

ASSESSMENT OF KNOWLEDGE ABOUT OCCUPATIONAL HAZARDS AND UTILIZATION OF SAFETY MEASURES AMONG THE INDUSTRIAL WORKERS IN HAYATABAD PESHAWAR

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ABSTRACT

Objective: To find, the relationship between knowledge score on occupational hazards and utilization of safety measures.

Material and Methods: A descriptive survey approach was used for this study. The study was carried out in industrial area of Hayatabad., comprising of 200 industrial male workers. The data collection was done from January to March 2013. A structural interview schedule were used for data collection. The data was analyzed using descriptive and inferential statistics.

Results: Majority of the workers (85%) had average knowledge, 12% and 2% workers had poor and good knowledge on occupational hazards respectively. Workers using moderate, low and high utilization of safety measures are 51 (%), 43 % and 6%. There is significant relationship between knowledge score of industrial workers regarding occupational hazards and utilization of safety measures. All hypotheses will be tested at 0.05 levels, of significance.

Conclusions: The findings of this study suggest the need for educating the industrial workers about occupational hazards and safety measures utilization. They must be motivated to adapt safety measures to promote and protect their health from occupational hazard.

Key Words: Knowledge, occupational hazards, utilization of safety measures.

INTRODUCTION

Occupational health implies health protection and promotion, emergency care, wide range of preventive, curative services, rehabilitative services, a concept which includes everything that can apply to promote the health and working capacity of worker.¹ Workers constitute a large and important sector of the world population. The global labor force is about 2600 million with 75% of these working people in developing countries.²

Industrial workers suffer more injuries and fatalities than the general work force population. This includes debilitating illness, from lung diseases, musculoskeletal disorders, hearing loss and dermatologic condition.³

The work force in industries is most vulnerable because employment is temporary, employer and employee relationship is very fragile and most of the time short lived. The work has lack of safety, health and welfare facilities, coupled with uncertain working hours.⁴ The industry is faced with unique safety and health problems that require special attention.⁵

Occupational diseases are caused by exposure

to harmful chemical and biological agents and physical hazards at the workplace. The initial changes are often reversible if treated promptly. The early detection of occupational diseases is important.⁶ The accidents in industries are due to workers who lack safety awareness⁷. Due to lack of proper education, they have not received proper safety training and trade skill training in industrial field^{8,9}. They lack safety awareness and job related safety health issues. The equipment supplied making it difficult for compliance of safety standards. The aim of this study is to assess knowledge of occupational hazards and to identify the utilization of safety measures by industrial workers.

MATERIAL AND METHODS

A descriptive survey approach was used for this study. The study was carried out in industrial area of Hayatabad. The sample comprised of 200 industrial male workers. The data collection was done from January to March 2013. Formal written permission was obtained from the authorities to conduct the study and informal consent was obtained from the industrial workers prior to the data collection process. Confidentiality was assured to all the subjects to get their cooperation. The data was collected at the end of duty hours, during that time the tool was administered to them and information was collected.

Inclusion criteria

1. Industrial workers who are working in industries for more than one year.

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2. Workers willing to participate in research study.
3. Workers who are engaged in unskilled work such as loading painting and cutting.

Exclusion criteria

1. Child laborers.
2. Skilled workers.
3. Workers having chronic sickness before joining the industry.

In order to establish reliability, the tool was administered to 200 industrial works working in industrial site of Hayatabad. Each subject completed the interview within 30 min. None of the subjects found difficulty in understanding the test item.

To conduct this study structural interview schedule was prepared with distribution of items in areas like physical hazards, chemical hazards, biological hazards, mechanical hazards and psychosocial hazards. According to the content areas, it was further classified into the following headings based on the intellectual process of learning i.e. knowledge, comprehension and application. Utilization of safety measures include hand washing, use of gloves, wearing safety belts, helmets, pattern of food consumption lavatory facility, working hours, leave, use of repellents etc. The existing knowledge is categorized into 3 levels: good, average, poor and utilization of safety measures is categorized into 3 levels: high, moderate and low.

