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"The Knowledge Regarding Occupational Hazards Among Industrial Workers "

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Abstract

Introduction: Occupational Hazards are risks associated with working in specific occupations. The Occupational Safety and Health Administration describes 5 categories of occupational hazards Physical safety hazards, chemical hazards, biological hazards, physical hazards and ergonomic risk factors. Occupational hazards are conditions surrounding the work environment that increase the probability of illness, disability, and death to a worker.

Aim of the study: "To assess the knowledge regarding Occupational hazards among Industrial workers.

Material and method: The study approach was a quantitative with non-experimental descriptive survey design. The sample selection technique was used non-probability purposive sampling technique. The sample size was 200 industrial workers working small scale industries aged between 18-60 years. Samples were selected from different industries from MIDC. The tool used for data collection was a self-structured questionnaire that contained demographic variables in section I, section II was related assessment of the knowledge regarding occupational hazards among Industrial workers. The written informed consent was taken from the participants prior to the data collection, in order to establish reliability of the tool, the inter-rater method was used.

Result: Majority i.e. 51% of samples were from 31-40 years of age, 84% of samples were female, 43.5% of samples were having secondary education, 39% of samples were working in industries since 31-40 years. Most of the participants i.e. 87% had awareness on occupational health hazards, 64.5% of them not had any ailment where as 70% of the workers were not undergoing any treatment for the ailment, 47.5% of the industries had regular health checkups being conducted and 62.5% of the industries used safety equipment's while working. The result shows that 31.5% of the Industrial workers have good knowledge regarding occupational hazards where as 67% had average knowledge and 1.5% workers had poor knowledge regarding the occupational hazards. Significant association was found between knowledge score with duration of work in years & Educational qualification at the 0.005 level of significance.

Conclusion: The study concluded that there was average knowledge regarding occupational hazards among majority of Industrial workers.

***Key Words*:** Knowledge, occupational hazards, Industrial workers.

Introduction

Occupational Hazards are risks associated with working in specific occupations. The Occupational Safety and Health Administration describes 5 categories of occupational hazards Physical safety hazards, chemical hazards, biological hazards, physical hazards and ergonomic risk factors. Occupational hazards are conditions surrounding the work environment that increase the probability of illness, disability and death to a worker. Occupational hazards are very obligatory and to promote awareness of the common occupational hazards that are spread daily in the Industrial sites. The most important reason for identifying the hazards in the workplace for prevention and promotion of health.

A research study was conducted on the probability of occupational hazards in an immunosuppressed patient. Mainly this study discovers transplant recipient who have undergone transplantation for primary sclerosing

cholangitis and maintained on tacrolimus monotherapy immunosuppression for the people. Bronchoscopy samples were negative for acid-fast bacilli and had been empirically treated for assumed community acquired pneumonia.

Employees were exhibited to of occupational hazards in a different factory, which eventually lead to hearing loss that was reported because of high machinery noise. While exhibition of workers to these hazardous substances, these substances had the ability for causation of severe health problems.

Occupational hazard can also be stated as any situation or process that is prone to cause risk or accident at the place where people / workers work. There are effectively limitless occupational hazards in nursing profession like back injury, radiation exposure, needle prick injury, physical and emotional stress. To get acquainted with the possible problems by approaching a rational and accessible solution is the best way to produce a protective working surroundings.

Need of the Study

Early identification of injury and at site occupational health issues can help in prevention of occupational hazards. The primary objective of studying occupational hazards is to identify and mitigate risks that can harm worker's physical and mental health & understanding the hazards helps to creates healthy working environment.

The prevalence of the occupational hazards in India is 61%, the majority of Industrial workers are suffering from noise-related problems, i.e. 60.4%, followed by 40.5% stress related problems, 30.6% workers undergo dust-related problems, ventilation problems are faced by 23.4% industrial workers and 20.7% workers suffer from illness related to chemical exposure. Musculoskeletal disorders associated with occupational hazards have a significant impact on workers' health as well as on the productivity of the company. The prevalence rate of the current study on occupational related upper and lower extremity musculoskeletal disorders ranged between 15.5 to 33.7%.

Many countries have regulation for employers to assess and address occupational hazards to ensure compliance with occupational health and safety standards. Failure to comply can result in legal penalties for employers.

A cross sectional research study carried out on 260 healthcare workers to find general work related health hazard. The prevalence of the occupational health related endangerment was found to be 36.5% in the study. It was concluded in the research study that health workers are widely exposed to occupational health hazard.

A study conducted on assessing the relationship between occupational exposure. Mainly the authentic articles in English pointing on the association linking occupational exposure and threat or death. The accessible data are reassuring of high threats to mainly in cooks, waiters, meat workers and specially the World Trade centre participants are exhibited to dust particles.

