

## A STUDY TO ASSESS THE KNOWLEDGE REGARDING PREVENTION OF OCCUPATIONAL HAZARDS AMONG WORKERS WORKING IN A SELECTED FACTORY OF LUCKNOW

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**ABSTRACT:** An industrial worker is exposed to the risk of occupational disuse and accidents which creates a feeling of physical economic and social insecurity. Non-experimental, descriptive research design was used for this study. 30 workers were selected through convenient sampling technique according to inclusion & exclusion criteria. A structured questionnaire was used to assess the knowledge of workers in the selected factory regarding occupational hazards and its prevention. The study found that Knowledge on occupational hazards and prevention of occupational hazards among the workers was poor; hence they need strong emphasis on awareness to prevent hazards and promote optimum health. In knowledge score test, almost workers in the selected factory had Mild knowledge in the area of occupational hazards (73.33%) and moderate knowledge in the area of prevention of occupational hazards (50%). The result revealed that mean value of knowledge scores is  $m= 12.20$ ,  $SD= 4.38$  Chi- square test revealed that there was significant association between the Level of knowledge score of workers working in the selected factory and their related demographic variables.

**Key words:** industrial worker, occupational hazards ,social insecurity

### Introduction

“PREVENTION IS BETTER THAN CURE”

The working population represents half of the world's population are being the major contributors to socioeconomic development, their health is determined not only by the work place but also by social, individual factor as well as access to available health services<sup>1</sup>. Surveillance to work environment, detection of workers knowledge, occupational hazards and safety measures is an important component of occupation health and safety services. Out of more than 1 billion Indian populations approximately 33% belongs to working class with more than 2lakh registered factory<sup>2</sup>. A part from large and medium industries small industries play on important role in the economy of the nation<sup>3</sup>. The small industries play an important role in the economy of the nation. In the industrial population health is usually provided by the management through the employee's state insurance scheme. As per the amended factories act provision of the occupational health center in mandatory in factories carrying out hazardous process<sup>4</sup>. Many progressive industries have established preventive occupational

health services to look after their workers occupational health needs<sup>5</sup>. The scope of occupational health services includes preventing occupational hazards at work, projecting workers against hazards at work, help in adopting work & the work environment to the physical mental and social will being of the workers<sup>6</sup>.

### Objectives of the Study

1. To assess the knowledge regarding occupational hazards and its prevention among workers working in the selected factory.
2. To find out association between the knowledge score of workers and selected demographic variables.

### Assumptions

1. The workers will have some knowledge regarding prevention of occupational hazards.

### Research Methodology

#### *Research approach and design:*

Non- experimental research approach and descriptive design was used.

*Setting-* The study was conducted in ACCON HEALTH

**Population-**In this study population comprises of workers, working in the ACON HEALTH CARE Pvt. Ltd.

**Sample and sample size-**

Sample size- 30.

**Sampling and sampling technique-**

Convenient Sampling technique.

**Inclusion criteria –**

- Those who were aged between 18-45 years.
- Those who were available at the time of study.
- Those who were willing to participate
- Those who were able to read and write.

**Exclusion criteria-**

- Age group more than 45years and less than 18years.

### Development of the Tool

Data collection tools are the instruments used by the researcher to observe or measures key variables in research problem. Structured knowledge questionnaire was constructed after extensive review of literature and discussed with experts, were used as a tool to collect the data. The tool consists of three sections.

#### Section –A

It deals with the demographic variables such as age, gender, work experience, education, type of family, residential area.

#### Section-B

It consist of 30 multiple choice questions which are formulated to assess knowledge of workers regarding occupational hazards.

#### Section-C

It consists of 15 questions to assess the knowledge of workers regarding prevention of occupational hazards.

#### Scoring Key

Scoring key was prepared for section- A by coding the demographic variables. For section-B and C knowledge item score 1 was awarded for correct response and 0 for wrong response, thus a total score of 30 was allotted under knowledge aspect and to interpret the level of knowledge, the scores were distributed as follows

- Mild knowledge less than 50%
- Moderately adequate knowledge 51-75%

- Adequate knowledge more than 75%

### Data Collection Procedure

After obtaining permission from the principal of Sahara College of Nursing and Accon Health Care, the main study was started. Investigators personally visited each respondent, introduced themselves to the workers and explain the purpose of the study. The knowledge was assessed by structured questionnaire that is multiple choice questions

### Plan of Data Analysis

The data collected from the subject was grouped and analyzed by using statistical measures in terms of objectives. The plan for the data analysis was as follows:-

- The collected data was coded and transformed to master sheet for statistical analysis.
- The response items from demographic profile planned to summarize in terms of frequency and percentage, knowledge scores of the participants were planned to be summarized in mean , standard deviation and mean percentage
- The chi square values used to find out the association between the knowledge score of workers regarding prevention of occupational hazards and their selected demographic variables like age, gender, work experience etc.
- The finding presented in the form of tables and diagrams.