A descriptive co relational design is chosen for the present study to find out the relationship between

TABLE 1: Mean and standard deviation of knowledge score of industrial workers in various areas on occupational hazards. Number of Workers =200

S.No.	Type of occupational Hazard	Range of occurrence	Mean	SD	Mean %	Level of knowledge
1	Chemical Hazard	25-51	20.28	3.696	59.64	Average
2	Physical Hazard	50-120	42.88	9.15	59.55	Average
3	Biological Hazard	14-35	11.57	2.417	57.85	Average
4	Mechanical Hazard	33-47	19.97	2.189	54.44	Average
5	Psychological Hazard	08-19	7.29	1056	66.18	Average
	Total	120-260	101.97	15.911	59.28	Average

TABLE 2: Frequency and percentage distribution of level of knowledge of industrial workers on occupational hazards Number of Workers =200

S. No	Education Qualification	Number of workers	Grading Knowledge Score on percentage		
1	Illiterate	128	1.58%	73.43%	25%
2	Primary	32	1%	82.25%	16.75%
3	Secondary	24	2%	75%	23%
4	Above sec level	16	2%	85.5%	12.5%

TABLE 3: Range, mean, median and Slandered deviation of utilization of safety measures score of industrial workers: Number of Workers =200

S.No	Component	Range	Mean	Median	SD
1	Utilization of safety manures	28-85	27.09	26	6.10

TABLE 4 Frequency and percentage distribution of the utilization of safety measures by the industrial workers : Number of Workers =200

S. No.	Grading Utilization of safety measures	Frequency	Percentage
1	High Utilization of safety measures (76% and above)	6	6
2	Moderate utilization of safety measures 51-75%)	51	51
3	Low utilization of safety measures (50% and below)	43	43
Maximum total score = 52			

TABLE 5: Frequency and percentage distribution of level of knowledge of industrial workers on occupational hazards: Number of Workers =200

S. No.	Grading of knowledge score	Frequen- cy	Percent- age
1	Good (76% and above)	2	2
2	Average 51 – 75%	75	75
3	Poor 50% and below	23	23

the knowledge score and utilization of safety measures.

RESULTS

The data in table 1 depicts the knowledge score of subjects on physical hazards, chemical hazards, mechanical hazards and psychosocial hazards. In all five areas the subjects, had average knowledge.

The data in table 2 depicts that most of the subjects regardless of their education status had average knowledge. None of the subjects having primary, secondary or above secondary education level had good knowledge where as 1.58% of illiterate had good knowledge regarding occupational hazards.

The data in the table3 depicts that the utilization of safety measures by the industrial workers. The utilization of safety measures ranged from 14-42 with mean 27.09,median 26and standard deviation 6.10.

Data in table 4 shows that majority(51%) of workers were using moderately adequate safety measures, low utilization of safety measures by 43%, high utilization of safety measures by 6% workers.

Data in table 5 shows that 75% workers had average knowledge, 23% workers had poor knowledge and 2% workers had good knowledge.

DISCUSSION

Human behavior towards occupational health and safety is age influenced. Mean age of our study population was 28.88+6.73 with a range of 15-45 years. Majority of the subjects (38%) were in the age of 26-35 years. The above findings of the study were consistent with a study conducted by Kamath N10. The study findings revealed that maximum numbers of employees were in the age group of 23-32 years.

The respondents in our study are 100% males, which is supported by the study done by Ahmed et al11, from D I Khan. The explanation may be that in Khyber Pakhtoonkhwa women do not participate in industrial work due to cultural and religious constraints.

Majority of the workers 51(%) were using mod-

erately adequate safety measures, low utilization of safety measures by 43 % workers, high utilization of safety measures by 6% workers. The overall mean score percentage of safety measures is about 50%. It shows that workers have average knowledge regarding safety measures. The finding of a study conducted in TI Cycles if India (Tube Investments of India) 12 to assess knowledge and utilization of safety measures supports the present finding of the study.

Correlation of knowledge score of industrial workers regarding occupational hazards to utilization of safety measures were highly statistically significant in our study The result of the present investigation are in agreement with previous studies^{11,13,14}. where positive correlation was found between knowledge attitude and practice.

CONCLUSION

The findings of this study suggest the need for educating the industrial workers about occupational hazards and safety measures utilization. They must be motivated to adapt safety measures to promote and protect their health from occupational hazard.

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