The aim of the study

To assess the knowledge regarding Occupational hazards among Industrial workers..

The objectives of the study:

1. To assess the knowledge on occupational hazards among Industrial workers.
2. To find association with demographic variables.

Research methodology: The study approach was a quantitative with non-experimental descriptive survey design. The sample selection technique was used non-probability purposive sampling technique. The sample size was 200 industrial workers working small scale industries aged between 18-60 years. Samples were selected from different industries from MIDC.

The tool used for data collection was a self-structured questionnaire that contained demographic variables in section I, section II was related assessment of the knowledge regarding occupational hazards among Industrial workers. The written informed consent was taken from the participants prior to the data collection, in order to establish reliability of the tool, the inter-rater method was used.

Result:

Section I (A): Demographic variables: Majority i.e. 43% of samples were from 31-40 years of age, 84% of samples were female, 43.5% of samples were having secondary education, 39% of samples were working in industries in the last 31-40 years.

Section I(B): Health Variables: The majority of the participants i.e. 87% had awareness on occupational health hazards, 64.5% of them not had any ailment where as 70% of the workers were not undergoing any treatment for the ailment, 47.5% of the industries had regular health checkups being conducted and 62.5% of the industries used safety equipment's while working.

Section – II

Item wise Analysis on knowledge regarding Occupational hazards among Industrial workers

Table no. 1

n=200

Item Number	Item related knowledge regrading occupational hazards	Frequency	Percentage
1.	Meaning of Occupational hazards	191	95.5%
2.	The primary goal for identification ofoccupational hazards	106	53%
3.	The common respiratory diseases faced byindustrial workers due to exposure to airborne particles	126	63%
4.	Meaning of the Biological hazard	117	58.5%
5.	Noise induced hearing loss is an example ofoccupational hazard.	128	64%
6.	Asbestos exposure associated along with theoccupational hazards.	102	51%
7.	The common gas within workplace hazard in confined spaces and can be deadly if notproperly monitored.	120	60%
8.	The type of hazard is associated the psychological wellbeing of the employees.	129	64.5%
10.	The type of hazard is associated with radiation exposure in certain industries .	124	62%
12.	PPE stands in the context of occupationalhazard prevention is	112	56%
14.	The common method forpreventing slips, trips, and falls in the workplace.	127	63.5%
15.	The common practice to prevent electrical hazards in the workplace.	131	65.5%

16.	The things that you'll do if you encounter a spill of hazardous chemicals in the workplace.	128	64%
17.	The purpose of safety audit in anindustrial setting .	115	57.5%
18.	The only thing that can keep youconsistently safe.	117	58.5%
20.	Occupation hazard safety and health is concerned mainly with health andwelfare of:	139	69.5%

Table no. 1 shows that the majority of the samples i.e. 95.5% of the participants had knowledge on meaning of occupational hazards, 53% answered the primary goal for identification of occupational hazards , 63% knew the common respiratory disease faced by Industrial worker due to the exposure of air borne particles , 58.5% answered correctly the biological hazard , 64% knew the example of noise induced hearing loss , 51% answered the occupational hazard associated with asbestos exposure, 60% responded correctly the common gas within workplace hazard that is considered cautious , 64.5% knew the type of hazard that was associated with the psychological well-being of the employees , 62% responded accurately the hazard that is associated with radiation exposure , 56% of the participants had perfectly answered the full form of PPE , 63.5% understood precisely the common method for preventing slips and falls, 65.5% already knew the common practice to prevent electrical hazards in workplace, 64% responded the things if they encounter a spill of hazardous chemicals, 57.5% knew the purpose of safety audit in Industries, 58.5% had knowledge on the things that can keep you safe in an Industrial setting, 69.5% responded accurately what is the health and welfare of occupational hazard safety concerned.

