

Evaluation of Occupational Hazards of Workers Working in Vital Tea Factory Tehsil Haroonabad District Bahawalnagar-Pakistan

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ABSTRACT

Background: Occupational health aims at prevention of disease and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations. Occupational health hazards refer to the potential risks to health and safety of workers at their workplaces. Tea factory workers are susceptible to a number of hazards due to physical, biological, mechanical, chemical and psychosocial factors. The present study tries to examine the occupational health hazards faced by the tea factory workers of Vital Tea Factory Tehsil Haroonabad, District Bahawalnagar. **Objectives of study:** To assess the occupational hazards of the workers working at Vital Tea Factory and to make recommendations for better occupational safety and health measures for workers of the factory. **Material & Methods:** It was a cross-sectional descriptive study. The place of study was factory workers of Vital Tea Factory, Tehsil Haroonabad, District Bahawalnagar. 63 respondents working in tea factory and they were included in the study and questions were asked to assess the occupational hazards to which the workers are exposed. **Results:** Results showed that most of the workers of the factory were educated. Only 4 (6.3%) sustained accidental injuries. Among them, finger cut was seen in three respondents and one sustained laceration to finger. With tea dust, 16 (25.4%) workers suffered cough while only 9.5% suffered cough and sneezing. Headache was seen in 10 (15.9%) individuals and tinnitus in only 3 (4.8%). With humidity and increased temperature, 12 (19%) suffered body aches, 3 (4.8%) faced heat cramps. All basic facilities like adequate lighting, fencing around machines, ventilated rooms, food and catering and proper sanitation were provided. **Conclusion:** This study was conducted to explore health hazards posed to tea factory workers. Tea industry is not a high risk industry as is evident that majority of respondents did not get job related illnesses. It was a pleasant sign that this particular factory is located outside of residential areas of city.

Keywords: Occupational Hazards, Injury, Tea Factory Workers.

Type of paper: **Original Research Article.**

1. INTRODUCTION

Tea is a second most popular beverage all over the world after water intake. Tea is made of leaves and leaf buds of *Camellia sinensis*. The manufacturing processes can be divided into two stages. The early stage includes withering, panning, rolling, ball-rolling, and drying and the late stage includes sifting and blending, packing, and other processes before export and trade. Occupational health hazards refer to the potential risks to health and safety of workers in their workplaces.

The two stages of tea manufacturing have differences in work schedule, workplace, processes, and materials, which may lead to variations in the intensity, frequency, and contents of tea dust exposure. Therefore, workers engaged in different stages might suffer from different respiratory effects. There are a number of common safety hazards and health issues associated with the blending, processing and packaging of tea.

Occupational asthma has been described among workers involved in packaging and blending studies found higher prevalence of chronic respiratory symptoms among blending workers. Exposures to tea dusts could cause airway obstruction.

The main risks posed to workers at tea factories are from unguarded machinery, chemical and biological agents as well as unfavorable working conditions like high temperatures, high humidity, etc.

A lot of studies have been undertaken on the occupational hazards for employees related to tea industry at

international levels. However, no study so far has been undertaken on occupational hazards related to workers in a tea industry in Pakistan. So this study is designed to collect information regarding occupational hazards, in order to develop strategies to be adopted for improving occupational safety, for better working environment and services provided to tea factory workers.

1.1 Objectives of study

The objectives of the study are stated as under: -

1. To assess the occupational hazards of the workers working at Vital Tea Factory.
2. To make recommendations for better occupational safety and health measures for workers of the factory.

2. MATERIAL & METHODS

2.1 Study design: It was a cross-sectional descriptive study

2.2 Study population: Factory workers of vital tea factory, Haroonabad, District Bahawalnagar were my study population.

2.3 Sampling technique: Simple Random Sampling.

2.4 Sample size: The sample size is 63

2.5 Duration of study: The duration of study was one month from 13th July, 2015 to 12th August, 2015.

2.6 Data collection method: A semi - structured questionnaire was prepared and finalized after pre testing. The factory workers of Vital Tea Factory, Haroonabad were interviewed by the investigator himself.

2.7 Data analysis: Data was entered in computer software SPSS (Statistical Package for Social Science) version 20.

3. REASULTS

3.1 Frequency Distribution of Respondents Designation

Designation of the respondents, 43 (68.3%) were worker, 10 (15.9%) were machine operator, 6 (9.5%) were foreman, 2 (3.2%) were machine worker, 1 (1.6%) was security guard and 1 (1.6%) was waiter.

3.2 Frequency Distribution about Work Related Diseases

Results shows that 8 (12.9%) suffered from work related disease and 55 (87.1%) were healthy.

Out of 8 respondents who suffered from work related diseases, 2 (25%) thought that disease was worsened due to job and 6 (75%) thought no effect was due to job.

3.3 Frequency Distribution of Respondents Developing any Health Problems since Employed

Results illustrates that 37 (59.7%) respondents developed health problems and 26 (40.3%) did not develop any health problem since employed.

3.4 Frequency Distribution of Respondents, who Sustained Accidental Injury

Results show 4 (6.3%) respondents sustained accidental injury while working and 59 (93.7%) remained safe.

Out of 4 sustaining accidental injury, 3 (75%) got their finger cut and 1 (25%) got laceration to his finger.

3.5 Frequency Distribution of Medical Examination of Workers

The employees were medically examined at the time of their entry into employment. All of them also had periodic medical examination.