### Result:

#### Section A: Demographic variables

**Table 1: .Frequency and percentage wise distribution o subject. N=30**

Variable	Category	Frequency	Percentage
<b>According to the age:</b>	18-25years	7	23.33%
	26-30years	8	26.6%
	31-35 years	9	30%
	36-40 years	6	20%
<b>According to</b>	Male	2	90%

<i>the gender:</i>	Female	3	10%
<i>According to the Education:</i>	Primary education	11	36.6%
	Secondary education	14	46.6%
	Higher secondary	5	16.6%
	Graduation	0	0%
<i>According to the work experience:</i>	Less than one year	11	36.6%
	1-2yrs	6	20%
	2-3yrs	7	23.3%
	More than 3 years	6	20%
<i>According to religion:</i>	Hindu	21	70%
	Muslim	8	26.6%
	Christian	1	3.3%
	Sikh	0	0%
<i>According to residential area:</i>	Urban	8	26.6%
	Rural	22	73.3%
<i>According to family:</i>	Nuclear	12	40%
	Joint	8	60%

### Section –B

#### Knowledge scores of workers regarding occupational hazards and prevention of occupational hazards.

*Table2. Level of knowledge score of workers about occupational hazards and its prevention.*

N = 30

Description	Level Of Knowledge Score					
	Mild <50%		Moderate 51-75%		Adequate >75%	
	F	%	F	%	F	%
Occupational hazards	22	73.3%	8	26.66%	0	0
Prevention of occupational hazards.	15	50%	15	50%	0	0

*Figure 1: Level of knowledge score of workers about occupational hazards and its prevention.*

Above Table: 2 and Figure: 2 Shows those workers in the selected factory had mild knowledge i.e. 73.33% and moderate knowledge i.e. 26.67% about occupational hazards and 50% each in mild and moderate knowledge about prevention of occupational hazards.

*Table: 3 Aspect wise mean, mean percentage, standard deviation of knowledge score of workers regarding occupational hazards and prevention of occupational hazards.*

N=30

Description	Mean	Mean Percentage	SD
Occupational hazards	6.13	40.89%	1.92
Prevention of occupational hazards	6.07	40.33%	2.46
<b>Total</b>	<b>12.20</b>	<b>81.22%</b>	<b>4.38</b>

It is evident from the above table that maximum mean knowledge score obtained by the participants was 6.13 (40.89%) in the aspect of occupational hazards and lowest mean score is 6.07 (40.33%) in the aspect of prevention of occupational hazards.

The overall mean scores of workers regarding occupational hazards and prevention of occupational hazards were 12.20 (81.22%) with the standard deviation of 4.38. Therefore, workers had mild knowledge regarding occupational hazards and its prevention.

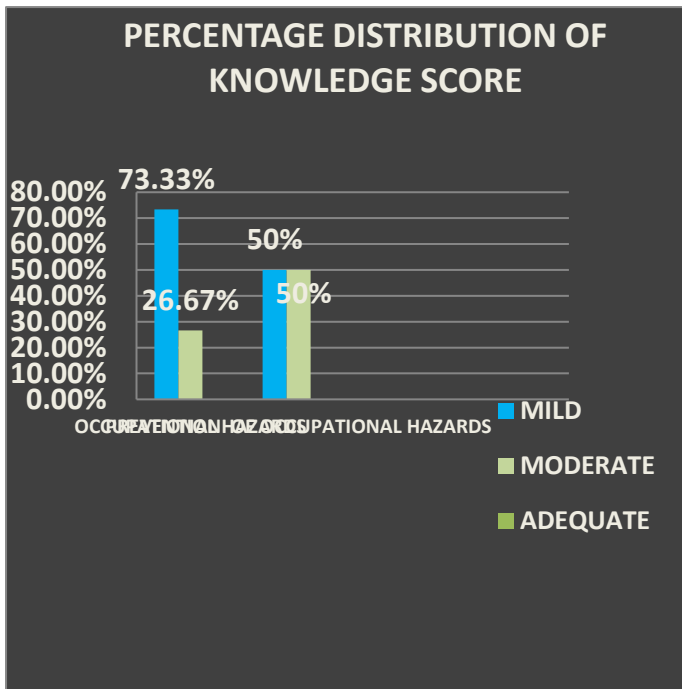


Figure 1: Level of knowledge score of workers about occupational hazards and its prevention.

