

A STUDY ON EMPLOYEES INDUSTRY SAFETY MEASURES IN R.K INDUSTRY

Submitted in partial fulfillment of the requirements for the award of
MASTER OF BUSINESS ADMINISTRATION

by

KARTHIKEYAN.R
Register No.40410084



SCHOOL OF MANAGEMENT STUDIES

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE
JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119**

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **KARTHIKEYAN.R 40410084** who carried out the project entitled "**A Study on employees industry safety measures in R.K INDUSTRY**" under my supervision from January 2022 to March 2022.

DR. JOYCE.S
Internal Guide

External Guide

Dr. BHUVANESWARI. G
Dean – School of Management Studies

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I **KARTHIKEYAN.R (40410084)** hereby declare that the Project Report entitled “**A Study on employees industry safety measures in R.K INDUSTRY**” done by me under the guidance of **DR. JOYCE.S** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

DATE:

PLACE:

KARTHIKEYAN.R

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I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

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KARTHIKEYAN.R

CONSENT & COMPLETION LETTER IN COMPANY

GSTIN : 33AAKFR9929D1ZY
PAN : AAKFR9929D

Phone : 044 - 32966960

R.K. INDUSTRIES - IV

(Registered Star Export House)

NO. 41, VANDALUR ROAD, PUDUPAKKAM,
KANCHIPURAM DIST. - 603 103.

08/03/2022

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **KARTHIKEYAN.R** (40410084) final year MBA degree student of the sathyabama institute of science and technology, Chennai, has completed Jan 2022 to Mar 2022 internship training in our R.K Industries IV. During the period of his internship training with us he was punctual, hardworking and inquisitive.

For R.K INDUSTRIES IV



for R.K. INDUSTRIES-IV
[Signature]
Authorized Signatory

ADMN. OFFICE : A7 & 8, T.V.K. INDUSTRIAL ESTATE, GUINDY, CHENNAI - 600 032.
PH. : 30178485, 30178484 FAX : 044 - 22451193 E-mail : contact@psarki.com

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ABSTRACT

The study entitled “**A study on employee safety measures in R.K INDUSTRY**”. The main focus of the study is to measure the level of employee safety and this project emphasizes the importance of safety among the workers in achieving gains in human performance and productivity. The steps for improving safety in the organization are identified. The level of individual and safety measures is identified in the organization. This project provides detailed information about safety, where does it reside and what does it do. The industry can implement job enrichment, job enhancement and self-development training methods to improve safety.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION:

The textile industry consists of a number of units engaged in spinning, weaving, dyeing, printing, finishing and a number of other processes that are required to convert fibre into a finished fabric or garment. There are numerous safety and health issues associated with the textile industry. The textile industry is characterized by the presence of a wide typology of machines and equipment, which automatic or manual system connecting the various machines with dwell and storing areas therefore the maximum attention must be paid by the operator who has to comply scrupulously with the procedures and the active and passive safety systems with which modern machines are largely equipped. Often the distraction or the excess of confidence with the machines are the occasions for accidents hazards.

Safety increases productivity, reduces accidents, acts as moral booster for employees, enables them to work fearlessly with confidence when they are assured of work safety. Safety measures develop team spirit and the sense of belongingness among employees, as they see no hazards to their lives and health. The occupational safety and health are primarily a management function like quality and production, having total participation of all workers with the objective of reducing deterioration and losses of resources of men machines and materials ensuring product safety.

Indian Textile Sector is a vast Industrial Sector and provides employment potential next only to agricultural Sector. The Indian Textile Sector shares 23% of Global Textile business and earns sufficient Quantum of Foreign exchange. India stands first in jute the next being Bangladesh and in silk India's position is number two the first being China. Coimbatore is Manchester of South India and has good population of small, medium and large scales of textile industries. Coimbatore is also classified as cotton hub as it has many numbers of educational and textile research institutes. Coimbatore and its surroundings have black soil in around 600 spinning Mills. Because of its Black soil Coimbatore belt is a cotton cultivation area.

The attention of awareness about the air, water and noise pollution is essential in the working environment. The Factories Act 1948 provides safeguards to the workers from being exploited by the organizations and it ensures safe working conditions inside the factory. It makes provisions for workers to get benefit of better health, and protection from mistreatment and unhealthy or unhygienic working conditions inside the factory. It is found that no separate rules have been framed under Factories Act, 1948 for the textile mill workers. As per the act the safety training is mandatory. As for the machinery layout in factories it is common for all the industries and applies to textile also.

Textiles can be manufactured from many raw materials. The four main sources of these materials are animal, plant, mineral and synthetic. Previously, textiles were made only from the natural fibres but subsequently the artificial fibres were also used. Due to technological development in fibre science, regenerated and synthetic fibres came in and found its application in textile goods either as blended with traditional fibres or 100% non blended form.

1.1.1 Synthetic/Regenerated Textile fibers:

In the regenerated sector viscose finds extensive application in apparels and surgical applications. Among the synthetic polyester finds vast application in apparels. As for polyamide commercially known as Nylon 6 and Nylon 6.6, because of its hydrophobic nature does not find application in apparels but has extensive application in industrial textiles. The Hydrophobic property of Nylon bans its application in Apparel Sector.

