AN ANALYSIS OF THE IMPACT OF SAFETY AND HEALTH PROGRAMS ON THE MANUFACTURING WORKFORCE

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Abstract

Examining the strategic concerns surrounding worker safety and health is the study's goal. Some businesses use more creative safety initiatives to replace the ones that were cancelled. Employees who stay accident-free may get awards from several safety initiatives. The research contributes to maintaining appropriate safety standards. Making ensuring that workers take precautions against harmful behaviors will also benefit the industrial industries.

A safety policy needs to be created and followed by every firm. Naturally, the technique to be used relies on the company's size, the number of facilities it runs, the kind of business it engages in, the manufacturing technology it employs, and the attitude of the top management.

A manufacturing institution should build a safety program after defining its safety policy with the main objectives of reducing the number of dangerous elements that are likely to cause accidents and fostering safe work practices among its personnel.

So, it is necessary to foster a realistic and optimistic outlook to protect the workers' health and safety in an organization.

Keywords: *Occupational health, Accidents, Employee safety & health, Rewards,*

INTRODUCTION

First and foremost, the function of human resource management in the economy is to incorporate economic factors into the organizational processes, policies, and strategies already in place. People must be put at the center of the organization's mission, and the requirements of its human resources must be reevaluated. The top management must be informed by human resource management of the significance of the internet, e-commerce, and globalization to the company's performance and competitive advantage. By incorporating them, change will happen. At this time of transition, it will be the responsibility of the human resource specialists to serve as a liaison between upper management and the workforce.

Workers possess a variety of attributes, including aptitude, values, knowledge, and talents. They arrive to the company with a wide range of human resources. While the organization and the work primarily demand the abilities and knowledge of the employee, it is necessary for the management to accept and appreciate the whole employee. Only the employee remains committed to the company at that point.

The devoted employee provides his or her full skill and expertise, making them a great addition to the industrial organization. Also, the dedicated employee is devoted to the company. The business offers its workers a pleasant working environment as part of its effort to preserve good ties with others.

Employee Safety

Safety refers to the absence of accidents. Stated differently, safety refers to the protection of workers from the danger of accidents.

Types of Accidents

Accidents come in many various forms, and depending on how seriously someone is hurt, they may be divided into major and minor accidents.

• A significant accident is one that results in a fatality or leaves the wounded with a serious impairment.

• A small accident is still an accident if it results in a scratch or cut but does not render the victim significantly disabled.

• The worker may or may not become disabled right away from a shallow cut or scrape, but later impairment may set in.

If a worker recovers from an accident, the injury may leave him or her temporarily impaired for an hour, a half-day, a day, a week, a month, or a few months. His or her impairment is permanent if the harm is such that complete recovery is impossible.

Need for safety

• An accident free plant enjoys certain benefits. Major ones are substantial

• Savings in costs,

• Increased productivity,

• Morale,

• And legal grounds.

HEALTH

"A condition of full physical, mental, and social well-being and not only the absence of sickness or infirmity," is how the WORLD Health WHO defines health.

Employee health is "a public health and preventive medicine system that is common within the industries," according to the dictionary.

Industrial health involves the following factors:

• Preserving and maintaining one's bodily health; maintaining one's mental health; and maintaining one's social well-being.

• The preservation and upkeep of a work environment that encourages health.

• Elimination of hazardous working conditions that contribute to pollution and disease.

• Safeguarding employees from dangers and other workplace health concerns.

• Creating workstations and equipment that are tailored to each person's body and psyche.

STATUTORY PROVISIONS ON SAFETY ILO'S CODE

A model code of safety regulations for industrial establishments was developed at a session of the International Labor Organization in 1948. This has evolved into a standard for the majority of nations and their industrial establishment. Codes cover "unsafe activities" in some regions.

Statutory Provisions of Safety in India

Factory Act of 1948: Sections 21 to 40 address statutory safety measures. The following are the areas covered:

Fencing of machinery

• Use care while working around moving machinery.

• Precautions must be taken before letting teens use hazardous equipment.

• Specific requirements for the use of hoists, lifts, and rotating machines.

• Protection against chemical fuels, gases, and dust.

• Tools for protecting files.

• The exclusion of girls and kids from risky regions.

• Providing lighting and ventilation

Other legislative measures:

• Mines Act 1952

• Plantation Labor Act 1961

• Beedi and Cigar Workers Act 1996

• Contract Labor Act 1970

- Motor Transport Workers Act 1961, etc.

SAFETY MANAGEMENT

The process of developing safety policies for your business based on legal requirements and business requirements, and then putting those policies into action, is known as safety management. According to the Occupational Safety and Health Administration, every level of the management and executive team must be engaged for a safety management system to benefit the organization.

Integrated systems created to handle the safety, health, environmental, and overall risk components of industry are referred to as safety management systems (SMS). Some structures for regulation and enforcement are in place. The specialized application of quality management to safety is known as an SMS.

INDUSTRIAL HEALTH AND SAFETY

The techniques for research and prevention are provided by the fields of engineering, epidemiology, toxicology, medicine, psychology, and sociology.

