from poor practices of occupational safety measures among carpenters. It is estimated that at least two million people are routinely exposed occupationally to wood dust worldwide.

Workers in the sawmill and other wood industries exposed to a variety of natural chemicals, fungi, and bacteria in raw barks and woods, and all these have been associated with diverse occupational illnesses and hazards, including cancers.

Research in occupational exposures in carpenters has suggested that the workers in carpenters are at risk of developing allergic disorders, lung diseases, some nasal tumors, deafness, and cataracts. This has been linked to hazards such as dust (28.1%) and noise (26.1%) which according to respondents interviewed were the major hazards.⁴

Research problem statement

“A study to assess the knowledge regarding prevention of occupational hazards among carpenters working in timber areas from Sangli Miraj Kupwad Corporation”

Objectives:-

- To assess the existing knowledge regarding the prevention of occupational hazards among carpenters working in the timber area.
- To find out the association between selected social demographic variables and knowledge regarding the prevention of occupational hazards in carpenters

Assumptions:- Carpenters have very little knowledge regarding the prevention of occupational hazards.

Review of literature

The reviewed literature for the present study is organized under following heading-

1. Literature related to assessing knowledge among carpenters.
2. Literature related to the prevention of occupational hazards among carpenters.

Total 10 were included with 5 reviews under each heading.

Research methodology

Research approach: In the present study, a quantitative research approach was used.

Research design: A descriptive survey design was used for the study.

Setting: Final study settings were timbers areas of Sangli and Miraj. Tal-Miraj Dist-Sangli.

Population: This study the population which consists of carpenters working in the timber area of Sangli -Miraj - Kupwad Corporation area.

Sample: In this study, samples were the carpenters, who fulfill inclusive and exclusive criteria.

Sample size: The present study considered 60 carpenters based on power analysis.

Sampling technique: In this study cluster random sampling technique was used

Data collection tool: Tool has two sections, Section 1-sociodemographic variables and Section 2-knowledge regarding the prevention of occupational hazards among carpenters.

Validity: We have given the research tool to 15 experts for validity. Psychiatric nursing (3), Pediatric nursing (3), Community health nursing (2), Obstetrics and Gynecology nursing (2) and Medical-surgical nursing (5).

Reliability: The reliability coefficient 'r' of the structured questionnaire was 0.82 which is more than 0.7, hence it was found to be reliable. It was done on 20/2/2017, at Miraj by using a structured questionnaire.

The procedure of data collection: The data collection was done from 01-01-2017 to 06-01-2017. Informed consent was taken from the sample after explaining the purpose and objectives of the study. 20 minutes test was taken by structured questionnaire after informed consent, no one was illiterate during the study

Plan for data analysis: Based on the objectives of the study the frequency and percentage were obtained to assess knowledge standard deviation, the chi-square test was obtained to find out the association between the knowledge score and selected demographic variables

Pilot study: The pilot study was conducted at Miraj from 25-12-2016 to 31-12-2016 to assess the feasibility of the study.

Analysis and discussion:

The analysis of data is organized and presented under the following headings:

Section I

Table 1:- The demographic characteristics

In this study majority of the samples belong to the age group of 18- 30 years that is 68.30 %. 86.70 % of the samples are males. Most of the samples have completed their primary school education that is 63.33 %. The majority of samples have experience between 1-5 years that is 61.70 %.

Section II

SECTION II deals with the analysis of data related to knowledge regarding the prevention of occupational hazards among carpenters working in timber.

Table 2:-shows knowledge on prevention of occupational hazards n=60

Sr.No	Items	F	%
1.	Meaning of occupational hazards.	21	35
2.	Function/work of carpenters.	38	63.33
3.	Common occupational hazards in carpenters.	35	58.33
4.	Occupational health hazards not related to carpenters.	31	51.67
5.	A common cause of Asthma.	22	36.67
6..	Common risk factors for health problems among Carpenters.	14	23.33
7.	Risk factors for Asthma.	35	58.33
8.	Risk factor for back pain.	37	61.67
9.	Preventive measures for throat infection.	44	73.33
10.	A good habit for the prevention of skin disease.	22	36.67
11.	Preventive measure for a hand injury.	35	58.33
12.	Prevention of the ill effect of noise.	19	31.67
13.	First aid management for a foreign body in the eye.	25	41.67
14.	First aid management of the wound.	28	46.67
15.	Health services provided for carpenters.	30	50
16.	The best method to control the fire.	29	48.33
17.	Maximum hours of work for a carpenter.	30	50
18.	Disablement benefit for carpenter	34	56.67
19.	Benefits provided to a carpenter.	34	56.67

The table shows that carpenters have more knowledge regarding the prevention of throat infection and that is 73.33 % and the carpenters have less knowledge regarding common risk factors for health problems and that is 23.33 %.

Similar findings were observed to Agbana BE, Joshua AO, Daikwo MA, Metiboba LO conducted a study on knowledge of occupational hazards among sawmill workers in Kwara State, Nigeria.

The study results showed that the knowledge of sawmill workers on occupational hazards was low, 61.7% of the respondents had poor knowledge, whereas 15.8% had good knowledge. Half of the respondents knew that exposure to hazards could be reduced by limiting their work hours to a maximum of 8 hours per day. More than three-quarters had experienced noise, closely followed by heat and injuries among the study group.¹²

Section III

Table No. 3. Associations between the selected social demographic variables and knowledge regarding the prevention of occupational hazards in carpenters.

SDV	Grading of knowledge			Fisher's exact test	p-value	Result
	Poor	Average	Good			
Age in years						
18-30	3	32	6	5.543	0.046	S*
30-40	1	12	2			
40-55	0	4	0			
Education						
1 st -10 th	4	29	5	2.851	0.655	NS
11 th -12 th	0	17	3			
Graduation	0	2	0			
Sex						
Female	1	4	3	5.543	0.046	S*
Male	3	44	5			
Experience in years						
less than 1	0	8	2	1.414	0.926	NS
1-5	3	29	5			
Above 5	1	11	1			

S* - Significant association . NS - Non-significant association.

The association was found between the knowledge score and age as well as sex at 0.05 level of significance.

A study was conducted by R .E. Wiggans; G.Evans; D.Fishwick.....et all in the year 2015 on examine the effect of lifetime exposure to wood dust in diverse occupational settings on lung cancer risk. The result shows that -While we observed an increased risk of lung cancer associated with working in a sawmill (OR=1.5; 95% CI: 1.1, 2.1). The relative risk for asthma in exposed workers in the single meta-analysis was 1.5 (95% CI 1.25–1.87).¹³

Conclusion:

Timber workers in our environment are faced with increased risks of diseases, accidents, and challenges of protection and safety. As a consequence, there is a need for proper education and enforcement of consistent uses of the different protective devices and take care of health.

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