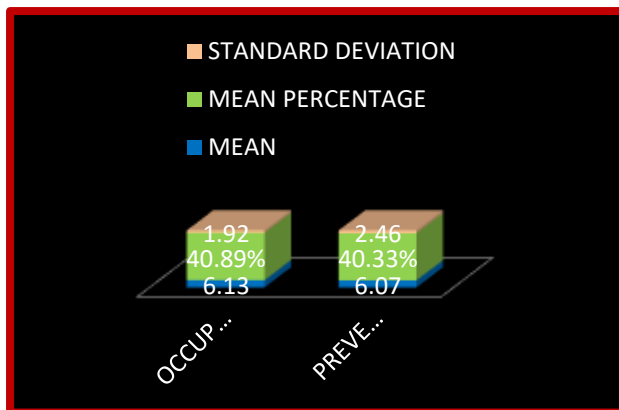


Figure 2: Aspect wise mean, mean percentage, standard deviation of knowledge score of workers regarding occupational hazards and prevention of occupational hazards.

Section- C

- The findings of the present study showed that there was no significant association between the knowledge scores of workers with their selected demographic variables working in the selected factory.

Nursing Implications

Nursing Practice

- Nurses can act as health educator by providing health education regarding prevention of occupational hazards,
- Nurses can act as an occupational nurse in order to promote wellbeing of workers.
- Nurse can provide teaching to the workers regarding nutrition, exercise, need of precaution, hygiene and the relationship between physical and mental health.

Nursing Education

- Nursing education emphasis the occupational health care system by paying more attention on training the nursing students as they become an efficient community health nurse.
- Nursing curriculum should be in a way to prepare the prospective nursing students in order to assist client and community in the aspect of occupational health.
- The holistic health care approach should be emphasized more during the training period of nursing student and also students should be made aware of the importance educating the public regarding occupational health.

Nursing Administrator

- The nurse administrator can organize counseling session for workers to provide information regarding prevention of occupational hazards.
- The nurse administrator can plan and organize community health programme for nursing personnel in order to prepare them to provide quality nursing care for industrial workers.

Nursing Research

- The study will motivate the initial researchers to conduct the same study on large scale and the study will be a reference for the extensive and intensive nursing research in the area of occupational health.

Recommendation

- The study may be replicated in a large sample.
- A co- relational study can also be conducted with the same topic.
- A comparative study can also be conducted with same topic.

**Conclusion:**

The study concludes that workers in the selected factory had mild knowledge 22 (73.33%) and moderate knowledge i.e. 8 (26.67%) about occupational hazards and 15 (50%) each in mild and moderate knowledge about prevention of occupational hazards.

**Reference**

- (1) PARK K, Textbook of preventive and social medicine, 20th edition, M/S Banarsidas Bhanot Publishers , page no. 708- 721
- (2) SWARNKAR. S “Community Health Nursing” 3<sup>rd</sup> edition, N. R. Brothers publishers, Indore, page no. 670
- (3) GULANI K K. “Community Health Nursing Principal and Practices”. Kumar publishing house, Delhi, India. page no. 501
- (4) Ravi Prakash Saxena “textbook of community health nursing II ” published by , Lotus publishers, Jalandhar, page no. 273
- (5) BRUNNER AND SUDDHARTH'S. “Textbook of Medical Surgical Nursing” 11<sup>th</sup> edition volume 2. Wolter Kluwer and Lippincott Williams and Wilikins, New Delhi Page no. 2427 – 2429
- (6) Liss GM. Health effects of welding and cutting fume-an Update. Internet. 2006. [Last accessed on 2013 Jun 12]. Available from:<http://www.canoshweb.org/sites/canoshweb.org/files/odp/html/rp5.htm> .Ashby HS. Welding Fume in the Workplace. Professional Safety. 2008;4:55–60.
- (7) AFSCME. Health and Safety Factsheet. Internet. 2013. [Last accessed on 2013Ju19]. <http://www.afscme.org/news/publications/workplace-health-and-safety/factsheets/pdf/Welding-Hazards-AFSCME-fact-sheet.pdf> .
- (8) Ehrlich GE. Low back pain. Bull World Health Organ. 2003;81:671–6. [PMC free article][PubMed]