There are tens of thousands of workplace dangers. Workplace physical conditions, hazardous products, job demands, and plants and equipment may all be categorized as occupational hazards. These categories interact significantly with one another. Equipment, for instance, may alter the working environment by generating heat, noise, or potentially dangerous compounds, but only if improper practices are followed.

Energy sources and power transmission, processes at the point of operation, vehicles and material-handling equipment, walking and climbing surfaces, ingress-egress, and confined spaces are often linked to plant dangers. Vibration and noise, extremes of temperature and pressure, and ionizing or non-ionizing radiation are some of the physical workplace hazards.

The type and shape of the materials utilized in industrial operations are quite diverse. It's possible that some materials' mists, vapors, gases, liquids, dusts, and fumes are dangerous. Certain materials may catch fire or explode. When they come into touch with or enter the human body, some of them become chemically or biologically active. Even elements that are chemically inert may harm people or make them sick.

The job that a worker does might be dangerous. When applied or reactive forces, pressures, or torques exceed the body's tolerance, lifting, pushing, tugging, and other physical action may result in injury. The risk of injury may be greatly increased by repeatedly doing manual activities for extended periods of time, making excessive reaches, twisting actions, moving quickly, and adopting postures that concentrate forces. Human mistake may also be caused by boring or unpleasant tasks. Errors are most prone to occur when work circumstances change and necessitate deviating from regular procedures, such as when equipment is being serviced.

Failure mode and effects analysis (FMEA) methodically records the impacts of errors on work sheets that identify the system's components, their probable failure modes, the probability and consequences of each failure, and alternative mitigation strategies. Related methodologies that structure the study around jobs rather than system components include work safety analysis and human error analysis. The first segmentation of tasks into subtasks is a step in this process. The probable

consequences of defective products and human mistake are then detailed for each subtask. A probable accident is the starting point for fault tree analysis, which subsequently drills down to its root causes. System flaws, human mistake, or regular non-malfunction conditions might all be considered fundamental causes. The primary reasons are often given probabilities, which makes it possible to determine the chance of accidents.

Plant or process design is one method of reducing or eliminating risks;

The Occupational Safety and Health Administration's general industrial standards are the most well-known federal standards in the United States (OSHA). OSHA also establishes rules for the agricultural, marine, and construction sectors. Additional regulations include those set out by the Federal Aviation Administration (FAA) regarding worker safety in air travel and by the Environmental Protection Agency (EPA) for the removal and cleaning of hazardous chemicals.

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the Mine Safety and Health Administration (MSHA) requirements for miners, the Nuclear Regulatory Commission and Department of Energy requirements for those dealing with radioactive materials, and the U.S. Coast Guard requirements for the security of personnel aboard tankers and passenger ships. Standards for health and safety may also be implemented by municipal and state governments.

OCCUPATIONAL HEALTH AND SAFETY

Protecting the welfare, health, and safety of those who are employed or working is the focus of the multidisciplinary field of occupational health and safety. Fostering a safe workplace is the aim of all occupational health and safety initiatives. Coworkers, family members, employers, clients, vendors, surrounding neighborhoods, and other members of the public who are influenced by the office environment may also be protected as a side consequence.

Reasons for Occupational health and safety:

the occurrence of a workplace incident (such as legal fees, fines, compensatory damages, investigation time, lost production, lost goodwill from the workforce, from customers and from the wider community).

Employees that participate in safety training sessions assist create a culture of safety where they actively support safe work practices. Although it is simple for seasoned workers to adversely affect the new recruits, it is crucial that new employee's get sufficient training and understand the significance of workplace safety. Yet, by implementing fresh, inventive, practical safety training, which will eventually result in a successful safety culture, this negative impact may be eliminated.

OBJECTIVES OF THE STUDY

• To investigate the strategic concerns surrounding worker health and safety in different industrial enterprises.

• To propose several strategies for reducing work-related risks in a manufacturing company.

REVIEW OF LITERATURE

A very urgent requirement in the workplace today was addressed by OSH 2016 India. The World Health Organization (WHO) and the International Labour Organization (ILO) have developed various goals for the topic of Occupational Safety Hazard, such as maintaining and promoting workers' health

and working capacity, improving the working environment and work to make it safer and healthier, and developing work organizations and working cultures in a way that supports health and safety at work. They provide a favorable social environment, facilitate operations, and increase productivity.

While extraversion was a reliable predictor of traffic accidents, Clarke and Robertson's study of individual personality traits was unable to find a strong correlation between personality dimensions and occupational accidents, indicating the need for additional research on the topic of personality and safety climate.

Systematic OHS management "aims to identify causes of injury and ill-health early in the production process and to generate countermeasures before damage or ill-health occurs," according to Frick and Wren (2000: 19).

SOURCES OF DATA

Primary Data:

In order to understand how the workers felt about the Employee Health and Safety program in relation to manufacturing issues, the main data from the employees was gathered using structured questionnaires.

Secondary Data:

Invaluable secondary data for the research was gathered from journals and reference materials.