Table 1 Frequency Distribution of Occupational Hazards

With Tea Dust	Frequency	Percentage
Cough	16	25.4
Sneezing	7	11.1
Cough & Sneezing	6	9.5
With Noise	Frequency	Percentage
Headache	10	15.9
Tinnitus	3	4.8
With Humidity and Increased Temperature	Frequency	Percentage
Body Aches	12	19
Heat Cramps	3	4.8
Skin Rash & Heat Cramps	1	1.6
Body Aches and Heat Cramps	1	1.6

Table 1 shows that out of the total 63 respondents, occupational hazards with tea dust shows, 16 (25.4%) suffered from cough, 7 (11.1%) suffered from sneezing and 6 (9.5%) cough as well as sneezing. Occupational hazards with noise shows, 10 (15.9%) suffered with headache and 3 (4.8%) suffered with tinnitus. Out of 63 respondents occupational hazards with humidity and increased temperature shows, 12 (19%) suffered body aches, only 3 (4.8%) suffered heat cramps, 1 (1.6%) suffered skin rash along with heat cramps and also 1 (1.6%) suffered body aches as well as heat cramps.

4. DISCUSSION

Workers in the tea planting industry are exposed to a variety of occupational health and safety hazards. The main risks posed to workers at tea factories are from unguarded machinery, chemical and biological agents as well as unfavorable working conditions like high temperatures, high humidity, etc.

Work-related morbidity and mortality not only result in sufferings and hardships for the worker and his family, but also add to the overall cost to the society through lost productivity and increased use of medical and welfare services. In this study, it is found that compensation policy exists for the factory workers and fortunately nothing crucial or fatal event had ever occurred for which compensation could be given. According to a study undertaken by the International Labor Organization in Sri Lanka, occupational hazards in the tea manufacturing industry were varied and disability or death occurring as a consequence of work-related injuries have resulted in the payment of compensation to the injured workers or their dependents. Another study carried out in Uganda has revealed that almost two-thirds of employees had suffered from work-related illness or injury, and 30.3% faced occupational safety hazards at least every month. Leigh et al estimated that about 38 million Disability Adjusted Life Years (DALYs) or 2.7% of all world DALYs were due to occupational factors. According to the International Labor Organization, diseases related to work cause the most deaths among workers. Hazardous substances alone are estimated to cause 438,489 deaths a year.

More than two-thirds of the factory respondents were permanent workers and were engaged in various types of work, as packing, printing, blending, etc. Tea workers, like any other industrial workers are prone to accidents at work. Only 4 (6.3%) workers sustained accidental injuries. Among them, finger cut was found in 3 respondents and one sustained laceration to finger. Fractures and dislocations were not seen in the respondents. Although they were common in study conducted by Minj and Joseph et al 2012 in which fractures were common and compensation was recorded in 22 cases and 483 days were lost in these cases.

Tea factory workers are susceptible to a number of health hazards like cough, sneezing, asthma, headache, tinnitus, vertigo, body aches as well as heat cramps or skin rashes. With tea dust, 16 (25.4%) workers suffered cough while only 9.5% suffered cough and sneezing. Asthma was not seen in any worker. The symptoms of cough and other respiratory conditions were also seen in a study by Sheih et al (2012).²⁹ Headache was seen in 10 (15.9%) workers and tinnitus in only 3 (4.8%). These conditions might be due to the noise produced by machines. With humidity and increased temperatures, 12 (19%) suffered body aches and 3 (4.8%) faced heat cramps.

5. CONCLUSIONS

This study was conducted to explore health hazards posed to tea factory workers. Tea industry is not a high risk industry as it is evident that majority of respondents did not get job related illnesses. It is also observed that job stress is minimal, only few suffered from headache and body aches. It was a pleasant sign that this particular factory is located outside of residential areas of city. Over 50% of the respondents had secondary education and above. It was found that occupational hazards to tea workers are less likely to happen in a healthy working environment. All basic facilities like adequate lighting, fencing around machines, ventilation of rooms, food and catering and proper sanitation in the factory were provided. Little has been seen adversely affecting the performance of workers.

If wages of the workers are increased then monetary incentives are enhanced, skill level of the workers is raised and modern technologies for tea processing and manufacturing are introduced then these interventions will further improve the productivity and wellbeing of workers.

7. RECOMMENDATIONS

A few recommendations for improving health and safety conditions of tea factory workers are as under;

- ► Income of both permanent and temporary workers should be increased so that they can lead comfortable and hygienic lifestyles and invest more in health and education.
- ► The tea factory workers should be made aware of the importance of the health benefits of drinking clean and safe water, keeping their surroundings clean and free from dirt and stagnant water.
- ► The walls and machinery of the tea factory should be kept clean, machines should be fenced off and the floors, stairs and means of access should be of sound construction.
- ► Proper training regarding handling of tools and machines should be given to workers before operating the factory machines.
- ► Utmost precaution should be taken while spraying chemicals so that the workers are not exposed to their hazardness.
- ► Protective equipment such as goggles or face shields, chemical-resistant gloves, aprons, boots and respirators should be provided to the workers.
- ► Rotation of duties can be undertaken to minimize the ill-effects to the workers
- ► Rehabilitation of sick and disabled tea garden workers should also be taken care of by the

management of the tea estates.

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