Research Article

An Exploratory Study to Assess the Health Status of Industrial Worker in Factory of Ahmednagar District

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Abstract

Aim: The study aims to assess the health status of industrial worker in factory of Ahmednagar district.

Materials and Methods: A descriptive quantitative research design was adopted to assess health status among industrial workers at Godavari Biorefineries chemical factory, Sakarwadi, Ahmednagar. Samples were 70 industrial workers selected using purposive sampling technique. Data were collected using interview and physical examination method. The data obtained were analyzed by descriptive inferential statistics.

Results: The results according to demographic variables showed that the majority of the industrial worker were 28 (40%) that belonged to the age group of >41 years, followed by majority of industrial worker 66 (94.28%) were male, whereas 65 (92.85%) workers were married, 44 (62.85%) worker completed their secondary level of education, and 34 (48.5%) found to have more than 10 years of experience, whereas 40 (57.14%) worker were on temporary work and about 7 (10%) of industrial worker were having hypertension and arthritis.

Conclusion: The study proves that most of the factory workers were having health problems due to working environment in which majority of industrial workers were male. Industrial workers were found prone to health problems such as hypertension, acidity, and arthritis.

Keywords: Assess, factory, health status, industrial worker.

Introduction

Industrialization is necessary for prosperity and at times for the survival of a nation. The production is the real wealth of a nation. Only industrialization is not enough, real benefit is brought by continuous top performance of the worker which is only possible by their good health.[1] Industrial workers constitute only a segment of general population and the factors that influence the health of the population also apply equally to industrial workers.[1]

Occupational hazard is defined as the "potential risk to the health of a person emerging from an unhealthy environment" which is a significant public health issue. It can also be referred to as any activity, materials, processes, or situation that is likely to cause an accident or disease at the work place.[2] Although improvement in occupational health has been seen in many developed countries, the protection of workers from work-related disorders is not a priority in many developing countries, partly because several other health issues have competed with occupational health. This situation has existed for long due to various socioeconomic, cultural, and political challenges which often make occupational health not prioritized. This has made occupational health and safety which is a fundamental right in maintaining workers' well-being to remain neglected in developing countries.[3]

Workers in their own workplaces are exposed to many different hazards and hazardous conditions that can threaten health and life.[3] Although some hazards are less likely to happen in some work spaces than others, it is important to assess which hazards are most damaging to the organization and its employees. Apart from the chemical, physical, mechanical, biological, and ergonomic agents, spiritual pressure and mental tensions exist in workplaces. These factors and their effects on humans must be controlled. If anybody spent about one-third of their own day at work, it is necessary to assess and control adverse situations based on this fact.[4]

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Objectives of the study

The objectives of the study were as follows:

1. To assess the health status of industrial worker in factory of Ahmednagar district
2. To associate the health status of industrial worker in factory of Ahmednagar district with selected demographic variable.

Hypothesis

- H_0 – There is a no significant changes in the health status of the industrial workers
- H_1 – There is a significant changes in the in the health status of the industrial workers.

Materials and Methods

Research design

A descriptive quantitative research design.

Setting of the study

Godavari Biorefineries chemical factory, Sakarwadi, Ahmednagar (MS), India.

Description of tool

The tool or the study instrument is divided into five parts.

- Section A: Consists of demographic data of samples
- Section B: Consist of physical examination of sample
- Section C: Consist of personal health questionnaire
- Section D: Consist of occupational health questionnaire
- Section E: Workplace stress checklist.

Population of the study

The accessible population of the study were industrial workers working at Godavari Biorefineries chemical factory, Sakarwadi, Ahmednagar.

Sample size

The sample size for study selected was 70 industrial workers who met with the inclusion criteria.

Sample technique

The sampling technique use in this study is non-probability purposive sampling technique.

Procedure for data collection

The study was carried out on 70 industrial working at Godavari Biorefineries chemical factory.

Reliability of tool

The reliability of tool was calculated by Karl Pearson's correlation coefficient method and the reliability of study is 0.91 for the knowledge questionnaire and the tool was found to be reliable and feasible to conduct main study.

Statistics

Frequency and percentage distribution were used to analyze the demographic data and assessment of the knowledge of industrial workers working at Godavari Biorefineries chemical factory.

