

Final Project Report

“A Detail Study of Welfare and Safety Measures Provided to Employees of Bajaj Steel MIDC Hingna”

Submitted to:

DMSR

**G. S. College of Commerce & Economics Nagpur
(An Autonomous Institution)**

Affiliated to

Rashtrasant Tukadoji Maharaj Nagpur

In partial fulfilment for the award of the degree of

Master of Business Administration

Submitted by

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NAAC Re-Accredited “A” Grade Autonomous Institution



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CERTIFICATE

This is to certify that **Payal A. Dhongadi** has submitted the project report titled **“A Detail Study of Welfare and Safety Measures Provided to Employees of Bajaj Steel MIDC Hingna”** towards partial fulfillment of **MASTER OF BUSINESS ADMINISTRATION** degree examination. This has not been submitted for any other examination and does not form part of any other course undergone by the candidate.

It is further certified that he has ingeniously completed his project as prescribed by DMSR - G. S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR (NAAC Reaccredited “A” Grade Autonomous Institution) affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

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DECLARATION

I here-by declare that the project with title **“A Detail Study of Welfare and Safety Measures Provided to Employees of Bajaj Steel MIDC Hingna”** has been completed by me in partial fulfillment of **MASTSER OF BUSINESS ADMINISTRATION** degree examination as prescribed by **DMSR - G. S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR (NAAC Reaccredited “A” Grade Autonomous Institution)** affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur and this has not been submitted for any other examination and does not form the part of any other course under taken by me.

Payal A. Dhongadi

Place: Nagpur

G.S. College of Commerce & Economics, Nagpur

ACKNOWLEDGEMENT

With immense pride and sense of gratitude, I take this golden opportunity to express my sincere regards to **Dr. Swati S. Kathaley**, Principal, G.S. College of Commerce & Economics, Nagpur.

I am extremely thankful to my Project Guide **Dr. Aniruddha Akarte** for his guideline throughout the project. I tender my sincere regards to Co-ordinator, **Dr. Sonali Gadekar** for giving me guidance, suggestions and invaluable encouragement which helped me in the completion of the project.

I will fail in my duty if I do not thank the non-Teaching staff of the college for their Co-operation.

I would like to thank all those who helped me in making this project complete and successful.

Payal A. Dhongadi

Place: Nagpur

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INTRODUCTION

Due to rapid industrialization, industrial workers are exposed to several types of hazards and accidents. Every year lakhs of workers are injured due to mechanical, chemical; electrical and radiation hazards and it leads to partial or total disablement. So, in recent years, greater attention is given to Health, welfare and safety due to pressure from government, trade unions, labour laws and awareness of employers.

The efficiency of workers depends to a great extent on the environment in which the work. Work environment consists of all the factors, which act and react on the body and mind of an employee. The primary aim is to create an environment, which ensures the greatest ease of work and removes all causes of worries.

Occupational welfare and safety are a discipline with a broad scope involving many specialized fields. In its broadest sense, it should aim at:

- a) The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations.
- b) The prevention among workers of adverse effects on welfare caused by their working conditions.
- c) The protection of workers in their employment from risks resulting from factors adverse to welfare.
- d) The placing and maintenance of workers in an occupational environment adapted to physical and mental needs.
- e) The adaptation of work to humans.

Successful occupational welfare and safety practice requires the collaboration and participation of both employers and workers in health, welfare and safety programmes, and involves the consideration of issues relating to occupational medicine, industrial hygiene, toxicology, education, engineering safety, ergonomics, psychology, etc.

Work plays a central role in people's lives, since most workers spend at least eight hours a day in the workplace, whether it is on a plantation, in an office, factory, etc. Therefore, work environments should be safe and welfare. Unfortunately, some employers assume little responsibility for the protection of workers' welfare and safety. In fact, some employers do not even that they have moral often legal responsibility to protect workers.

What is employee welfare?

Employee welfare is an all-encompassing term that describes the physical and mental health and wellbeing of your employees. This can include their physical work environment as well as other factors in and outside the workplace that affect their quality of life, health, mental wellbeing and, in turn, their performance at work.

Employee welfare initiatives are designed to look at reducing absences from work as a result of illness or injury as well as encouraging and promoting healthier attitudes and lifestyles which will have a positive affect on every aspect of the employee's life.

For employers, the cost of absenteeism is very high. And a lot of absenteeism is related to stress in the workplace. According to the UK 2020 Workplace Stress Survey, 79% of workers report that they are stressed at work.

The major causes of workplace stress include:

- Workplace politics

- Bullying and harassment
- Poor communication
- Working long hours
- Lack of direction
- Poor relationships with manager
- Unsafe working conditions

The COVID-19 pandemic has affected employees' welfare in many organizations. Staff have more stressors than ever before from a range of factors, including working remotely and feeling disconnected, feeling like they are spending all their lives at work, being worried about their health, recovering from the virus if they unfortunately catch it, worrying about vaccines as well as concerns around other health and hygiene protocols.

Reducing the burden of stress and any other workplace health and wellbeing issues has a direct benefit to reducing absenteeism as well as increasing productivity, lowering staff turnover and attracting and retaining talent.

By neglecting employee welfare, not only will these issues go unaddressed, but you as an employer will become partly responsible for any welfare issues faced by your employees. This means that you will not only have to deal with the costs of having gaps to fill in terms of your team when people take time off for health and wellbeing issues, but the company may also have additional costs in terms of workers compensation claims.

Further financial impacts can come in terms of loss of productivity as stressed employees are disengaged, tired, burned out, worried and anxious and not able to work at their peak.

Workplace safety is also critical for employee welfare. If you don't focus on employee safety and provide your workers with a safe physical workplace you could also have similar issues on your hands in terms of law suits, lost productivity, down time and high staff turnover. Additionally, depending on the scope of any workplace injuries, you could end up with a public relations issue that would cause customers and clients to reconsider doing business with your company on philosophical grounds.

Statutory provisions

According to factories Act, 1948, the statutory provisions regarding the welfare of the workers are stated in the sections 11 to 20. They are

Cleanliness (sec 11)

Every factory shall be kept clean by daily sweeping or washing the floors and workrooms and by using disinfectants where every necessary. Walls, doors and windows shall be repainted or varnished at least once in every 5 years.

Disposal of wastes and effluents (sec 12)

The waste materials produced from the manufacturing process must be effectively disposed of wastes.

Ventilation and temperature (see 13)

There must be provision for adequate ventilation for the circulation of fresh air. The temperature must be kept at a comfortable level. Hot parts of machines must be separated and insulated. The State Government may make rules for the keeping of thermometers in specified places and the adoption of methods which will keep the temperature low.

Removal of Dust and fumes (sec 14)

If the manufacturing process used gives off injurious or offensive dust and steps must be taken so that they are not inhaled or accumulated. The exhaust fumes of internal combustion engines must be conducted outside the factory.

Artificial humidification (sec 15)

The water used for this purpose must be pure. The State Government can frame rules regarding the process of humidification etc. The water used for humidification shall be taken from a public supply or other source of drinking water and must be effectively purified before use.

Overcrowding (sec 16)

There must be no overcrowding in a factory. In factories existing before the commencement of the Act there must be at least 9.9 cubic meters of space per worker. For factories built afterwards, there must be at least 4.2 cubic meters of space. The chief inspector of factories can also prescribe the maximum number of workers who can work in each work room.

Lighting (sec 17)

Factories must be well lighted. Effective measures must be adopted to prevent glare or formation of shadows which might cause eye strain.

Drinking water (see 18)

Arrangements must be made to provide a sufficient supply of wholesome drinking water.

All supply points of such water must be marked "drinking water".

No such points shall be within 20 ft. (or 7.5 meters) of any latrine, washing place etc.

Factories employing more than 250 workers must cool the water during the hot weather.

Toilet facilities (sec 19)

Every factory must provide sufficient number of latrines and urinals. There must be separate provisions for male and female workers. Latrines and urinals must be kept in a clean and sanitary condition. In factories employing more than 250 workers, they shall be of prescribed sanitary types.

Spittoons (sec 20)

A sufficient number of spittoons must be provided at convenient places, in a clean and hygienic condition. The State Government may take rules regarding their number, location and maintenance.

WHAT IS SAFETY?

Safety refers to the absence of accidents. Stated differently, safety refers to the protection of workers from the danger of accidents. Safety, in simple terms, means freedom from the occurrence or risk of injury or loss. Industrial safety or employee safety refers to the protection of workers from the danger of industrial accidents. An accident, then is an unplanned and uncontrolled event in which an action or reaction of an object, a substance, a person, or a radiation result in personal injury.

NEED FOR SAFETY

1) Cost Saving

Two types of costs are incurred by the management when an accident occurs. There are the direct costs, in the form of compensation payable to the

dependents of the victim if the accident is fatal, and medical expenses incurred in treating the patient if the accident is non-fatal. The management, however, is not liable to meet the direct costs if the victim is insured under the ESI scheme. When the victim is uninsured, compensation and medical expenses are the responsibility of the management.

More serious than the direct costs are the indirect or hidden costs which the management cannot avoid. In fact, the indirect costs are three to four times higher than the direct costs. Hidden costs include loss on account of down-time of operators, slowed-up production rate of other workers, materials spoiled and labour for cleaning and damages to equipment.