There five major sectors of textile industry are i) Ginning Industry, ii) Spinning Industry, iii) Weaving Industry, iv) Dyeing Industry and v) Garment Industry.

i) Ginning Industry:

The machine in ginning industry separates cotton fibers from seed cotton more effectively and quickly. Mostly ginning units are located near cotton cultivation, cotton belt areas. Ginning industry will have bale pressing facility also in it. Normal Indian cotton bales will weigh 160 to 165 Kg/bale.

ii) Spinning Industry:

The fiber is formed into yarn and twisted. At present two types of technology are employed in yarn formation. 1) Ring spinning technology and 2) Open end rotor spinning process. The latter is exclusively used to manufacture coarse yarn. In the spinning unit they also double the yarn to produce folded yarns to get stronger yarns-especially sewing threads.

iii) Weaving Industry:

Weaving is the processes of production of fabric in which two different sets of yarns or threads/warp/weft are interlaced at right angles to create a woven fabric or cloth. The way of warp and filling threads intertwist with one another is termed as weave.

iv) Knitting Industry:

Knitting is a method by which yarn is manipulated to create a textile or fabric. Knitting creates multiple loops of yarn, called stitches, in a line or tube. Knitting has multiple active stitches on the needle at one time. Knitted fabric consists of a number of consecutive rows of interlocking loops. As each row progresses, a newly created loop is pulled through one or more loops from the prior row, placed on the gaining needle, and the loops from the prior row is then pulled off the other needle. Knitting may be done by hand or by using a machine.

v) Dyeing Industry:

It is the method of adding colors to textile products such as fibres, yarn and fabrics. It is usually made in specific solution containing dyes and special chemical material. The two main key factors for dyeing are temperature and time control. The two main classes of dye are natural and man-made.

vi) Garment Industry:

The fabric is cut and stitched as apparels as per the fashion. The Garment/ Apparel industry is classified as 1) Woven Garments 2) Knit garments. Garment/ Apparel industry is the most important link in the textile value addition chain.

SPINNING PROCESS:

It is the process of converting fibres into yarn. The process of spinning constitutes various sequences of process and machinery.

Blow room:

It is the first mechanical operation of spinning process. This contains several machines which are used in succession in order to open and clean fibres. The compressed cotton bales are opened and in turn made into small tufts. To remove dirt, dust particles, broken leaves, grass and other Non Fibrous impurities cleaning process is done. After that blending process is carried out to provide the better quality by mixing various kinds of cotton together. Then the cleaned fibre is given a 3-dimensional shape in the formation of sheet of cotton and rolled into a lap or chute feed.

Carding:

It is the next process in spinning after blow room. In carding, the machine card is used in which lap from blow room is converted to carded silver. It is the mechanical process where fibre individualization is achieved and web formation done. The contribution of carding is comparatively more than blow room to improve the yarn quality. Blow room just opens the raw material but carding opens to individual fibres. It completely eliminates the unwanted impurities as card is better dust removing machine. This removes even the micro particles. Card improves the disentangling in neps process and it improves long-term blending scarcely, traverse bending and fibre mixing.

Drawing:

It is the process in which silvers are blended, doubled and then levelled. The silvers are elongated when it passes through group of pair rollers and every pair moves fast compared to previous one. This helps to make them strong, straighten the crimps and curls in fibres, make parallel to neighbour fibre, improves the uniformity by doubling of silvers fed, removes the dust and to decrease the weight per length. Drawing is also referred to as drafting which reduces soft mass of fibre in to a uniform strand of functional size. Carded silver is not good enough to make better yarn quality hence it subjected to a machine called Draw Frame. Draw frame improves uniformity/ regularity of weight and parallelisation.

Combing:

Combing is the special process adopted in cotton spinning to manufacture special yarn which has quality improvement viz yarn regularity yarn strength yarn surface property.

Especially in the manufacture sewing threads combing is a must. The natural cotton contains long as well short fibres. These short fibres behave differently in drafting in the process which affects the yarn quality spun. So, by fractionation at combing the short fibres are removed from the stock of fibres. In addition to removal of short fibres combing also does fibre hook removal. Normally the short fibre removal at combing will be 15 to 18% of stock fed.

Roving:

Roving is the product of fibre strand less than that of silver which is delivered from roving machines. This keeps fibres together in to a package that suitable for spinning machines. The main goal of roving is attenuation of silver to a specific size for spinning, winding the twisted roving into a bobbin. The operations that involved in roving is drafting, twisting and winding. Twisting is an intermediate process that converts fibres into low twist lea called roving. Silver that is not suitable for yarn manufacturing is removed away from draw frame. The main purpose is to produce input package for next process. This in turn, produces a compact package called bobbins.

Ring spinning:

It is the last process in yarn manufacture where the final count of yarn is got and the fibres are locked in their respective position by insertion of twist.

Post Spinning:

The yarn got from ring spinning is wound/ reeled and then marketed. The yarn is marketed in the cone package form in bags for power loom/ shutter less weaving sector where as for hand loom sector the ring frame yarn is reeled and marketed in hank form.

1.1.2 AN OVERVIEW OF ENVIRONMENTAL HAZARDS:

Each working environment has its own accidental hazards. There are various hazards that occur inside the premises of textile spinning industries due to the presence of wide machines and equipment in various departments. The interruption of machines results in accident hazards and it is increased in every industry in all departments. Dust and noise

are considered as the important environmental hazard that affect the health conditions in workers. The following are the major hazards that occur in textile industry.

i) Physical Hazards:

Noise: It is an environmental pollutant that generates in spinning industry. The workers suffer from impairment of hearing capacity due to the industrial exposure noise of potentially damaging quality and intensity. Prolonged exposure of noise leads to hearing disorders. The emission of noise occurs during manufacturing of yarn and it is mainly due to high rotary and high speed of machines. This damages the ear drum and it leads to loss of hearing. And also, it causes annoyance, fatigue, absenteeism, changes in rate of pulse, variations in blood pressure, reduction in efficiency and also sleep disorders.

Dust: Workers are exposed to organic dust from the materials like silk, cotton, hemp, jute, wool, flax and sisal generated in spinning. Continuous Exposure to dust causes bronchitis and also leads to disability and premature death.

Accidents: There are many machines which are used in the industry. Workers are exposed to accidents at the time of handling materials and operating machines. In the automating the system reduces the accidents that happen inside premises. Fire, electrical and mechanical accidents are major type of accidents that occur in various departments.

Heat Stress: The spinning process needs high humidification and artificial humidification of the air employed. It is denoted by symptoms of either heat stroke else heat exhaustion. Some of the symptoms due to the heat stress in workers are headache, moist skin, vomiting sensations, dizziness, and the body of persons are not able to cool itself. High temperature exposure does not arise in spinning mills.