Section III

A. Analysis related to knowledge level on Occupational hazards among Industrial workers

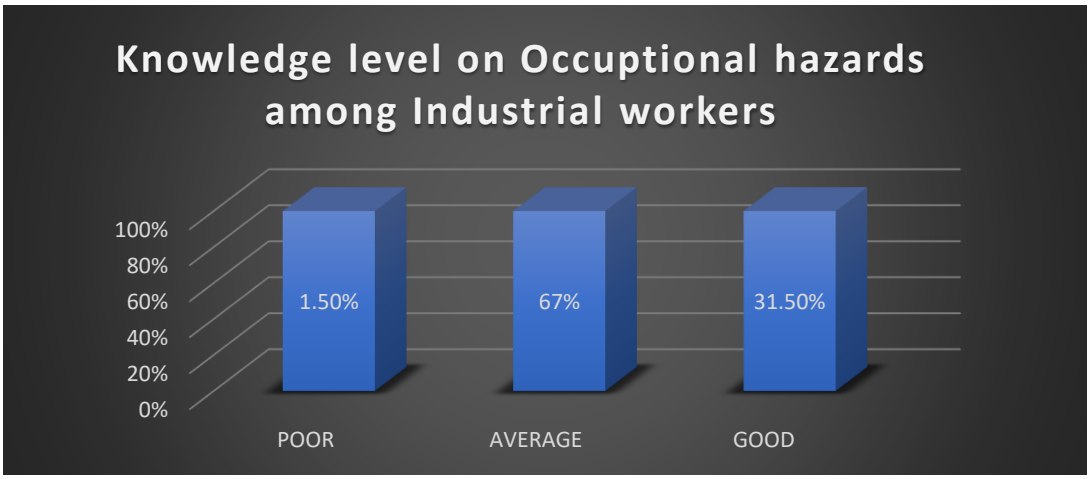

Figure no – 1 The bar diagram showing percentage wise distribution of to knowledge level on Occupational hazards among Industrial workers

Figure No. 1 shows that 31.5% of the Industrial workers have good knowledge regarding occupational hazards, the majority of the workers i.e. 67% had average knowledge and 1.5% workers had poor knowledge regarding the occupational hazards.

Section IV

Association with selected Demographic Variables

Analysis related to association of demographic variables was interpreted and 3 of them were associated i.e. educational qualification, Monthly Income and Duration of work in years.

Discussion

The findings of the study were discussed with the objectives and assumptions of the present study, which was undertaken to assess the knowledge regarding occupational hazards among Industrial workers from selected areas of Pune city. The main findings showed that, most of the Industrial workers have average knowledge, with a total score of 134 (67%). & 31.5% of the Industrial workers have good knowledge regarding occupational hazards, and 1.5% workers had poor knowledge regarding the occupational hazards.

The study supports finds as a self-made questionnaire was developed, and it was distributed to the group of Industrial workers. As per the findings of the study, 56% Industrial Workers practices the use of PPE kit, which is similar to a study conducted on 952 samples to evaluate the number of samples advocating the adoption of wearable sensors in their workplace. The research concluded that, to keep a track on occupational safety and health associated element of danger; almost half of the samples favour the use of wearing sensors. According to this study the result shows 65% of the people had the knowledge regarding the safety of wearable sensors while 35% of the people did not have the knowledge.

Similarly, a study conducted was found to have average number of years of respondents to be 40 years with an average work experience of 19 years. The majority of respondents i.e. 139 possessed scores below average regarding knowledge questions on toxin threat. No association was found uniting knowledge range with work experience P=0.492 or age P=0.462 but the knowledge was significantly associated with exposure score P=0.004, gender P=0.002 as well as compliance regarding rules and regulations on chemicals usage P=0.041 following modifications for safety procedures. In majority, commonly occurring problems mainly among the dye workers were skin disorders, respiratory disorders and allergies which were 24.1%, 53.8% and 51.8% respectively. The airborne pollutants that were mixed with chemicals were associated as 0.045 whereas circulatory and skin disorders were 0.02 and 0.049.

Conclusion

The study was conducted on knowledge regarding occupational hazards among Industrial workers, this research is important as it shows the knowledge level of the industrial workers regarding workplace accidents and their preventive measures. The main goal of conducting this research was to provide a booklet that contains information on preventive measures regarding occupational hazards and to make awareness on occupational hazards among Industrial workers.

Majority i.e. 51% of samples were from 31-40 years of age, 84% of samples were female, 43.5% of samples were having secondary education, 39% of samples were working in industries since 31-40 years. Most of the participants i.e. 87% had awareness on occupational health hazards, 64.5% of them not had any ailment where as 70% of the workers were not undergoing any treatment for the ailment, 47.5% of the industries had regular health checkups being conducted and 62.5% of the industries used safety equipment's while working. The result shows that 51% of the Industrial workers have good knowledge regarding occupational hazards where as 67% had average knowledge and 1.5% workers had poor knowledge regarding the occupational hazards. Significant association was found between knowledge score with duration of work in years & Educational qualification at the 0.005 level of significanc**.**

Recommendation for Future Research:

A similar study can be conducted among IT workers, Health care workers, also on Industrial workers working in large scale Industries. A study can also be done in larger sample in different settings.

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Conflict of interest:

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

Ethical Approval: Ethical approval is given by Intuitional research & recommendation committee, Bharati Vidyapeeth (Deemed to be University), College of Nursing, Pune

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