2) Increased Productivity

Safety plants are efficient plants. To a large extent, safety promotes productivity. Employees in safe plants can devote more time to improving the quality and quantity of their output and spend less time worrying about their safety and well-being.

3) Moral

Safety is important on human grounds too. Managers must undertake accident prevention measures to minimize the pain and suffering the injured worker and his/her family is often exposed to as a result of the accident. An employee is a worker in the factory and the bread-winner for his/her family. The happiness of his/her family depends upon the welfare and well-being of the worker.

4) Legal

There are legal reasons too for undertaking safety measures. There are laws covering occupational welfare & safety, and penalties for non-compliance have

become quite severe. The responsibility extends to the safety and welfare of the surrounding community, too. The Supreme Court held:

An enterprise which is engaged in a hazardous or inherently dangerous industry which poses a potential threat to the welfare and safety of the persons working in the factory and industry in the surrounding areas, owes an absolute and non-delegable duty to the community to ensure that no harm results to anyone on account of the hazardous or inherently dangerous nature. This implies unlimited liability.

The civil law establishes the extent of damages or compensation. In the criminal law, sentences are prescribed under the pollution control laws. There is no legal ceiling on the extent of liability.

Safety of the worker

Safety is a measures or techniques implemented to reduce the risk of injury, loss and danger to persons, property or the environment in any facility or place involving the manufacturing, producing and processing of goods or merchandise.

Statutory provisions

According to factories Act, 1948, the statutory provisions regarding the safety of the workers are stated in the sections 21 to 41. They are

Fencing of machinery (See 21)

In every factory, every dangerous part of any machinery, every moving part of a prime mover and every flywheel connected to prime mover the head-race and tail-race of every water wheel and water turbine, and every part of an electric generator, motor or rotary converter, every part of transmission machinery, must be securely fenced by safeguards of substantial construction.

Work on or near machinery in motion (See 22)

It is necessary to examine any part of the machinery while it is motion. The examination and lubrication of the machinery, while in motion, should be carried out only by a specially-trained adult worker wearing tight-fitting clothing.

Employment of young person's on Dangerous machines (Sec 23)

A young person should not be allowed to work at dangerous machines unless, has been sufficiently instructed and received sufficient training.

Striking gear and devices for cutting off power (Sec 24)

In every factory, suitable striking gear or other efficient mechanical appliance has to be provided, maintained and used to move driving belts.

Self-acting machines (Sec 25)

No travelling part of a self-acting machine in any factory and no material carried thereon shall be allowed to run on its outward or inward traverse within a distance of 18 inches from any fixed structure which is not a part of the machine, if a person is liable to pass over the space over which it runs.

Casing of new machinery (Sec 26)

All machinery driven by power, every set-screw, bolt or key or any revolving shaft, spindle, wheel or pinion, spur, worm and other toothed or friction-gearing has to be properly encased or guarded in order to prevent danger to the workmen.

Prohibition of employment of women and children near cotton openers (Sec 27)

Women and child workers are prohibited to be employed in any part of a factory for pressing cotton in which a cotton opener is at work.

Hoists, lifts, lifting machines (Sec 28 & 29)

Lifting machines, chains, ropes and lifting tackles must be of good mechanical construction, sound material and adequate strength and free from defects. They are to be properly maintained and thoroughly examined by a competent person at least once in every 6 months.

Revolving machinery (Sec 30)

The maximum safe working peripheral speed of every grindstone or abrasive wheel shall be permanently affixed. Safe working peripheral speed of every revolving vessel, cage, basket, flywheel, pulley or disc has also to be ensured.

Pressure plant (See 31)

In any factory operation is carried on at a pressure above the atmospheric pressure, effective arrangements shall be taken to ensure that the safe working pressure is not exceeded.

Floors, stairs and means of access (Sec 32)

In every factory all floors, steps, stairs, passages and gangways shall be of sound construction and properly kept and maintained.

Pits, sumps, openings in floors (Sec 33)

Every fixed vessel, sump, tank, pit or opening in the ground or in a floor, which may be a source of danger shall be either securely covered or securely fenced.

Excessive weights (Sec 34)

No person is to be employed in any factory to lift, carry or move any load as heavy as is likely to cause him injury.

Protection of eyes (See 35)

The state government may require the provision of effective screens or suitable goggles if the risk of injury to the eyes is caused from particles or fragments thrown off in the manufacturing process or from exposure to excessive light.

Precautions against dangerous fumes (Sec 36)

In any factory, no person shall be allowed to enter any chamber, tank, vat, pipe, flue or other confined space in which dangerous fumes are likely to be present to an extent involving risks to persons.

Explosive or inflammable dust, gas (See 37)

All practicable measures have to be taken to prevent explosion by, effective enclosure of plant and machinery, removal or prevention of the accumulation of dust, gas etc and exclusion or effective enclosure of all possible sources of ignition.

Precaution in case of fire (Sec 38)

Every factory has to be provided with adequate means of escape in case of fire. Effective and clearly audible means of giving warning in the case of fire have to be provided. A free passage-way giving access to each means of escape in case of fire has to be maintained.

Power to require specifications of defective parts or tests of stability (Sec 39)

The factory inspector to serve on the manager of a factory to furnish specifications of defective parts or he may order the manager to carry out tests as he may specify and to inform him of the results.

Safety of buildings and machinery (Sec 40)

Every factory should adopt the measures to ensure the safety of the buildings and machinery. The factory must employ the required safety officers according to the number of workers working in the factory.

Power to make rules (Sec 41)

The state government has the power to make rules to supplement the provisions relating to safety contained in the act.

Occupational accidents/disease

Work-related accidents or diseases are very costly and can have many serious direct and indirect effects on the lives of workers and their families. For workers some of the direct costs of an injury or illness are:

- a) the pain and suffering of the injury or illness;
- b) the loss of income;
- c) the possible loss of a job;
- d) Welfare-care costs.

It has been estimated that the indirect costs of an accident or illness can be four to times greater than the direct costs, or even more. An occupational illness or accident can have so many indirect costs to workers that it is often difficult to measure them. One of the most obvious indirect costs is the human suffering caused to workers' families, which cannot be compensated with money.

Identifying hazards in the workplace

Some occupational diseases have been recognized for many years, and affect workers in different ways depending on the nature of the hazard, the route of exposure, the dose, etc. Some well-known occupational diseases include:

a) Asbestosis (caused by asbestos, which is common in insulation, automobile brake linings, etc.)

b) Silicosis (caused by silica, which is common in mining, sandblasting, etc.)

c) Lead poisoning (caused by lead, which is common in battery plants, paint factories, etc.)

d) Noise-induced hearing loss (caused by noise, which is common in many workplaces, including airports, and workplaces where noisy machines, such as presses or drills, etc.)

Importance of management commitment on welfare and safety

In order to develop a successful welfare and safety programme, it is essential that there be strong management commitment and strong worker participation in the effort to create and maintain a safe and welfare workplace. An effective management addresses all work-related hazards, not only those covered by government standards.

All levels of management must make welfare and safety a priority. They must communicate this by going out into the worksite to talk with workers about their concerns and to observe work procedures and equipment. In each workplace, the lines of responsibility from top to bottom need to be clear, and workers should know who is responsible for different welfare and safety issues.

Importance of training:

Workers often experience work-related welfare problems and do not realize that the problems are related to their work, particularly when an occupational disease, for example, is in the early stages. Besides the other more obvious benefits of training, such as skills development, hazard recognition, etc., a comprehensive training programme in each workplace will help workers to:

- a) Recognize early signs/symptoms of any potential occupational diseases before they become permanent conditions.

- b) Assess their work environment.

- c) Insist that management make changes before hazardous conditions can develop.

Welfare and safety programmes

Effective workplace welfare and safety programmes can help to save the lives of workers by reducing hazards and their consequences. Welfare and safety programmes also have positive effects on both worker morale and productivity, which are important benefits. At the same time, below, it is crucial that employers, workers and unions are committed to welfare and safety.

- a) Workplace hazards are controlled - at the source whenever possible.

- b) Records of any exposure are maintained for many years.

- c) Both workers and employers are informed about welfare and safety risks in the workplace.

- d) There is an active and effective welfare and safety committee that includes both workers and management.

- e) Worker welfare and safety efforts are ongoing.

COMPANY PROFILE



B AJAJ STEEL INDUSTRIES LTD.