Fire: In textile industry most of the materials are flammable that create an explosion. The nature of the materials can penetrate the skin and causes infections. And it can occur due to electrical short circuit. Smoking also can cause fire hazards.

ii) Electrical Hazards:

This type of hazard occurs due to improper earthing and improper insulation of conductors. This causes electric shocks to workers. Due to the 14 presences of moisture, the electrical leakage/electrical shock in spinning Industry is very common. The electrical hazards are also occurred by using old wires, improper current flow, poor electrical maintenance and melting and heating of cables, due to over loading of electrical cables than its rated specification.

iii) Ergonomics Hazards:

Ergonomics deals with the study of potential and inabilities in mental and physical work. This hazard referred to as factors cause pain and discomfort among the workers. Environmental conditions that are not comfortable for workers can also cause pains and injuries in legs, hands, wrist, neck, knee and shoulder. It is also caused by repetitive strains, lifting large heavy loads, sitting for a long period of time and improper arrangement of the machines.

iv) Psychosocial Hazards:

The major cause of these hazards is work stress and depression. This is mainly due to various reasons like strict rules and regulations in industry, work intensification, poor pay, feeling of job insecurity, poor working conditions, long working hours and inhuman abuse. It also includes other financial and personal problems of workers associated with his family relationship.

1.1.3 HEALTH AND SAFETY TRAINING PROGRAMME:

Health is regarded as a state of entire physical, mental and social well-being and hence it is considered as the important concern. Health is the real foundation for all happening and caring and it is the right of each individual people. Hence it is not only a starting point of welfare but also an important yard stick of measuring the progress of a country. Health at work is an important one. The environmental hazards do affect the worker's health in the textile industry. The next aspect in health care is safety. Hence both are the integral sections for the general health.

There are many numbers of health and safety issues associated with the textile industry. National Institute of Health and Safety in its survey report on textile industry has listed the following occupational diseases.

- i) Lung disorders
- ii) Cancer
- iii) Cardio vision
- iv) Loss in hearing
- v) Reproductive disorder
- vi) Neuro- toxicity
- vii) Dermatological problems and skin disorders and
- viii) psychological problems.

The three main contributory causes for the above are injuries, incidence and severity-preventive in built provisions in the machinery. Textile industries being labour oriented and repeated incidence of accidents do happen due to the following reasons.

- i) Inadequate knowledge on machines working due to improper training
- ii) Not handling the materials carefully
- iii) Mental conditions of workers
- iv) Unsafe conditions existing in the industry premises.

Hence many of the workers are suffering from the ill health. Therefore, management's awareness on the workers welfare is needed to improve the productivity. The goal is to create the awareness about the health and safety among the workers in textile industries.

1.1.4 Provisions about Worker Safety:

Fencing of machinery:

Every dangerous machine-like electric generator, flywheels, moving parts of prime movers must be fenced securely and painted "DO NOT REMOVE FENCE" in red. In case of power supply paint as "DANGER" and draw skull. Self-acting machines: Moving parts in this machine must not be allowed to come in 45 cms of any permanent structure that is not part on the machine.

Striking gear and devices:

In every workroom, suitable devices for cutting off power should be provided and maintained during emergencies.

Work on or near machinery in motion:

Only the trained male adult workers should work on or near such machinery in motion and they should wear tightly fitted clothes.

Casing of machines:

After installing some parts must be sunk and encased or it should be effectively guarded like set screw and bolt in all the machinery.

Near cotton openers:

No women are allowed to work in near cotton openers. Lifts, chains and ropes: Each lift and hoist must be safely constructed. This provision helps to know how to secure such safety and also get periodic safety certificate.

Dangerous machines:

No person shall work in dangerous machines till they are fully trained on the precautions, sufficient knowledge and experience of the work. They must wear tight dress.

Revolving machinery:

Revolving machined should be run at the rated speed specified by the manufacturer and should not exceed the rated speed.

Pressure Plant:

If any operation is carried out in a higher pressure comparing to the atmospheric pressure, care should take to ensure that safe working pressure is not exceeded.

Floors and stairs:

Every floor, stairs, steps, gangways and passage should be maintained properly. If it is necessary, handrails should be provided. And also, safe means of access are given to workers who carry any work in any place.

Overload:

Workers should be not allowed to carry heavy loads which cause injuries to them. In spinning mills only place worker carry's weight in above shoulders is blow room lap even there the lap weight is kept less than 22 Kg/Lap. But some mills use 1 ap trolleys for this purpose. But after the introduction of chute feed the lap carrying by the worker is totally abolished. In all other places material handling in spinning mills is done by trolleys with wheels. Even meter cans in carding are now equipped with cannisters and wheel.

Precautions for fire:

Proper construction of all doors and windows are maintained to open outwards. Fire escapes should be provided and if any fire occurs the exit should be highlighted in red text.

Protection of eyes:

Appropriate goggles should be provided for all workers to protect eyes from excessive lights in manufacturing process.

Precautions for explosive:

If the manufacturing process produces any explosives or inflammable gases or dust, the necessary steps should be taken to cover the machine and prohibit all the sources of ignition.

1.1.5 REASONS FOR ACCIDENTS:

There exist three main reasons for occurrence of accidents:

1. Unsafe Conditions (work-related):

Unsafe working conditions are the biggest cause of accidents. These are associated with defective plants, tools, equipment's, machines, and materials. Such causes are known as 'technical causes'. They arise when there are improper guarded equipment's, defective equipment's, faulty layout and location of plant, inadequate lighting arrangements and ventilation, unsafe storage, inadequate safety devices, etc. Besides, the psychological reasons such as working overtime, monotony, fatigue, tiredness, frustration and anxiety are also some other causes that cause accidents.

2. Unsafe Acts:

Industrial accidents occur due to certain acts on the part of workers. These acts may be the result of lack of knowledge or skill on the part of the worker, certain bodily defects and wrong attitude. (For e.g.,)

- i) operating without authority.
- ii) failure to use safe attire or personal protective equipment's.
- iii) carelessly throwing of materials at the work place.
- iv) working at unsafe speed.
- v) Removing safety devices.
- vi) Taking unsafe equipment, or using equipment's unsafely.
- vii) Distracting, teasing and day dreaming.