SAMPLE DESIGN:

The issue highlighted determines the sort of study that will be conducted. "Descriptive research" is the research method used here. Surveys and other fact-finding inquiries are part of descriptive research. The main goal of descriptive research is to describe the current situation as it stands. Here, an effort has been made to identify the numerous root causes of the issue and to provide solutions.

METHOD OF SAMPLING

Simply said, sampling is the process of gathering information about the population from a sample taken from it. Instead of studying the whole of the universe, just a portion of it is being investigated as a sampling approach, and conclusions about the entire universe are formed from that.

TOOLS AND TECHNIQUES OF DATA COLLECTION

The tool utilized for the research's goal was a questionnaire.

A structured questionnaire with a set of questions written in a certain format is the tool used to gather data from primary sources. The questionnaire was given to each person separately.

TOOLS FOR ANALYSIS

Sample units were tagged, transcribed, and tables were created when the fieldwork was finished. For the analysis and interpretation of the data, appropriate elementary statistical tools, such as percentages and graphs, were employed.

TABLE SHOWING WHETHER THE ORGANIZATION HAS AN ACTIVE SAFETY COMMITTEE

Response	No. of Respondents	Percentage
Yes	100	100%
No	0	0%
Total	100	100

ANALYSIS & INFERENCE:

The aforementioned chart demonstrates that the company has a functioning safety committee. The organization has an active safety committee, according to all responders. All of the workers are aware

of the safety committee, which demonstrates that the manufacturing concerns have done the best possible steps to guarantee that every employee is included in the committee. The safety committee must update timely periodic modifications.

TABLE SHOWING THE EMPLOYEES AWARENESS OF THE SAFETY PROGRAMS PROVIDED BY THE MANUFACTURING CONCERNS

Response	No. of Respondents	Percentage
Yes	85	85%
No	15	15%
Total	100	100%

ANALYSIS & INFERENCE:

It is evident that the staff is aware of the safety initiatives offered by the manufacturing companies.

TABLE SHOWING THE MONITORING OF THE VIOLATION OF THE SAFETY RULE

Response	No. of Respondents	Percentage
Consultation of the Superiors	32	32%
Occurrence of Damage	24	24%
Through Observation	44	44%
Total	100	100%

ANALYSIS & INFERENCE:

From the aforementioned, it is clear that the safety manager is keeping an eye out

for safety rule violations. According to the table, 47% of respondents believe that monitoring is done by observation, 30% believe it is done through communication with superiors, and 23% believe it is done only after harm occurs.

TABLE SHOWING THE MEASURES TAKEN TO ENSURE INDUSTRIAL SAFETY IN THE ORGANIZATION

Response	No. of Respondents	Percentage
Safety Committee	25	25%
Safety Training	53	53%
Regular Inspection	22	22%
Total	100	100%

ANALYSIS & INFERENCE:

It is obvious that the business has taken steps to guarantee industrial safety. It can be observed from the table that 55% of respondents chose safety training, 27% chose safety committees, and 18% chose regular inspections.

TABLE SHOWING THE CAUSE FOR INDUSTRIAL ACCIDENTS

Response	No. of Respondents	Percentage
Slip / fall	20	20%
Inherent Hazards	56	56%
Collision	24	24%
Total	100	100%

ANALYSIS:

It is evident from the table that 56% of respondents believe it is because of intrinsic dangers, 24% believe it is because

of collisions, and 20% believe it is because of workers' slips or falls.

GRAPH SHOWING THE CAUSE FOR INDUSTRIAL ACCIDENTS

INFERENCE: The graph suggests that the majority of respondents believe that inherent dangers are the reason.

TABLE SHOWING THE PROVISION FOR HEALTH PROTECTION

Response	No. of Respondents	Percentage
Accident Insurance	6	6%
Health Insurance	11	11%
Hospitalization	83	83%
Total	100	100%

ANALYSIS:

The provision for health protection is shown in the table above. From the table, it can be observed that 83% of the respondents have received hospitalization benefits, 11% have received health insurance, and none have received accident insurance.

FINDINGS

1. The safety committee is known to all of the workers, demonstrating that the business has taken all necessary steps to guarantee that every employee is covered by the committee.

2. The vast majority of respondents gave the safety rules and procedures positive ratings. By routinely changing the rules when change is required, this helps the business turn average ratings into superior ones.

3. 20% believe that monitoring only takes place when harm is present. To prevent breaking safety laws, precautions must be taken.

4. The majority of respondents said that the best way to guarantee industrial safety is via safety training. Nonetheless, the government may make sure that regular inspections and safety training are undertaken.

5. The vast majority of them agree that the safety and health training program is carried out. It indicates that the safety and health of the workers are given the proper consideration.

The medical benefit for occupational sickness is supplied, according to all of the respondents. This is a reliable sign for the manufacturing concerns' safety and health division.

CONCLUSION

The research found that both the public and private sectors in Bangalore's manufacturing industry, particularly, are working well to promote employee safety and health. Enhancing safety and preventing fatalities will be made possible by talking about best practices, getting clarification, and learning from one another.

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