COMPANY PROFILE

Bajaj Steel Industries Limited (Bajaj), Nagpur, India, established in 1961, is a public limited company, listed on Bombay Stock Exchange. The company is having world class engineering setup in its various plants situated in and around Nagpur. The present activities of the company are as below:

A) Manufacturing

- Largest and Modern Cotton Ginning & Pressing Machinery Manufacturer in India
- World class Delisting and Decorticating machinery manufacturing
- World class machining of components and parts for various applications
- All types of electrical panels to meet various industrial needs
- High quality structural fabrication for buildings and machinery applications etc.
- Manufacturing of various other machineries, components and parts as per drawings
- High quality mechanical conveyors and elevators
- Pneumatic conveying, dust waste handling systems and humidification systems
- Engineering and construction projects

Company is having extensive facilities for following:

1. Engineering Designs
2. Machining
3. Fabrication
4. Assembly

B) Trading: Cotton Trading Domestic and Exports

HISTORY

The company was established by Late Shri Gangabisenji Bajaj in 1961 and is now run under able guidance of his son Shri HarGovind Bajaj. The group is having wide experience in the fields of engineering, cotton, plastics and various other activities. The company has been pioneer in double roller cotton ginning technology with largest market share in the segment. The company has grown rapidly and now expanded its manufacturing, fabrication and assembly facilities manifold. Earlier company was having only factory at Imambada Nagpur, now it is having four major manufacturing facilities, The company has recently entered into technical collaboration for manufacturing of saw gin, roto bar gin and other equipments earlier manufactured by Continental Eagle Corporation, USA to manufacture them in India.

INFRASTRUCTURE



Bajaj Plant

at MIDC Hingna Nagpur



New

Bajaj Steel: ImamBada Plant

HIGHLIGHTS & STRENGTHS

- Large number of trained manpower.
- Total land area over 22 acres.
- Plant build-up area over 20,000 sq. meters. Large number of CNC machines with multi floor CNC setup. Plasma cutting machines, more than 50 conventional machines and a big set up of fabrication facility with all kind of welding and sheet metal forming.
- Efficient power backup for non-stop working.

- Safe raw material and finished goods handling by forklifts, hydra, gantries, over head cranes, pallets, bins etc.
- Fully equipped Design and Planning Department with Multi point Auto CAD, Inventor and high-speed Plotters to provide quick and efficient technical support for Layouts and Operational details.
- Infrastructure ready for expansion.
- A good set up for all kind of tool room machines for in house development of jigs and fixtures.
- An ISO 9001:2008 certified company.
- An ISO/TS 16949 certified company.

Product and services

Ginning & Pressing Machinery

We have been awarded the "Largest and modern cotton ginning & pressing machinery manufacturer in India" by the hands of the hon'ble Union minister of textile Govt. of India Mr. Shankersinh Vaghela

Bajaj DR gins give highest output of lint with better seed quality at lowest maintenance and per unit cost of production Similarly high efficiency Bajaj down packing cotton baling press produces highest number of bales at lowest cost per bale. We offer complete cotton ginning, pressing, cleaning, conveying and handling solutions and turnkey ginning and pressing plant machinery

Components & Machine Parts

We are a renowned manufacturer and exporter of precision machined components having applications in cotton ginning automotive industry,

hydraulic presses, ordinance factory and many more other diversified applications.

Electrical Panels



Electrical panels and Accessories

Structural Fabrication

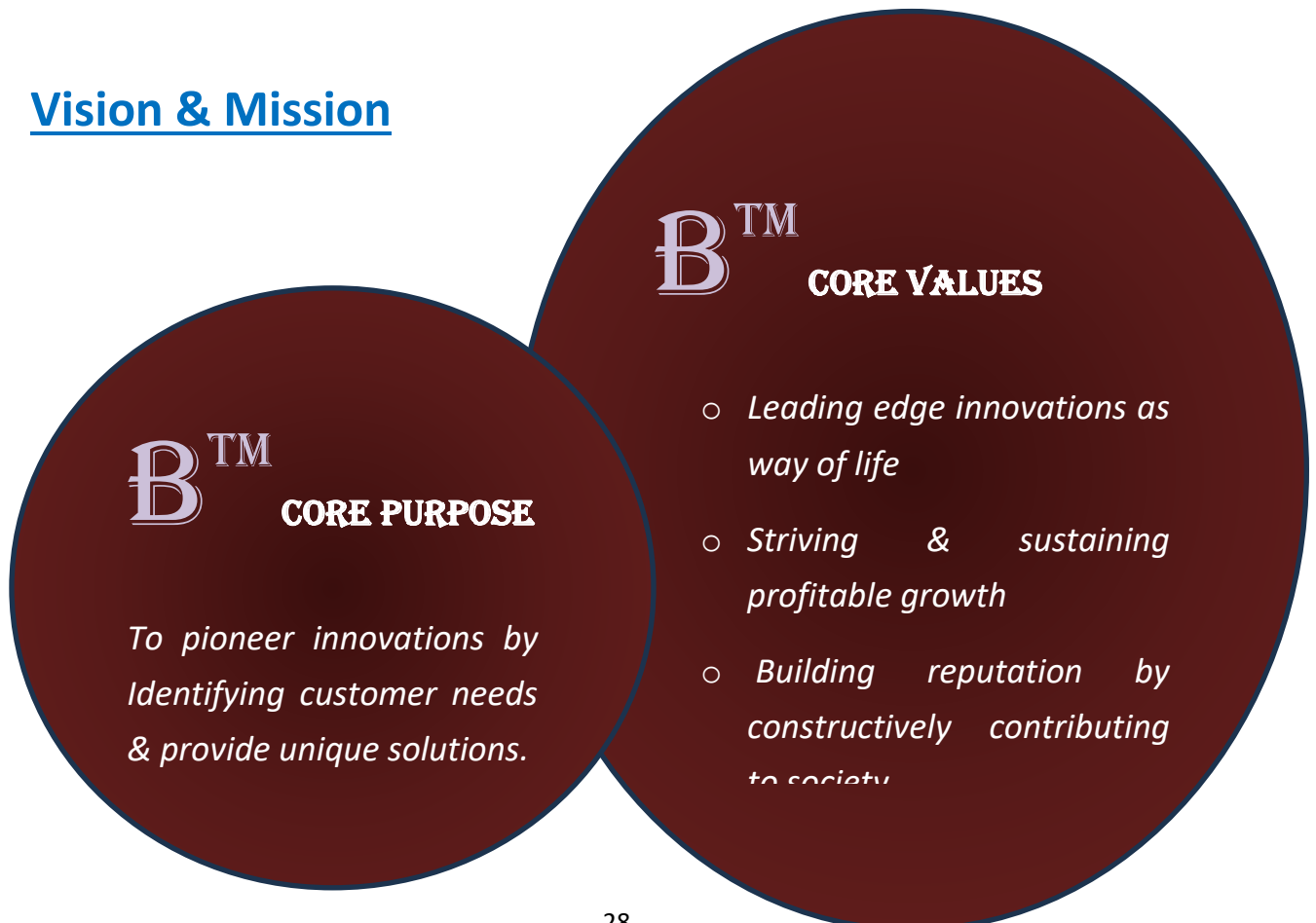
At Bajaj, we take pride in flexibility and diversification in both services and products, from prototype to production. Bajaj is equipped to deliver all the structural fabrication that your applications demand. Our Structural fabrication shop enables us to build any component even specialty items with a commitment of maintaining the highest standards of safety. With around 50 years of experience, the latest technology, and a highly skilled team Bajaj is the best choice for your next project.

Humidification Systems

Humidification or Moisture restoration in a cotton gin can have a le impact on profitability for the grower, the gin and the mil.

- Preserves Fiber length, improves strength and uniformity and reduces short Fiber content.
- Eliminates moisture condensation which is a general problem with all other techniques.
- An increase the lint slide capacity and allows more cotton to enter the press box at each stroke of the tramper and hence higher density bale is obtained.
- Improves the capacity of the bale press whereas dry cotton requires higher compression forces and more time to charge and compact it into the press box.

Vision & Mission



RESEARCH OF STUDY



NEED FOR THE STUDY

- Welfare and Safety measures are inevitable to any organization where workers are involved.
- It's an organization's responsibility to provide to its workers beyond the payment of wages for their services.
- The worker's welfare and safety on and off the job within the organization is a vital concern of the employer.
- The working environment in a factory adversely affects the worker's welfare and safety because of the excessive heat or cold, noise, fumes, dust and lack of sanitation and pure air etc., which leads to accident or injury or disablement or loss of life to the workers.
- Providing a welfare and safer environment is a pre-requisite for any productive effort.
- These must be held in check by providing regular welfare check-up, protective devices and compensatory benefits to the workers.
- This research deals with the study on the welfare and safety measures provided to the workers at Bajaj Steel industries LTD, MIDC Hingna Nagpur.

OBJECTIVES OF THE STUDY

- To study the awareness of the workers about welfare and safety in the work place.
- To identify the role of management in implementing welfare & safety.
- To find out satisfaction level of the respondents towards welfare, welfare & safety measure.
- To give suggestions to improve the welfare, welfare & safety in the organization.
- To find the occurrence of accidents happened at work place.

Hypothesis

HO

- The health and safety measures provided by the organization helps employee to increase their morale and satisfaction.

HI

-The health and safety measures provided by the organization do not help employees to increase their morale and satisfaction.