3. Other Causes:

These causes arise out of unsafe situational and climatic conditions and variations. These may include excessive noise, very high temperature, humid conditions, bad working conditions, unhealthy environment, slippery floors, excessive glare, dust and fume, arrogant behaviour of domineering supervisors, etc.

In order to avoid these incidents, Chunk Training method is introduced which provides safety instructions. The training is mandatory for workers and it enables them to be aware of following:

- i) It allows them to know the safety precautions in handling materials, safe working methods and handling techniques in the industry.
- ii) It makes workers to be aware of hazards and safety in electrical and fire hazards.
- iii) It builds the perception of clean surroundings.
- iv) It permits them to realize the health hazards that occur because of dust and other unhealthy states.
- v) It enables workers to be aware of other mechanical and electrical dangers and their defending methods.

1.1.6 SAFETY INSTRUCTIONS FROM CHUNK TRAINING:

Chunk training recommends the keyword strategy. The chunk training was organized in weekly basis. This provides safety precautions to be adapted and safety procedures to be followed.

i) Electrical Safety Instructions:

- Insulation is one of the most fundamental one as it prevents electrical current leaking. It detaches the conductor substantially from worker and to make disappear the produced heat and it stops overheating.
- Avoid contact with energized electrical circuits. x Treat all electrical devices as if they are live or energized.
- Disconnect the power source before servicing or repairing electrical equipment.
- Use only tools and equipment with non-conducting handles when working on electrical devices.
- Never use metallic pencils or rulers, or wear rings or metal watchbands when working with electrical equipment. This rule is very easy to forget, especially when you are showing some electrical part pointing with metallic pencil.
- When it is necessary to handle equipment that is plugged in, be sure hands are dry and, when possible, wear nonconductive gloves, protective clothes and shoes with insulated soles.
- Remember to wear Personnel Protective Equipment's (PPE) like gloves, clothes and shoes etc.,
- If it is safe to do so, work with only one hand, keeping the other hand at your side or in your pocket, away from all conductive material. This precaution reduces the likelihood of accidents that result in current passing through the chest cavity.
- Minimize the use of electrical equipment in cold rooms or other areas where condensation is likely. If equipment must be used in such areas, mount the equipment on a wall or vertical panel.
- If water or a chemical is spilled onto equipment, shut off power at the main switch or circuit breaker and unplug the equipment.
- Never try to remove water or similar from equipment while energized.
- If an individual comes in contact with a live electrical conductor, do not touch the equipment, cord or person. Disconnect the power source from the circuit breaker or pull out the plug using a leather belt.
- During tricky situation, and you must be very calm in order not to make the situation even worse.
- Do not rely on grounding to mask a defective circuit nor attempt to correct a fault by insertion of another fuse or breaker, particularly one of larger capacity.
- Drain capacitors before working near them and keep the short circuit on the terminals during the work to prevent electrical shock.
- Never touch another person's equipment or electrical control devices unless instructed to do so.
- Enclose all electric contacts and conductors so that no one can accidentally come into contact with them.
- Never handle electrical equipment when hands, feet, or body are wet or perspiring, or when standing on a wet floor.
- When it is necessary to touch electrical equipment (for example, when checking for overheated motors), use the back of the hand. Thus, if accidental shock were to cause muscular contraction, you would not "freeze" to the conductor.

- Do not store highly flammable liquids near electrical equipment.
- Be aware that interlocks on equipment disconnect the high voltage source when a cabinet door is open but power for control circuits may remain on.
- Do not wear loose clothing or ties near electrical equipment.
- Circuits boards should be closed properly.
- Avoid loose wiring and long extension cords
- Establish perfect grounding.
- In the situation of high-risks, employ explosion proof devices. x Instructions of first aid treatment should be provided for every worker.
- The on and off of the switch should be operated as per the safety rules and with advance approval of the authorized person.
- Provide lightning arresters.
- The apparatus with excessive voltage maintenance and repairment should not be done till the apparatus is made unresponsive and isolators are open and locked.
- Warning notices should be placed in the work place.

ii) Fire Safety Instructions:

- Alert and evacuate all personnel in the immediate area. This should be done only if you can do so and that too without any delay to exit.
- Do not stay back to fight if it is a large fire. x Leave the building immediately, close doors behind you as you exit the building and proceed to the designated emergency evacuation assembly location.
- Report it to the concerned department / fire department. x Safety is more important than property or valuables.
- If you are trapped in a room touch and feel the door. If it is hot, do not open it. Stay in your room and put a towel or blanket (preferably wet) under the door to keep the smoke out to avoid suffocation.
- If you encounter smoke on your way out, stay low and crawl if necessary. You are more apt to find breathable air close to the floor. Cover your nose and mouth with a wet towel or wet handkerchief, if possible.
- If gone out, do not attempt to re- enter the building until the fire is put off or the fire department gives permission to do so.
- Know emergency escape routes like fire doors, window exits, and fire escapes.
- Never block emergency escape routes or block open or attempt to open any fire doors.
- Emergency exit doors within rooms/suites shall not be blocked on either side by furniture or obstructions of any kind.
- If a person's clothing is on fire, he/she must not be allowed to run, as this will fan the flames and cause a more serious burn
- Clothing fires must be extinguished immediately, before anything else is done, in order to minimize skin burns. Try not to use your hands for they will also burn
- Know the fact of electrical and chemical sources of ignition, static and mechanical sparks.
- Tanks for depositing chemical or diesel oil should be of underground storage type. Sources should be stored in underground tanks and it must be well apart from the workplace.