Results

The data were entered into master sheet for tabulation and statistical processing; the obtained data were analyzed, organized, and presented under the following headings:

- Section 1: Deals with the demographic detail and presents medical illness of industrial worker under study
- Section 2: Deals with the analysis of physical health status of the industrial worker
- Section 3: Deals with the analysis of personal habit of industrial worker
- Section 4: Deals with the analysis of occupational health status of industrial worker

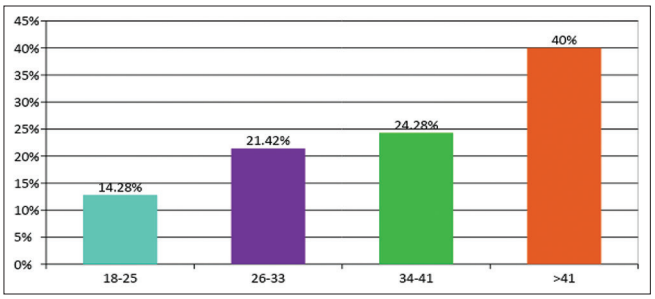

Figure 1: Distribution of subject in relation to their age in years

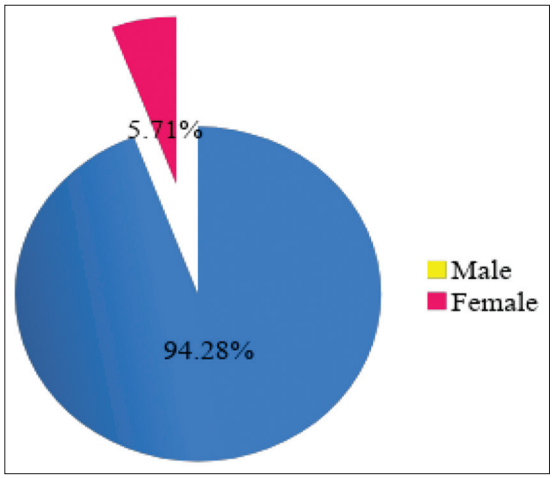

Figure 2: Distribution of subject in relation to their gender

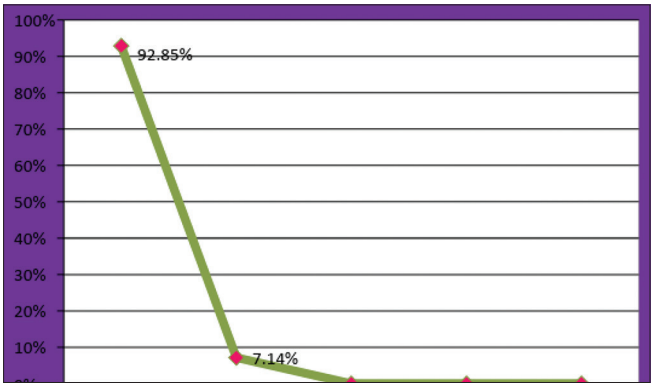

Figure 3: Distribution of subject in relation to their marital status

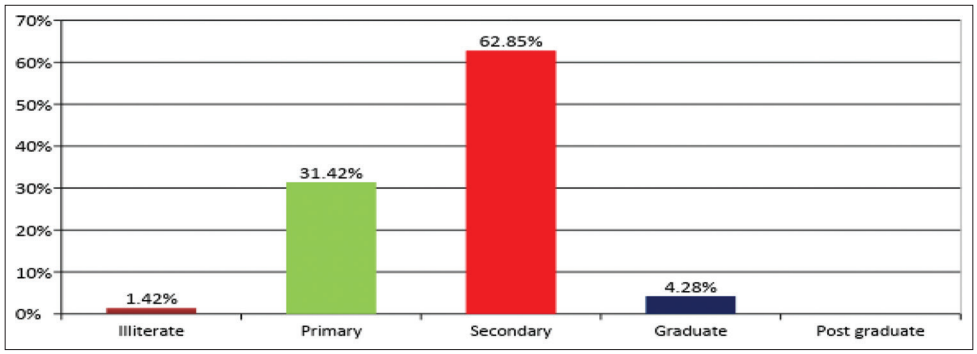

Figure 4: Distribution of subject in relation to their educational level

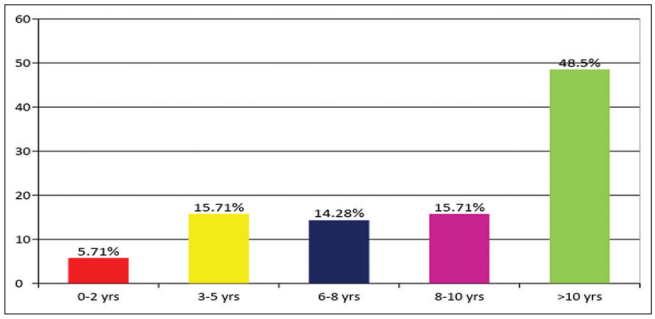

Figure 5: Distribution of subject in relation to years of experience

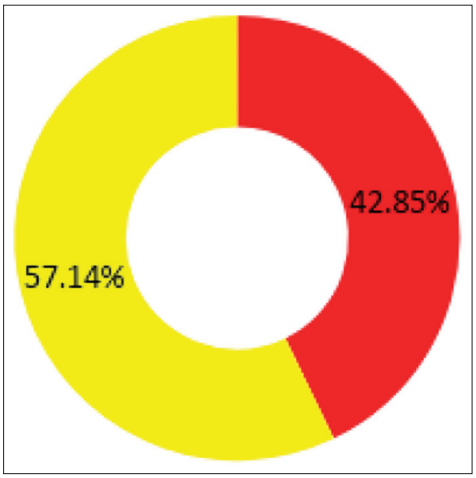

Figure 6: Distribution of subject in relation to their mode of work

- Section 5: Deals with the analysis of mental health status of industrial worker.