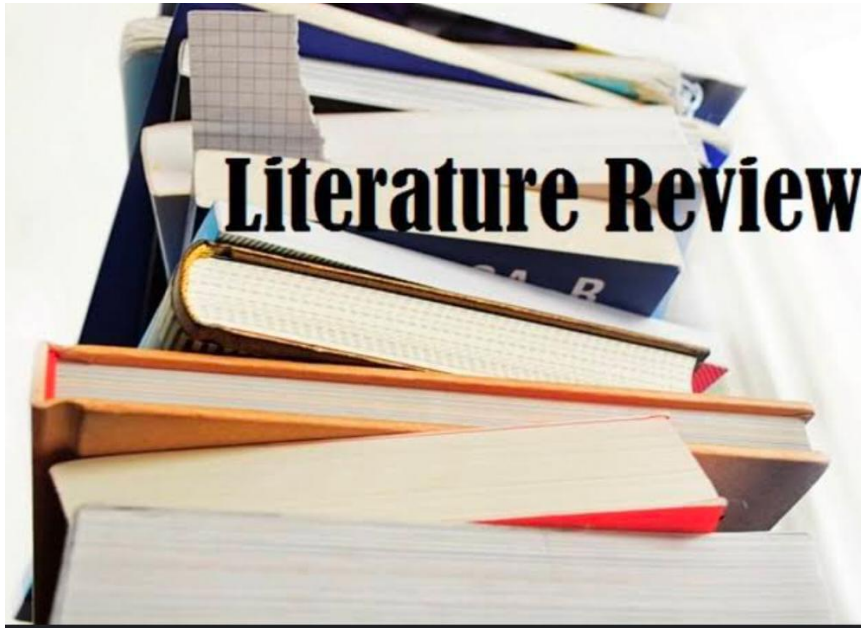
SCOPE OF THE STUDY

- This study would give an overview of the welfare and safety measures existing at Bajaj steel industries LTD, MIDC Hingna Nagpur.
- Since welfare and safety are two important elements essential for improving the productivity of an organization, a study on the existing welfare and safety measures would help the organization to perform better.
- This study would throw light on the perception of the workers regarding welfare and safety.
- Bajaj Steel industries ltd can identify the areas where it can be improved, so as to improve the performance of the workers.
- This study would also help to analyze the satisfaction level of the workers towards welfare and safety measures and suggest provisions to improve welfare and safety.

LIMITATIONS OF THE STUDY

- The study is applicable only to Bajaj Steel Industries LTD, MIDC Hingna Nagpur. Therefore, the results cannot be generalized for the whole industry.
- Due to time constraints the sample size had to be confined to 60.
- The respondents have replied to the queries recalling from their memory. Therefore, recall bias and personal bias are possible.
- Since the data was collected using a schedule, the interviewer unable to understand and record the responses correctly.
- The respondents were unable or unwilling to give response.

REVIEW OF LITERATURE



REVIEW OF LITERATURE

1) Johansson B; Rask K; Stenberg M (2010)', this study was to carry out a broad survey and analysis of relevant research articles about piece rate wages and their effects on welfare, welfare and safety. A total of 75 research articles were examined extensively and 31 of these were found relevant and had sufficient quality to serve the purpose of this study. The findings of these relevant articles are summarized and analyzed in the survey. More recent research shows a clear interest for welfare, musculoskeletal injuries, physical workload, pains and occupational injuries. The fact that 27 of the 31 studied articles found negative effects of piece rates on different aspects of welfare and safety does not prove causality, but together they give very strong support that in most situations piece rates have negative effects on welfare and safety.

2) Tompa, Emile PhD; Dolinschi, Roman MA; de Oliveira (2009), we reviewed the occupational welfare and safety intervention literature to synthesize evidence on financial merits of such interventions. A literature search included journal databases. existing systematic reviews, and studies identified by content experts. We found strong evidence that ergonomic and other musculoskeletal injury prevention intervention in manufacturing and warehousing are worth undertaking in terms of their financial merits. The economic evaluation of interventions in this literature warrants further expansion. The review also provided insights into how the methodological quality of economic evaluations in this literature could be improved.

3) Conor CO Reynolds; M Anne Harris; Peter A Crypton; Meghan Winters (2009), Bicycling has the potential to improve fitness. Understanding ways of making bicycling safer is important to improving population welfare. We reviewed studies of the impact of transportation infrastructure on bicyclist safety. To assess safety, studies examining the following outcomes were included: injuries;

injury severity, and crashes. Results to date suggest that sidewalks and multi-use trails pose the highest risk, major roads are more hazardous than minor roads, and the presence of bicycle facilities (e.g., on-road bike routes, on-road marked bike lanes, and off-road bike paths) was associated with the lowest risk. Street lighting, paved surfaces, and low-angled grades are additional factors that appear to improve cyclist safety.

4) Lucia Artazcoz; Imma Cortes; Vincenta Escriba-aguir; Lorena Cascant (2009), the objectives of this study was to identify family and job characteristics associated with long work hours. The sample was composed of all salaried workers aged 16-64 years (3950 men and 3153 women) interviewed in the 2006 Catalonian Welfare Survey. Factors associated with long working hours differed by gender. In men, working 51-60 h a week was consistently associated with poor mental welfare status, self-reported hypertension, job dissatisfaction, smoking, shortage of sleep. Among women it was only related to smoking and to shortage of sleep. The association of overtime with different welfare indicators among men and women could be explained by their role as the family breadwinner.

5) Dee W. Edington; Alyssa B. Schultz (2008), The aim was to present the literature which provides evidence of the association between welfare risks and the workplace economic measures of time away from work, reduced productivity at work, welfare care costs and pharmaceutical costs. A search of Pub Med was conducted and high-quality studies were selected and combined with studies known to the authors. A strong body of evidence exists which shows that welfare risks of workers are associated with welfare care costs and pharmaceutical costs. A growing body of literature also confirms that welfare risks are associated with the productivity measures. The paper shows that measures of success will continue to be important as the field of worksite welfare management moves forward.

6) David E. Cantor (2008). The purpose of this paper was to review the literature and call for additional research into the human, operational, and regulatory issues that contribute to workplace safety in the supply chain. This paper identifies several potential research opportunities that can increase awareness of the importance of improving a firm's workplace safety practices. This paper identifies 108 articles which informs, how the logistics and transportation safety has evolved. The paper identifies 14 future research opportunities within the workplace safety in the supply chain, that have been identified can have a positive effect on practitioners confronted with safety issues.

7) Lucia Artazcoz; Imma Cortes; Vincenta Escriba-aguir; Lorena Cascant (2007), To provide a framework for epidemiological research on work and welfare that combines classic occupational epidemiology and the consideration of work in a structural perspective focused on gender inequalities in welfare. Gaps and limitations in classic occupational epidemiology, when considered from a gender perspective, are described. Classic occupational epidemiology has paid less attention to women's problems than men. Research into work related gender inequalities in welfare has rarely considered either social class or the impact of family demands on men's welfare. The analysis of work and welfare from a gender perspective should take into account the complex interactions between gender, family roles, employment status and social class.

8) Shouji Nagashima; Yasushi Suwazono; Yasushi Okubo; Mirei Uetani (2007), The aim was to clarify the influence of working hours on both mental and physical symptoms of fatigue and use the data obtained to determine permissible working hours. The survey of day- shift male workers, using the Self-Rating Depression Scale (SDS) and Cumulative Fatigue Symptoms Index (CFSI). A total of 715 workers participated. In the group working 260-279 h/month, the odds ratios for SDS and irritability' and 'chronic tiredness of the CFSI were

increased. In the group working 280 h/month, the odds ratios on CFSI for 'general fatigue', 'physical disorders', 'anxiety' and 'chronic tiredness' were likewise increased. The research clarified that working hours should be <260 h/month in order to minimize fatigue symptoms in male day workers.

9) L Ala-Mursula; J Vahtera; A Kouvonen; A Vaananen; A Linna (2006)", The associations of working hours (paid, domestic, commuting, and total) with sickness, absence, and to examine whether these associations vary according to the level of employee control over daily working hours. The study among 25,703 full-time public sector workers in 10 towns in Finland. Long domestic and total working hours were associated with higher rates of medically certified sickness absences among both genders. Low control over daily working hours predicted medically certified sickness absences for both the women and men.

In combinations, high control over working hours reduced the adverse associations of long domestic and total working hours with medically certified absences. Employee control over daily working hours may protect welfare and help workers successfully combine a full-time job with the demands of domestic work.

10)A Baker; K Heiler; S A Ferguson (2002)", The occupational welfare and safety implications associated with compressed and extended work periods have not been fully explored in the mining sector. Absenteeism and incident frequency rate data were collected over a 33-month period that covered three different roster schedules. The only significant change in absenteeism rates was an increase in the maintenance sector in the third data collection period. The current study did not find significant negative effects of a 12-hour pattern, when compared to an 8-hour system. However, when unregulated and excessive overtime was introduced as part of the 12-hour/5-day roster, absenteeism rates were increased in the maintenance sector.

11) N Nakanishia; H Yoshidaa; K Naganoa; H Kawashimob; K Nakamurac (2001)", to evaluate the association of long working hours with the risk of hyper-tension. The work site is in Osaka, Japan. 941 hypertension free Japanese male white-collar workers aged 35-54 years were prospectively examined by serial annual welfare examinations. 424 men developed hypertension above the borderline level. After controlling for potential predictors of hypertension, the relative risk for hypertension above the borderline level, compared with those who worked 8.0 hours per day was 0.48, for those who worked 10.0-10.9 hours per day was 0.63. These results indicate that long working hours are negatively associated with the risk for hypertension in Japanese male white-collar workers.