- Workers should not be allowed to smoke within the premises of the factory.
- In each and every floor, fire extinguishers should be placed and the label regarding its usage is noticed.
- Entire floor should be leakage-proof.
- The working premises should be maintained free from wastages.
- The oily rags should be kept in enclosed containers.
- In case of existence of open flame or when the equipment is hot, don't fill up the gasoline powered material.
- The combustible liquids should be stored/ placed in compactly closed container and should be isolated from the sources which generates spark.
- The combustible liquids should be used only in well oxygenated space.
- Acetylene cylinders should be separated from O₂ cylinders. x Gas cylinders must be placed in an individual room and properly ventilated and the rest of the empty / full cylinders should be stored separately.
- Cylinders should always be placed or shift vertical.
- As per the "Factories Act, 1948" workers should not be permitted to enter into tanks that comprises of dangerous hazardous smokes / fumes. In those places, lamp of flame proof light alone built and not higher than 24 volts of transferable electric light should be used.

iii) Mechanical Safety Instructions:

- Do not operate the machines without any full pledged detailed instructions.
- Well maintained housekeeping will avoid accidents.
- Do not be over confident, while operating machines / equipment's.
- Having drunk do not try or operate any machine or equipment's.
- Family problems and mental distractions will create stress which lead to accidents.
- Always consider the significance of safety manual and procedure.
- Provide with safe access that is suitable for the work they perform in, on and around machinery and equipment.
- A stable work platform suited to the nature of the work that all access may vary during each stage of machinery and equipment life cycle.
- Undertake regular maintenance, repair, installation, service, cleaning or decommissioning by placing the 'UNDER MAINTENANCE WORK' sign boards.
- Identify machinery and equipment hazards in the workplace and provide necessary safety guards.
- The safety manual for handling machines should be read and clearly understood before operating the equipment.
- No person should not lie or sit beneath the machine other than while examining or repairing it.
- Make sure that every machine has been fixed with correct operating guards at all times when the machine is running.
- The guards must be replaced instantly in case of any repair.

- If the machine is in running condition, no person should try to clean, lubricate, repair or regulate the machines.
- The machine should not be operated by any worker until they get instructions from the instructor or their supervisor.
- The machine should not be tried to stop with the hands or body.
- The floor must be maintained clean of curls, metal chips and unwanted pieces and if so, they should be placed in the container provided for this purpose. In the absence of an instructor, the machine should not be operated.
- In case if there is another worker with the operating worker, only the one authorized to work on the machine should handle the machine and the switches.
- While operating machines, more concentration on the work is needed.
- Unnecessary chatting should be avoided while handling machines.
- First-aid treatment should be provided immediately to the injured, in case of any such injury while operating machine.
- Use the appropriate PPE and should wear suitable clothes for the required job.
- No worker should wear watches, rings, bracelets or any other jewellery or loose clothes that have the chance to be caught in the moving machine.

1.2 Industry profile:

The **textile industry in India** traditionally, after agriculture, is the only industry that has generated huge employment for both skilled and unskilled labour. The textile industry continues to be the second-largest employment generating sector in the India. It offers direct employment to over 35 million in the country. According to the ministry of textiles, the share of textiles in total exports during April–July 2010 was 11.04%. During 2009–2010, the Indian textile industry was pegged at US\$55 billion, 64% of which services domestic demand. In 2010, there were 2,500 textile weaving factories and the 4,135 textile finishing factories in all of India. According to AT KEARNEY's 'Retail Apparel Index', India was ranked as the fourth most promising market for apparel retailers in 2009.

India is the second largest producer of fibre in the world and the major fibre produced is cotton. 60% of the Indian textile industry is cotton-based. Other fibres produced in India include silk, jute, wool and man-made fibres. India is first in global jute production and shares 63% of the global textile and garment market. India is second in global textile manufacturing and also second in silk and cotton production. 100% FDI is allowed via automatic route in textile sector. Rietor, Trutzschier, saurer, soktas, zambiat, bilsar, Monti, cmt, land, nisshinbo, spencer, Zara and levis are some of the foreign textile companies invested or working in India. Between Jan and July 2021, India exported textile products worth Rs.1.77 lakh crore, which is 52.6 per cent more than the same period last year. Indian textile industry is one of the leading textile industries in the world. Through was predominantly unorganized industry even a few years back but the scenario started changing after the economic liberalization of Indian economy in 1991. The opening up of economy gave the much-needed thrust to the Indian textile industry, which has now successfully become one of the largest in the world.

Indian textile industry largely depends upon the textile manufacturing and export. It also plays a major role in the economy of the country. India earns 27% of its total foreign exchange through textile exports. Further the textile industry of India also contributes nearly 14% of the total industrial production of the country. Indian textile industry is also the largest in the country in terms of employment generation. India textile industry currently generates employment to more than 35 million people. It is also estimated that the industry will generate 12 million new jobs by the year 2010.

1.3 company profile:

R.K. Industries was established in 1973, in the picturesque metropolis of Chennai on the East coast of Southern India. Today R.K. Industries produces over 350,000 garments per month for many of the leading labels in the world. R.K. industries have all facilities from yarn dyeing, weaving, garment manufacturing, panel printing, embroidery and washing in house knowing the importance of providing its customers with the largest design trends. R.K Industries has a design and sales office in New York with an extensive library of swatches. Our long-standing relationship with our buyers is a testimony for our service and commitment.

Products:

- Men's shirts
- Casual pants
- Shorts
- Boxer shirts

Customer profile:

- J CREW
- POLO BY RALPH LAUREN
- A&F
- CALVIN KLEIN
- HACKETT
- WOOLRICH
- ORVIS

Garment Division:

Behind every garment from R.K. Industries is a world of skill and technique from the most experienced of hands and the most modern machinery.

Cutting Section:

Cutting section is equipped with computerized Accumark Pattern/Grading system. Cutting is done manually and in blocks to get the perfect match.

- R.K. Industries uses GGT Accumark system for Pattern making and Grading
- All cutting is done in blocks and refolded and re-cut to get the best matching

- Trolleys are used to get reduce handling.

Production:

- Factories are equipped with Automatic Production Handling systems to reduce manual handling, increase productivity and better tracking of production status.
- Various special Machines like Welt Pocket Machine, Fornt Placket Machine, folders and other attachments are used to ensure Consistent product quality.
- Collar and Cuff etc are stitched using templates to maintain consistent shape.
- In-line Checkers ensure that the product coming off the line is as per spec.