Section 1

Figure 1 imparts that majority of industrial worker 28 (40%) belongs to the age group of >41 years, and 17 (24.28%) industrial workers were found to be in between 34 and 41 years, whereas 15 (21.42%) industrial workers were in between 26 and 33 years and only 10 (14.28%) industrial workers were in between 18 and 25 years.

Figure 2 depicts that majority of industrial worker 66 (94.28%) are male and females are only 4 (5.71%).

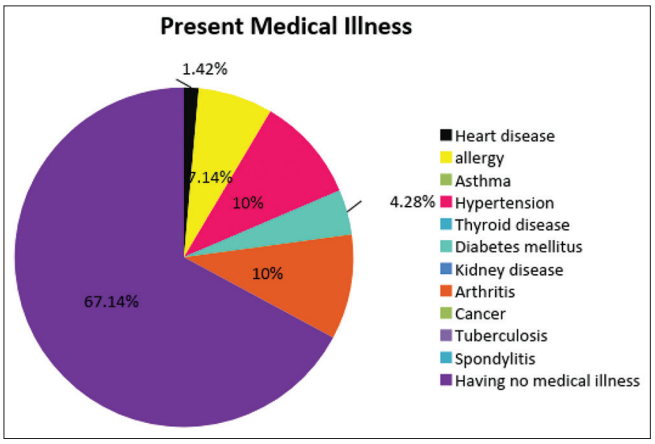

Figure 7: Distribution of subject regarding medical history

Figure 3 depicts that majority of industrial worker 65 (92.85%) are married and only 5 (7.14%) industrial workers are unmarried and no industrial workers are divorced, widower, or widowed.

Figure 4 reveals that majority of industrial worker 44 (62.85%) had completed their secondary level of education, 22 (31.42%) industrial worker had completed their education up to primary level, and only 3 (4.28%) industrial worker had completed their graduation, 1 (1.42%) industrial worker is illiterate, and none of the industrial worker are postgraduated.

Figure 5 communicates that majority of industrial worker 34 (48.5%) have more than 10 years of experience, 11 (15.71%) industrial workers have 3–5 years of experience, 11 (15.71%) industrial workers have 8–10 years of experience, and only 4 (5.71%) industrial workers have 0–2 years of experience.

Figure 6 tells that majority of industrial worker 40 (57.14%) are on temporary work and 30 (42.85%) industrial workers are permanent in factory.

Figure 7 reveals that majority of industrial worker 47 (67.14%) are having no medical illness but 7 (10%) industrial workers are having hypertension and arthritis, 5 (7.14%) industrial workers are having allergy due to dust, penicillin, etc., 3 (4.28%) industrial workers are suffering from diabetes mellitus, and 1 (1.42%) industrial worker is having heart disease.

Discussion

Objectives of the study

The objectives of the study were as follows:

1. To assess the health status of industrial worker in factory of Ahmednagar district
2. To associate the health status of industrial worker in factory of Ahmednagar district with selected demographic variable.

The findings of the study were supported by Bhusnure *et al*. (2018) in their article titled explaining the chemical hazards and safety management in pharmaceutical industry and preventing exposure to toxic chemicals. In form of liquid, gaseous, and solid, chemical substances reach the unprotected body through inhalation, absorption of the skin, intake, or injection. The significance of collaborating with a number of OHS experts to avoid fatality, disability, and ill health resulting from this dynamic field of OHS is underlined.[5]

The findings of the study were supported by Ngaruiya (2014), in their article, the researcher explained the evaluation of occupational health hazards among oil industry workers. A refinery workmen case study determines the awareness regarding health risks among the employees as well as assesses the occupational health protocols for safety measures which followed in the refinery. The usage of advanced equipment and good housekeeping to determine the different health hazards was used to monitor the environment/monitor the situation; and evaluation of threats linked to known health hazards. Hazard risk assessment matrix has been applied to define and identify threats related to health risks.[6]

The findings of the study were supported by Benjamin (2015) in which the evaluation of occupational health perils among oil industry workers. A refinery workmen case study determines the awareness regarding health risks among the employees as well as assesses the occupational health protocols for safety measures which followed in the refinery. Ecological surveillance/observing which incorporates the utilization of particular supplies and great housekeeping is utilized to distinguish the diverse health risks and the evaluation of threats linked to known health hazards. Danger risk evaluation network was utilized for recognizing the health risks and their associated dangers. It suggested the executive's convention that can help the administration of gas and oil refinery secure, advance, and restore the well-being as well as a prosperity of the laborers.[7]

Conclusion

The study proves that most of the factory workers were having health problems due to working environment in which majority of industrial workers were male. Industrial workers were found prone to health problems such as hypertension, acidity, and arthritis. More interventional studies need to be conducted for improving occupational health of the workers.

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