RESEARCH DESIGN



RESEARCH DESIGN

The research design of this study considering its objectives, scope & coverage was exploratory as well as descriptive in nature.

SOURCES OF INFORMATION

PRIMARY DATA

The primary data has been obtained from the selected employees & senior executive of Innovative Bajaj Steel Industries LTD through circulation of the structured non-disguised questionnaire.

SECONDARY DATA

The secondary data has been obtained from published as well as unpublished literature on the topic and from Books, Journals, News Papers, Research Articles, Thesis, Websites, and Magazines etc.

SAMPLING DECISIONS

SAMPLE SIZE

Appropriate number of sample size (i.e. 60) was put to use for the purpose of collecting primary data from the selected employees of the has been presented in the forms of tables, charts, graphs and diagrams as the case may be.

SIGNIFICANCE OF THE PROPOSED RESEARCH STUDY

Welfare and Safety measures are inevitable to any organization where workers are involved. It's an organization's responsibility to provide to its workers beyond the payment of wages for their services. The worker's welfare and safety on and off the job within the organization is a vital concern of the employer. The working environment in a factory adversely affects the worker's welfare and safety because of the excessive heat or cold, noise, Odors, fumes, dust and lack of sanitation and pure air etc., which leads to accident or injury or disablement or loss of life to the workers. Providing a welfare and safer environment is a prerequisite for any productive effort. These must be held in check by providing regular welfare check-up, protective devices and compensatory benefits to the workers. This research deals with the study on the welfare and safety measures provided to the workers at Innovative Bajaj Steel Private Limited.

RESEARCH METHODOLOGY



TITLE OF THE RESEARCH STUDY

“A Detail Study of Welfare and Safety Measures Provided to Employees of Bajaj Steel MIDC Hingna”

RATIONALE OF THE RESEARCH STUDY

When it comes to performance, employee's performance is one the main in organizational success. Therefore, it is a need of the hour where organizational has to make very specific efforts for Welfare & Safety Measures to improving employee's performance to optimally utilize knowledge and skills of their employees. The proposed research study also would report on employee's feedback as well as expectations & experiences with regard to Welfare & Safety. It also list out suggestions for an overall improvement in Welfare & Safety. The research study would make an attempt to find the impact of Welfare & Safety on effective employee's performance.

SCOPE & COVERAGE OF RESEARCH STUDY

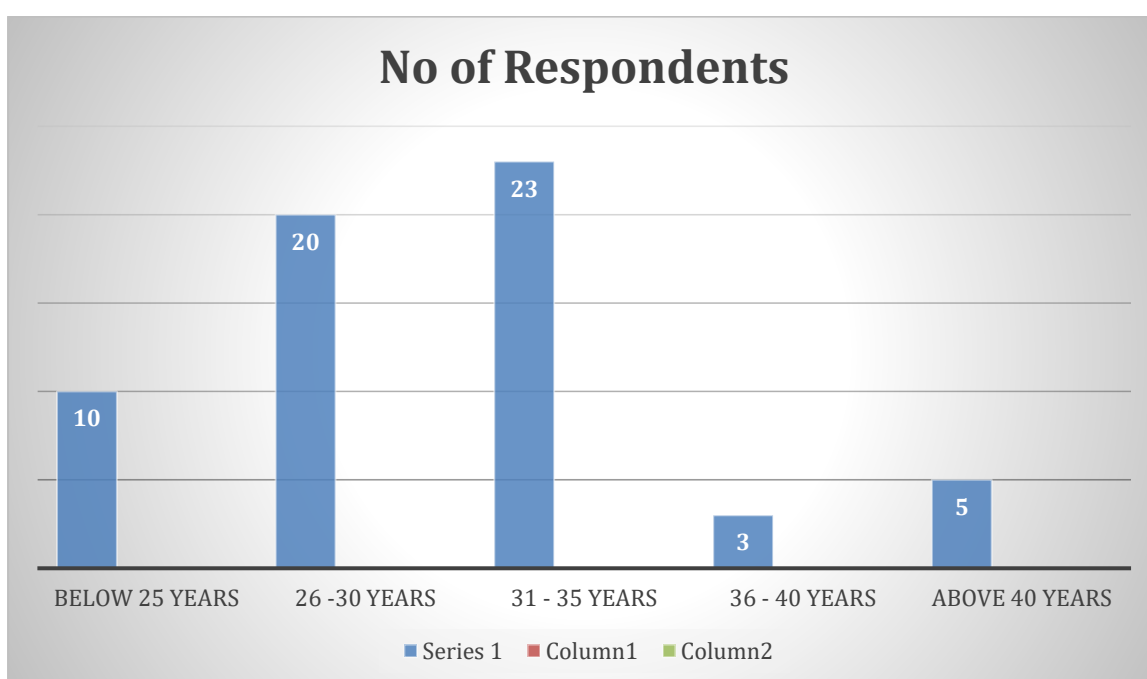
This study was given an overview of the welfare and safety measures existing at Innovation Bajaj Steel Pvt Ltd. Since welfare and safety are two important elements essential for improving the productivity of an organization, a study on the existing welfare and safety measures would help the organization to perform better. This study was highlight on the perception of the workers regarding welfare and safety. Innovative Bajaj Steel Pvt Ltd. can identify the areas where it can be improved, so as to improve the performance of the workers. This study would also help to analyze the satisfaction level of the workers towards welfare and safety measures and suggest provisions to improve welfare and safety.

DATA ANALYSIS



Table – 1: Table showing age of respondents

Sr. No.	Age	No. of Respondents	Percentage (%)
1	Below 25	10	17 %
2	26 - 30	18	30 %
3	31 - 35	22	36 %
4	36 - 40	4	7 %
5	Above 40	6	10 %
Total		60	100 %

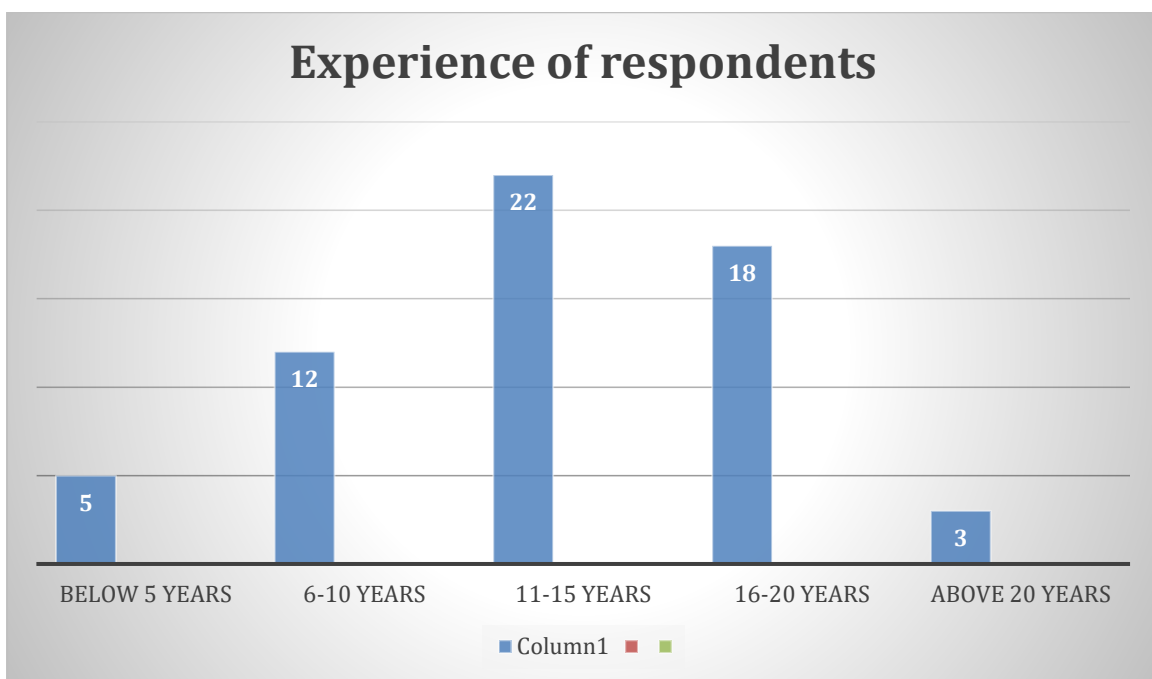


Interpretation: The chart depicts that: 17% respondents tend to age below 25, 30% respondents tend to age between 26-30, 36% respondents tend to age between 31-35, 07% respondents tend to age between 36-40 and; 10% respondents tend to age above 40.

Majority of the respondents tend to age between 31-35.