Finishing:

- Each factory has a independent finishing area.
- All garments are 100% checked before packing
- The finishing area is equipped with Steam ironing tables and Folding table and also conveyors to reduce handling
- Needle detectors are installed in the finishing conveyor.
- Garments can be Scan pack and data transmitted via EDI.

Fabric Division:

R.K. Industries diversified backwards into fabric manufacturing in 1996, to cater to the increasing needs of its customers. All equipment's are from leading manufacturers in the respective fields, so as to produce fabrics to meet the stringent quality standards of our clients.

Yarn Dyeing:

All the yarn is dyed in Cones on fully automatic yarn dyeing machines. This ensures good colour matching and reproduction-ability across batches.

Warping and Sizing:

- Fully Automatic Sectional warping machines
- Beam to beam sizing Machine
- Single end Warping Machine for sample warps of up to 100 meters.

Finishing:

- Equipped with Singeing, felt finishing and Zero-Zero machine to get quality finish on the fabric.

- This ensures that the fabric is stable after wash.
- All fabric is checked and rolled after finishing.

1.4 Statement of problem:

In textile industry, work pressure for workers is very high due to rise in orders. For an average healthy worker, the targets are set high. And if the assigned targets are not completed by workers they are criticized by the corresponding supervisors. So the workers are forced to work for long period of time in order to complete the works. But most of workers are not interviewed and trained properly and they are not asked to sign for any kind of contract. Hence the workers are not aware of hazards that are caused inside the working environment. They should not have any risk factors of workplace, the way of working safely with heavy equipment, chemical substances, and hazardous substances, how to avoid danger of vehicles, what the precautions to be taken are, and what are the protective measures are to be used. To overcome all these issues, safety training is imperative.

Not only have the workers faced these situations, supervisors and managers also face equal difficulties in the working premises. They should manage all the workers, should know about the quality procedures throughout the production process, they should know about the machines and handling machines, should have excellent organizational skills and should manage a team regularly. Supervisors also trained for these qualities. Managers also should be trained as to how to work under pressure. The awareness about all these things is essential in the textile industry. So, the workers, supervisors and managers require more effective training during their training periods to overcome all these challenges.

1.5 objectives of study:

- To study the various safety measures existing in the company.
- To understand the problem faced by employee in the organisation while operating the machine.
- To analyse the causes of accidents in industry.
- To measure the effectiveness of the safety and first aid training provided by the organization.

1.6 Need for study:

- The study can be done by considering some other factors to measure the industrial safety measures inside the R.K Industries.
- To develop a framework for understanding the risks textile workers were exposed to due to lack of health and safety standards in the industry.
- This study can be extended to measure the satisfaction level of employees on health and hygiene also.

1.7 scope & significance of the study:

- Safety are the important elements essential for improving the productivity of an industries, a study on the existing safety measures would help the industry to perform better.
- This study would throw light on the perception of the workers regarding the safety.
- This study also helps to analyse the satisfaction level of workers towards safety measures and suggest provisions to improve safety.

CHAPTER 2

REVIEW OF LITERATURE

2.1 REVIEW OF LITERATURE:

Akhter (2008) has dealt with the occupational safety for women workers in Bangladesh garment industries by considering their workplace surroundings, condition of working, their age and health related problems, reasons for health diseases, source of injuries and accidents. It is found that rate of growth in readymade garments was about 25% and found financial reason in outsourcing production. The extensive success of these readymade garments has changed its status in social and economic development indicators. A determined public policy package directs to encourage the development skill and increase the productivity.

Bhagia & Derasari (2009) investigates about the gram-negative bacteria and their endotoxin in India gin house. The disease of byssinosis has developed because of cotton dust exposure. It is proved that main cause for the disease is gram-negative bacteria and endotoxin present in it. This study was carried out in western India. Vertical elutriator was used to collect the environmental dust samples.

MudeyAbhay (2010) studied the commonness of chronic respiratory diseases and associated factors in spinning mill workers. There are many studies existed, but this was undertaken to find the respiratory diseases and epidemiological exposure of the respiratory diseases among the workers in spinning mill. The study was conducted in 462 workers of cotton industries in Babashaheb Kedar Sut Girni Pvt. Ltd of Central India. This survey was conducted to gather socio demographic, information of addiction and anthropometric. This study shows that among 462 workers, about 25.3% of workers had chronic respiratory diseases, and it includes 11.7% of Byssinosis, 5.8% of chronic bronchitis, 4.5% bronchial asthma, 1.5% of tuberculosis and 1.7% of obstructive pulmonary diseases. The surveyed workers are male with the range of age 21 – 58 years. Most of the workers of about 97.4% that is 450 workers are literate. The process of spinning was carried out in 7 main sections. Most of the workers about 47% that is 217 workers belong to the section of ring frame. It shows clearly that 32.7% of workers had exposure of cotton dust for more than twenty years. They are given only masks as protecting devices and about 41.3% of workers were using the masks.

Smith (2010) gathered many datasets regarding administrative health care billing records, significant statistics, registries of workers who having cancer, pharmaceutical records, details of workers compensation, and these details are collected to investigate the occupational health and safety issues among the workers in Canada. Three provinces Quebec, Ontario and British Columbia were selected which possess long history of administrative data and survey which is highly needed to increase access to data, comparing more database records that are used for research about the occupational health and safety. This research is very much helpful for understanding the result of health research.

Kamalesh J Dube et al. (2011) investigate the typical sound levels conquering at the workplace environment and its consequence on ability on hearing of the exposed which

workers that were made among the workers in cotton ginning. A questionnaire survey is conducted in 10 cotton ginning industries in Maharashtra of Jalgaon district, India and data were collected about the health status. The workers in the cotton ginning industry suffered consecutive noise levels in between 89 and 106 dBA. The hearing ability of the subjects was acquired by pure tone audiometry and the results show about the average, medium and moderate severe degree of hearing damage among the workers. At the time of study, the generated data of hearing loss was notably related with period of exposure to the noise in workplace ($P < 0.0001$). The familiarity of audiometric hearing destructive defined as a threshold average which is more than 25 dB hearing level was 96% for binaural low-frequency average, 94% for high frequency and 97% for mid frequency in cotton ginning industry workers.

Ajeet Jaiswal (2011) introduced a study to identify the factors relating in the degradation of respiratory function in female textile workers. The impurities of raw cotton fibre and dust affect the respiratory function. A study was conducted with 243 men workers and 235 women non textile workers of age greater than 20 years who worked for about 3 months years. They were asked to collect the details like chest symptoms, occupational history information's and some characteristics of them. To evaluate the important difference in between the women textile workers and non-textile workers, statistical analyses such as Chi-square and odds ratio was carried out. The symptoms of byssinosis are due to the more dust in workplaces, period of service years and heavy smoking. These are determined by univariate analyses of factors. And also, the analysis of logistic regression showed that employing in the scouring, spinning with the odds ratio 11.0, spinning with odds ratio 4.7, weaving sections of odds ratio 2.6, higher than 10 years of experience with odds ratio 2.8 and weaving section of odds ratio 2.6 were separate risk factors.

Ashwin Kumar (2011) inspected individual and social factors that are related to the workplace injuries in Australians. From this inspection totally 636,000 members were injured in between 2009-2010. Among them 88% of workers working in the same place, 5.2% were moved to another and 6.9% of workers were not employed. The most general and common injury among them are strains and sprains, wounds and chronic muscle conditions with economic cost of \$57.5 billion. Due to these injuries, there were several problems arise in workers. It results in changes in worker life, it sustains immeasurable cost to worker families, and each individual life is changed, including their dreams and hopes. It can be avoided by giving appropriate health and safety training for workers, enlarged organizational working environment for Australian workers. By taking the factors such as work hours, workload, work environment, provision of quality supervision, safety culture, provision of training into consideration, one can easily understand the complexity of injuries and fatalities.

Padmini & Venmathi (2012) studied to measure the parameters like lighting, temperature, noise and humidity in working environment and to rate the safety measures that are practiced in garment industries. The study shows that the vital problems faced by the workers are due to unergonomic workstations, congested work area, no proper ventilation, poor illuminations, more dust and noise, not using personal protective equipment. Garment industry is the significant strategic industries that comprises 7% in world production and 8.3% of total trade in industrial materials. And it

also consists of more than 14% of labour force and employs nearly 40 million people in several countries of world. The largest knitwear garment manufacturing in the western Tamil nadu is Tirupur which export a large quantity in South Asia. It is also known to be “T-shirt city” and it accounts for nearly 80% of total production of export in India.

Nazia Malik et al. (2012) designs a multistage random sampling technique to identify the role of hazards in textile industry. For this work, it selects around 480 permanent workers in the age between 30-55. The analysis of uni-variate and bi-variate presents a powerful and positive association. It has come to light those thousands of workers are repeatedly exposed to hazards. Some other reasons which create hazards include shift work, strained job due to improper use of personal protective equipment, smoking in the workplace premises. These lead to higher accident rate, occupational diseases and unsafe environment.

Albert Sese et al. (2012) who proposed occupational health and safety measures in Spain observed that these measures upgrade considerably due to the new concept. Significant changes in psychosocial factors, industrial hygiene and safety provide an optimistic panorama for future Spain. According to the European convergence programme, statistics of Spanish provides better safety results. As stated in 1997 official statistics, Spain had the high-ranking incidence rate for non-fatal industrial accidents of all European Union countries and remain third place for fatal accidents. It also outlined the organization of the Spanish National System of Health and Safety at Work, its laws of health and safety, statistics on work place that obtained from Spanish National Survey on Work conditions.

Mishra (2012) examines the byssinosis among male workers in Pondicherry textile industry. This study aims to determine the factors related to the development of byssinosis among textile workers. The specimen constitutes 761 male workers age of more than 30 years who working for minimum 10 years in textile industry. A questionnaire is provided to all the respondents to collect the information about the byssinosis symptoms, some characteristics of workers and working history details. This can be found by using the classification presented by the world health organization. Hence 2 age matched controls were selected.

Aghera Nirmala (2013) examined the prospects of occupational health and safety in Gujarat textile industries. The notion of occupational safety and health is restricted and therefore the accidents and diseases remain high in the modern industries. In India many of accidents are not reported correctly in labour department. Hence there is no sufficient data about occupational health and safety is available in India. This leads to poor OHS legislation and infrastructure. The laws of health and safety do not change the biggest enterprises with highest employed rate in India. Hence this work concentrates on those issues. Here the six textile units are selected randomly in Gujarat and evaluates the prospects of occupational health and safety. The significant goal is to identify the workplace hazards that are faced by the textile industry workers and prepare a framework to analyse them.

Vasim Khatik et al. (2013) discussed in addition to understanding the common causes of fire, the unknown causes also examined. The fire safety investigations are included in the work methodology and also the questionnaire survey is conducted. This explains

in detail the causes of various fires such as electrical, anthropogenic, mechanical, spontaneous ignition and mechanical. The owners of ginneries are recommended in understanding the reasons for occurrence of fire and follow the suggestions in advance. Fire is the most danger one and unmanageable for the cotton industries. Hence it is considered as the biggest issue to the safety of ginning industries. Fires in the Khandesh region of ginneries have been greatly catastrophic and results in loss of heavy financial damages. The actual cause of these fires is not known easily and even it is very tough to trace. This work presented to find out the causes of fires in the Khandesh region ginning factories.