Table – 2: Table Showing the experience (in years) of the respondents

Sr. No.	Range	No. of Respondents	%
1	Below 5	5	8
2	6-10	12	20
3	11-15	22	37
4	16-20	18	30
5	Above 20	3	5
	Total	60	100

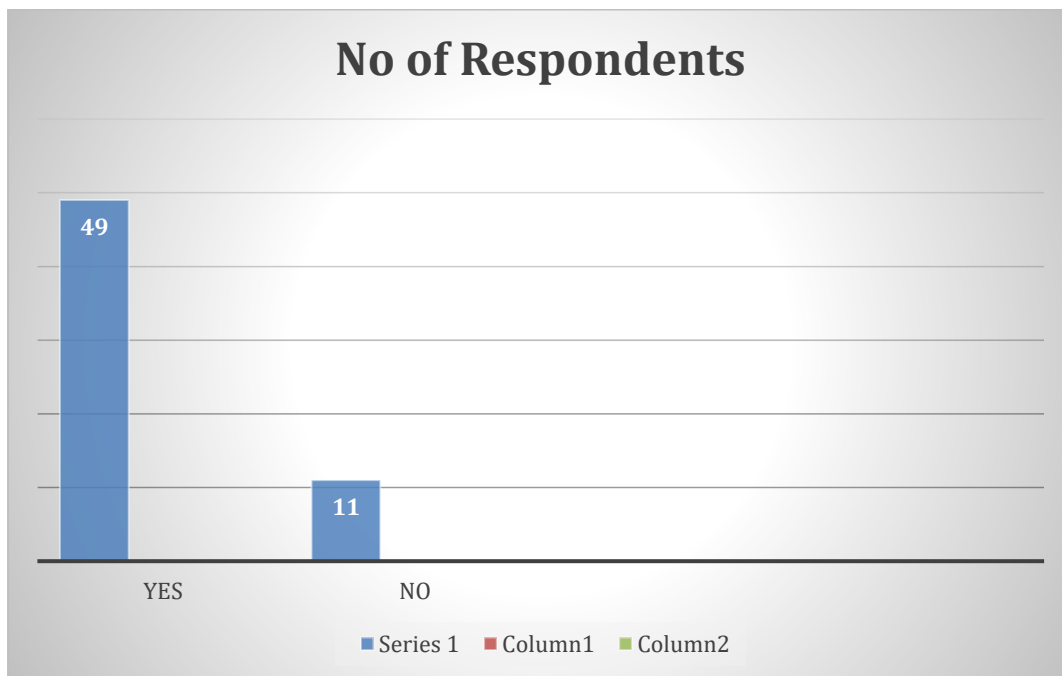


Interpretation: From the above table, 8% of the respondents have work experience of below 5 years, 20% of the respondents have work experience of 6- 10 years, and 37% of the respondents have work experience of 11-15 years,30% respondents have work experience of 16-20 years, and 5% respondents have work experience of above 20 years.

Majority of the employees in the organization have a work experience of 11-15 years.

Table – 3: Table Showing the Awareness of Welfare & Safety

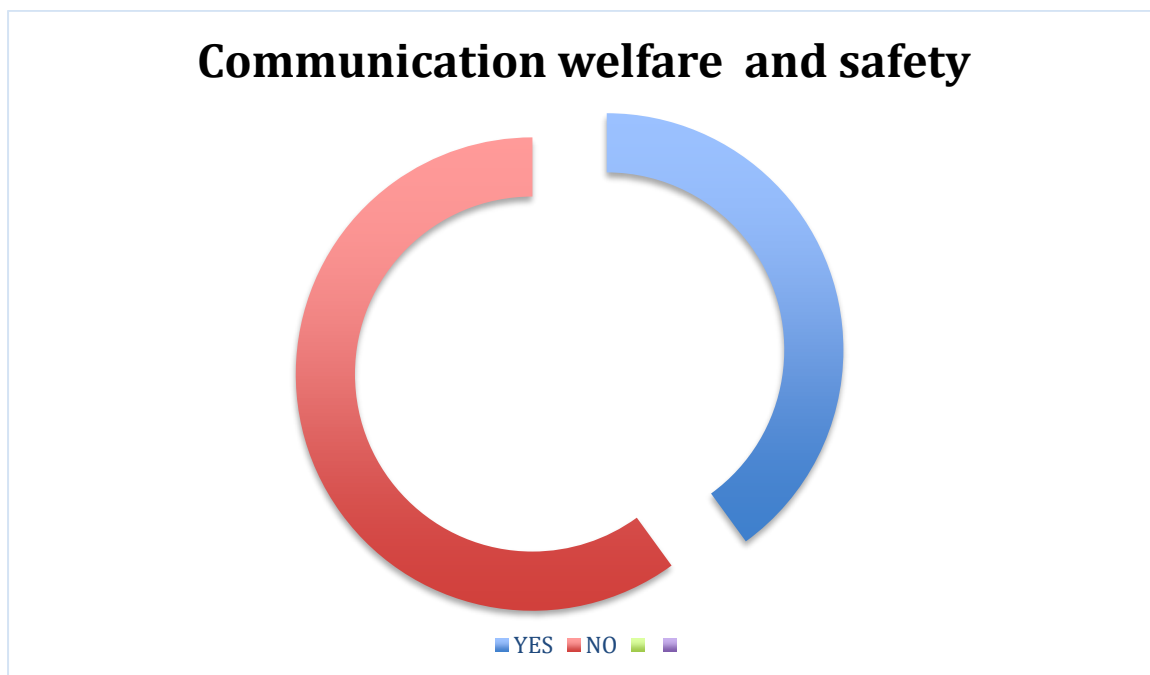
Sr. No.	Range	No. of Respondents	%
1	Yes	48	80
2	No	12	20
	Total	60	100



Interpretation: In the survey,80% of the respondents are aware of the welfare and safety measures but 20% of the respondents respond that they are not aware of the welfare and safety measures adopted in the company.

Table 4: Table showing the effective arrangements for communicating welfare and Safety matters

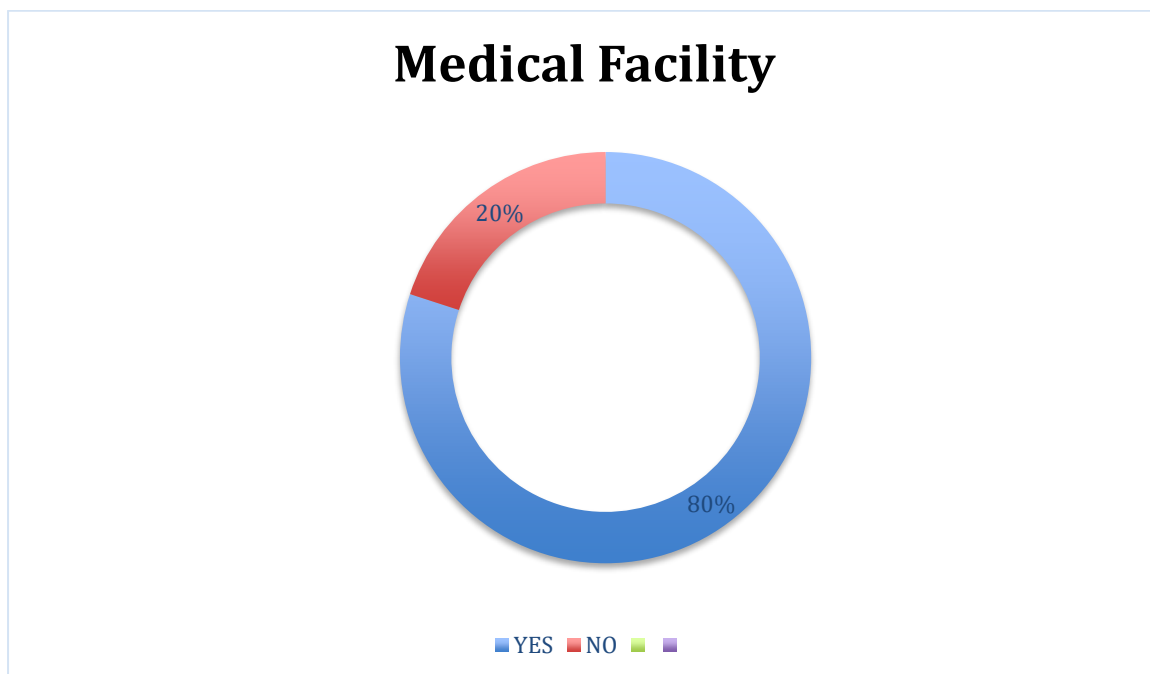
Sr. No.	Range	No. of Respondents	%
1	Yes	24	40
2	No	36	60
	Total	60	100



Interpretation: In the survey, only 40% of the respondents say that they have effective arrangements for communicating welfare and safety matters but nearly 60% of the respondents says that they have no effective arrangements for communicating welfare and safety matters in the company.

Table 5: Table showing the medical facility for worker safety

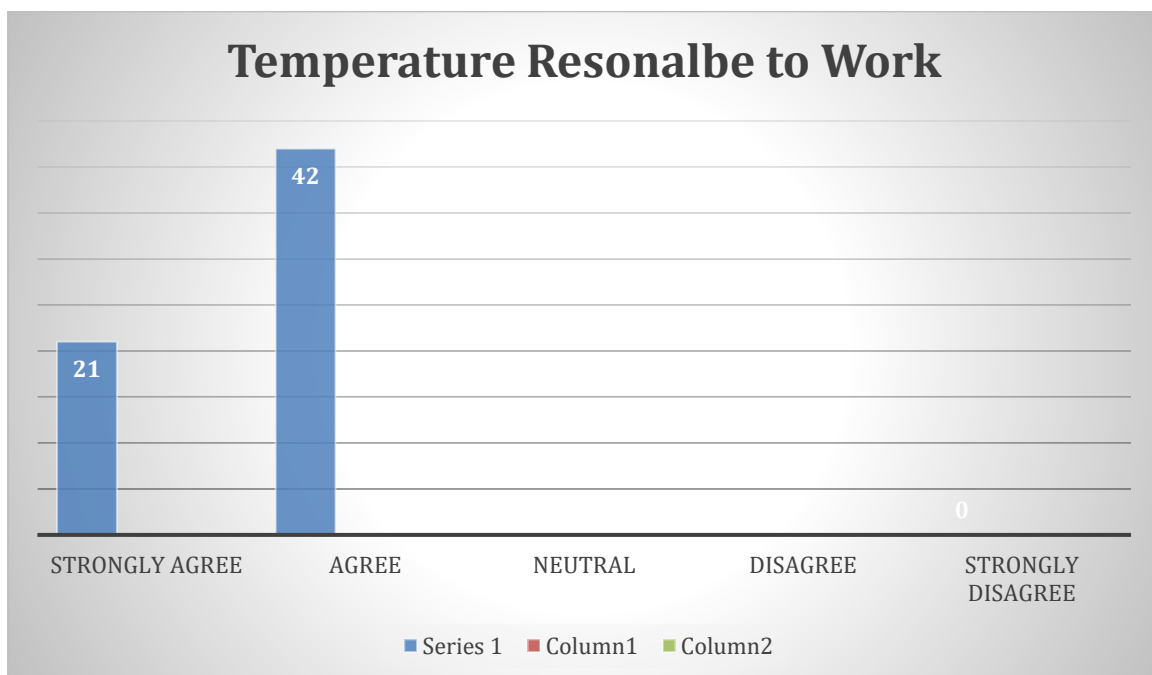
Sr. No.	Medical Facility	No. of Respondents	%
1	Yes	48	80
2	No	12	20
	Total	60	100



Interpretation: In the survey, 80% of the respondents say that the company is providing medical facilities to the workers but 20% of the respondents respond the company is not providing any medical facilities to the workers.

Table 6: Table showing the working temperature is reasonable to work

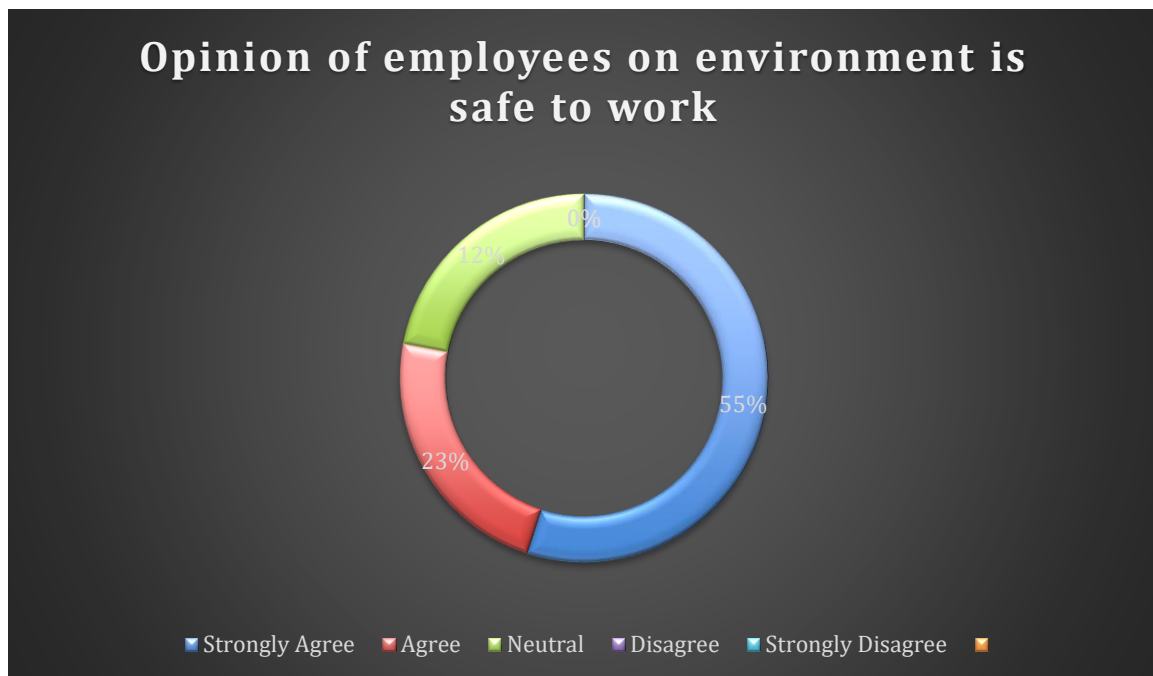
Sr. No.	Temperature reasonable to work	No. of Respondents	%
1	Strongly Agree	17	28
2	Agree	43	72
3	Neutral	-	00
4	Disagree	-	00
5	Strongly Disagree	-	00
	Total	60	100



Interpretation: In the survey, 28% of the respondents strongly agree that the working temperature is reasonable to work but 72% respondents simply agree that the working temperature is reasonable to work. No respondents say that the working temperature is not reasonable to work.

Table – 7: Table showing the environment is safe to work

Sr. No.	Environment is safe	No. of Respondents	%
1	Strongly Agree	33	55
2	Agree	14	23
3	Neutral	13	22
4	Disagree	-	00
5	Strongly Disagree	-	00
	Total	60	100

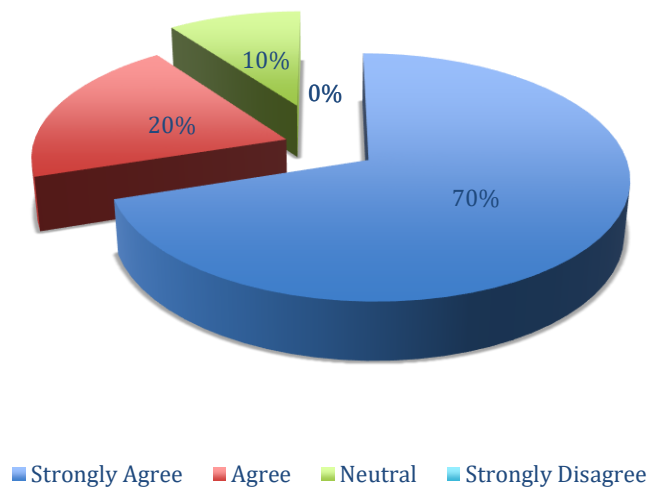


Interpretation: In the survey, 55% of the respondents strongly agree that their environment is safe to work but 23% respondents simply agree that their environment is safe to work and 22% of the respondents say that they have no idea about their environment is safe to work. No respondents say that their environment is not safe to work.

Table 8: Table showing the enough Training given to workers before handling the Machines

Sr. No.	Training handling Machinery	No. of Respondents	%
1	Strongly Agree	42	70
2	Agree	12	20
3	Neutral	6	10
4	Disagree	-	00
5	Strongly Disagree	-	00
	Total	60	100

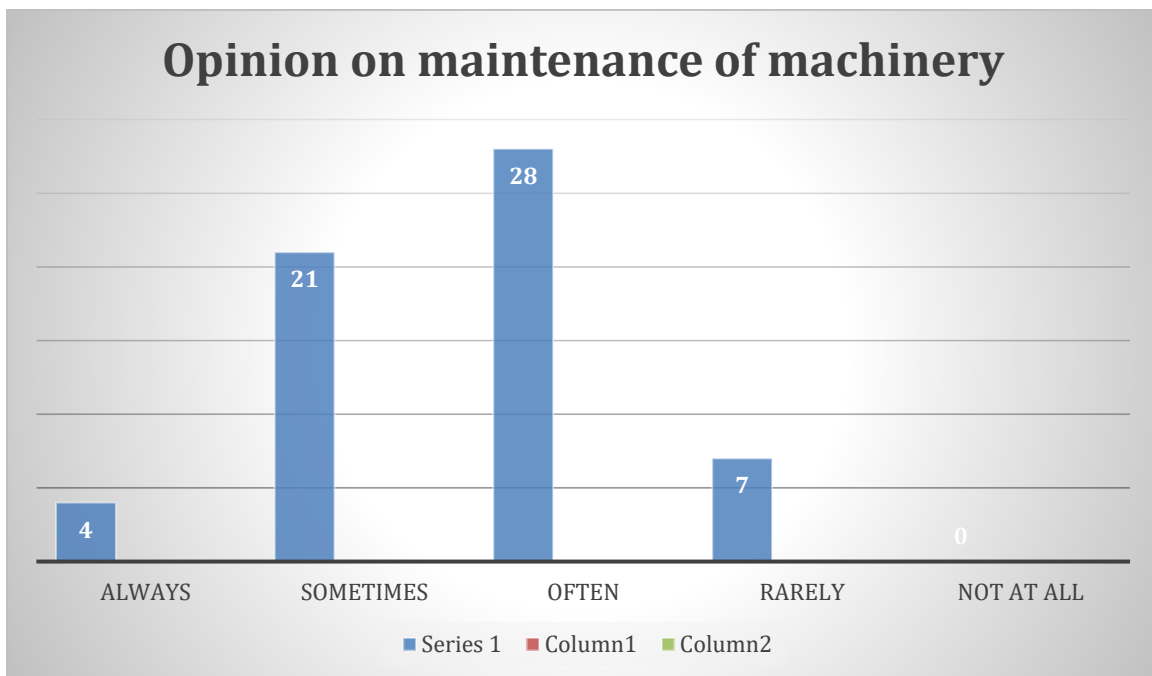
Opinion on training given for handling machinery



Interpretation: In the survey, 70% of the respondents strongly agree that enough training is given to the workers but 20% respondents simply agree that enough training is given to the workers and 10% of the respondents say that they have no idea about enough the training given to the workers. No respondents say that enough training is not given to the workers before handling machines.

Table 9: Table showing the machines maintained properly

Sr. No.	Range	No. of Respondents	%
1	Always	4	7
2	Sometimes	21	35
3	Often	28	46
4	Rarely	7	12
5	Not at all	-	00
	Total	60	100

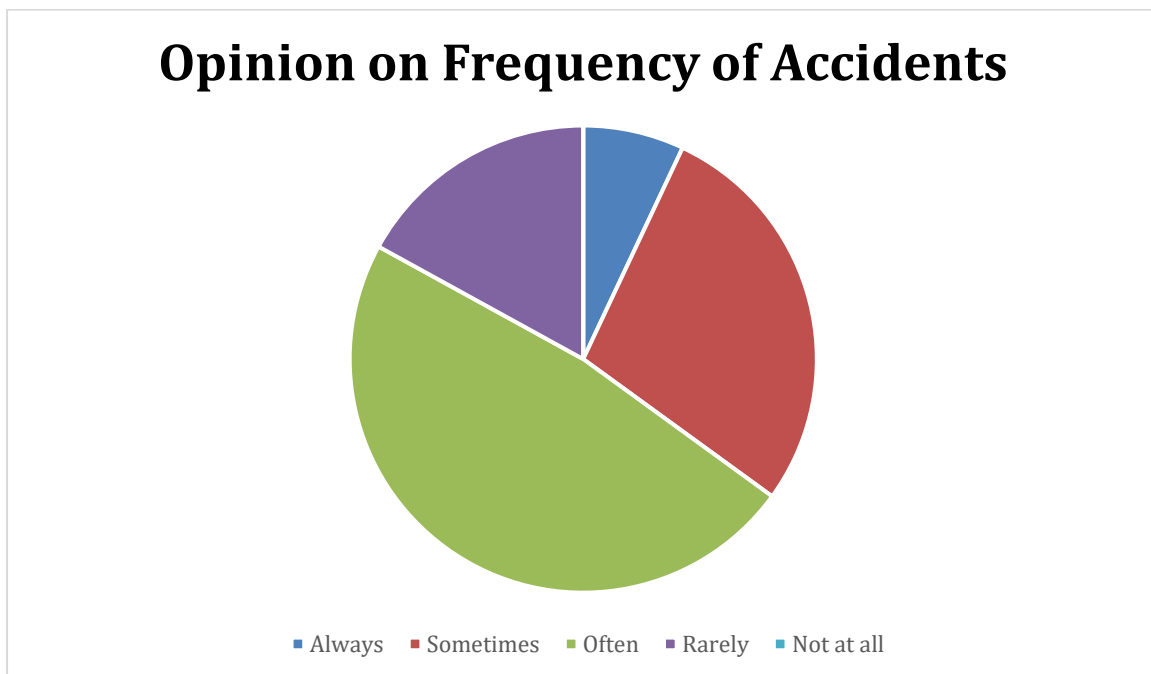


Interpretation: In the survey, 7% respondents say that always they are maintaining the machines properly and 35% of the respondents respond that sometimes they are maintaining the machines properly and 46% respondents says often they are maintaining the machines properly and 12% of the respondents says rarely they are maintaining the machines properly.

Table 10: Table showing the Accidents Happened

Sr. No.	Range	No. of Respondents	%
1	Always	4	7
2	Sometimes	17	28
3	Often	29	48
4	Rarely	10	17
5	Not at all	-	00
	Total	60	100

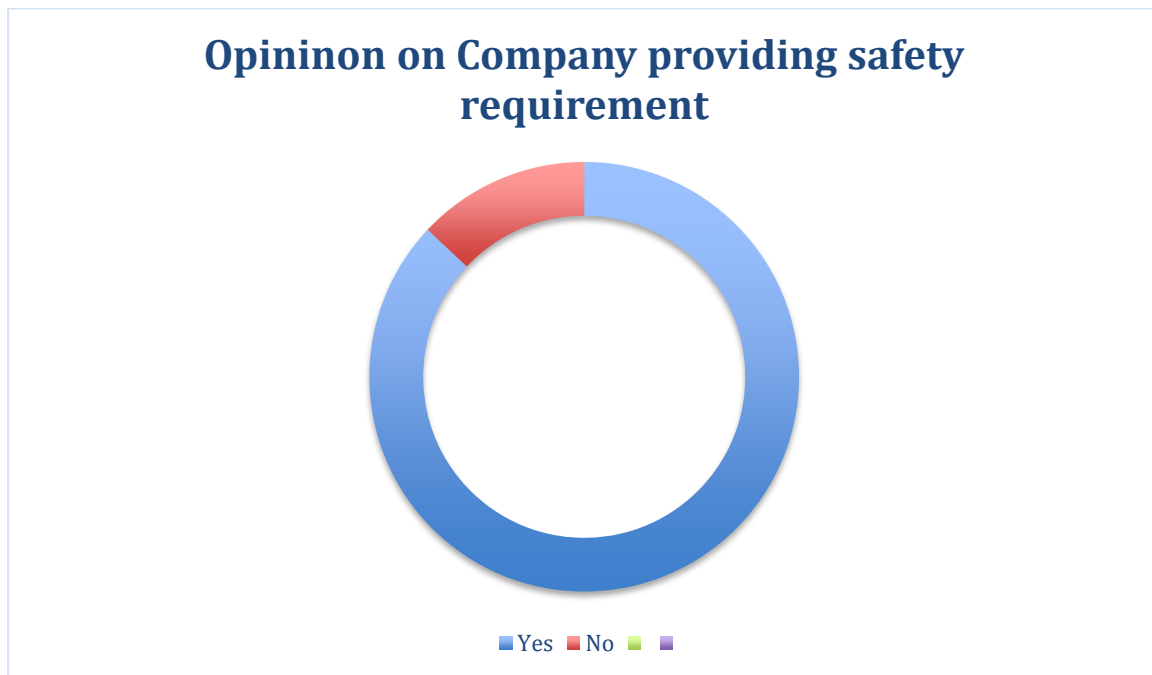
Opinion on Frequency of Accidents



Interpretation: In the survey, 7% respondents say that always the accidents are happened and 28% of the respondents respond that sometimes the accidents are happened and 48% respondents says often the accidents are happened and 17% of the respondents says rarely the accidents are happened.

Table 11: Table showing the company providing safety requirements

Sr. No.	Range	No. of Respondents	%
1	Yes	52	87
2	No	8	13
	Total	60	100



Interpretation: In the survey, 87% of the respondents say that the company is providing safety requirements for work and 13% of the respondents only respond that the company is not providing any safety requirements for work.

FINDINGS

- Only 20% of the respondents respond that they are not aware of the welfare and safety measures and 80% of the respondents are aware of the welfare and safety measures.
- Communicating welfare and safety matters; only 40% agrees that they have effective arrangements for communicating welfare and safety matters.
- Majority of the respondents are told that company is providing medical facility to the workers.
- Most of the respondents respond that sometimes they have proper drinking water and some of the respondents say often they have proper drinking water and very few of the respondents say that always they have proper drinking water.
- 70% of the respondents strongly agree that enough training is given to the workers but 20% respondents simply agree that enough training is given to the workers and 10% of the respondents say that they have no idea about enough the training given to the workers.
- 55% of the respondents strongly agree that their environment is safe to work and 23% of the respondents simply agree that their environment is safe to work and 12% of the respondents say that they have no idea about the safe working environment.

- 87% of the respondents say that the company is providing safety requirements for work and 13% of the respondents only respond that the company is not providing any safety requirements for work.

CONCLUSION

- Health and safety training at the workplace is a fundamental aspect of organizational success.
- Management provides the resources needed to implement the safety and health program, pursue program goals, and address program shortcomings when they are identified.
- To take care of well-being of workers by employers, trade unions and governmental agencies. It's besides removing dissatisfaction help to develop loyalty in workers towards the organization.
- Conduct regular surveys, Train your employees, Offer health and wellbeing programs

RECOMMENDATIONS/SUGGESTIONS:

- The company has to create the awareness for the workers regarding welfare and safety.

- Orientation programmes can be conducted to make the workers to feel that their work environment is safe to work.

- The maintenance department has maintained the machines properly to reduce lead-time.

- Proper training has to be given to the workers to avoid frequent accidents.

- Meditation practices can be given to avoid electric shocks, finger injuries etc. due to lack of concentration.

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