Anwara Begum (2013) have stated that women's occupation in export-oriented industries in Bangladesh has decreased the gender gap in many areas that include participation in social prestige, labour force, and controlling income and in making resolution. And simultaneously, there is extensive occupational separation and gender inequality in wages. This study used survey data from 1990, 1993 and 1997 in order to estimate how the women exploit the "comparative advantage in their disadvantages". It analyses the gender dissimilarity in conditions of occupation and workplace, and observes the differences in export-oriented garment industries, non-export-oriented industries and in other export industries. It also suggests policy measures to eliminate the gender imbalances appearing from women's occupation in export-oriented garment industries. It also collected data from the following surveys

Peggy & Christiani (2013) reviewed and found that around 60 million people working in the textile industries have chronic lung diseases, particularly chronic obstructive pulmonary disease. This work estimates the result of long-term exposure of organic dust for industry workers on chronic respiratory disorder and classification of disease that includes both restrictive lung disease and reversible or irreversible blockage lung disease. The main purpose of this research is to understand clearly about the chronic lung disease due to organic dust workplace environment. Termination of organic textile dust exposure to worker retirement leads to development in lung function. Inversion in the lung macrophage: dendritic cell ratio owing to exposure of dust associated endotoxin may be a mechanistic justification for the improvement of persistent airway inflammation and related airflow obstruction.

Praveen Kumar et al. (2014) proposes a method in order to find the RPN (Risk Priority Number) for all kinds of hazards in the industry and FEA (Fault free analysis) is carried out for the hazard which has highest RPN number. Some of the major hazards that happen in industry are physical, Ergonomical, physiological, chemical and biological nature due to various reasons like improper ventilation and others. Normally these types of hazards occur more in the textile industries than any other industries and also, they are not aware of health issues as most of workers are uneducated.

Soomro et al. (2014) have given suggestion to improve the workers' health and safety. It is the important key for improving the quality and production of ginning factory. If the workers are safe and healthy it is regarded as the there is minimum environmental hazards. The work indicated that it is mandatory to design system that raises the worker's health and safety. This study shows the problems which are faced by the workers of Pakistan ginning industry. This research is mainly interest in highlights two

essential aspects, namely are, improving the previous ginning technology and applying PAK-EPA act for keeping good health. This act provides for conservation, protection, rehabilitation and improvement of environment, pollution control, maintaining the machines properly and proper alignment of ginning machines. It also provides the safety precautions for workers and dust control devices which are used for machines in order to reduce the diseases.

Fatema Tania & Nasrin Sultana (2014) studied that readymade garment are the most significant export from Bangladesh but the conditions of working and factories fire safety records are not often up to the standard. The sector drafts the global attention to its quality of product. Worker deaths are frequent in Bangladesh and this leads to recriminations and results in continuation of fire and other terrible accidents. In the world, the safety record of garment industry in Bangladesh is very worst and the study shows the types of environmental hazards of health in garment workers. It provides an overview of what necessary action need to be taken by various actors in order to enhance the safety of garment industries, what has been achieved so far to prevent and compensate the accidents. This study shows that there is lack of consciousness in environmental health and safety issues and unawareness in their basic rights in working environment.

Sudha Babel & Meenaxi Tiwari (2014) studied the occupational health is a significant issue for any working person. The objective is to maintain the workers physically and psychologically healthy and mentally stable. This explains detail about the various hazards including physical, chemical, mineral, mechanical, biological, ergonomic and psycho-social hazards. It shows various problems that occur in various departments of textile industries such as production and ginning unit, yarn manufacturing unit, synthetic fibre production unit, weaving unit, dyeing, printing and finishing unit. It deals with impacts of cotton dust and security issues relating to the textile industries. It explains the workers' health problems and safety measures to be followed inside the premises of workplace environment. This makes aware of occupational hazards and enables the management to provide sufficient precautions in order to prevent from this situation.

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Devanand uttam (2015) discussed the various aspects of industrial lighting. Sufficient and proper lighting enhance the visibility of an object, improve the performance of work, minimize the payment of loss and compensation because of accidents, and enhance the job satisfaction in the textile industry. Poor lighting in these industries can cause of

headaches, fatigue, eye strain, stress and accidents. At the same time, too much of light glare causes the problems of health and safety for workers. Both effects result in mistakes at work, low production and poor quality. This work explains the characteristics and benefits of good lighting. And it also provides the good illumination level of light for various departments from blow room to winding in textile industry. For attaining in the increased efficiency of illumination, cleaned walls should be maintained, and needs good reflector, efficient light source and ceiling.

Seyed Shamseddin Alizadeh (2015) analyzed occupational accident fatalities and injuries in male employers in Iran between 2008 and 2012. There were many permanent illness and deaths and injuries for workers because of accidents and it leads to economic losses. The purpose of this study is to examine the facts of factors that are responsible for death and injuries by applying descriptive statistics. To verify these factors chi-square test crammer's v statistics were utilized and identified that there was no any particular connection between worker's marital status and time of injury happen. Successful accident prevention can be taken by analyzing the reasons of accidents, In which in turn improves the awareness of workers and makes the workplace possible to prioritize the working area problems.

Abdul Wali Khan (2016) observed the cotton industries in Pakistan, and found that around 15 million workers are employed and they are exposed to cotton dust continuously and other hazardous materials and chemical substances and noise. It decides the generality of respiratory symptoms and examines 47 cotton industries. Questionnaire of symptoms in respiratory disease and dust level were measured among 800 workers in different areas. And from the conducted questionnaire, it is identified that respiratory symptoms are more for workers in weaving. This shows the bad ratings in occupational health and there is more level of cotton dust and endotoxin in spinning mills and therefore the workers are revealed to several hazards and hence more precautions are required in industry. Most of the complaints were from small scale weaving industries and power looms. Hence there is a need of regulations in both private factories and government to enhance the working conditions especially in the small weaving factories. Simple preventive measures for avoiding hazards are highly recommended.

Bhatt, Panchal & Rao (2016) studied the differential diagnosis of byssinosis by blood histamine and pulmonary function test. It was conducted on byssinotics of 8 workers and non-byssinotics of 16 mill workers who were exposed to cotton dust and on controls of 15 workers from dust free zone. They were surveyed for tightness of chest, breathlessness at the period of Monday to Friday. In addition to tracing these details after shift work on Mondays, the level of blood histamine, pulmonary function tests like FEV1 (Forced Expiratory Volume) indicates flow of air in both peripheral and central airways, PEFR (Peak Expiratory Flow Rate) indicates flow of air in larger airways; FEF (Forced Expiratory Flow) 25-75% indicates the flow of air in smaller airways screened, Data on Monday only were counted to assess a contrast between these two parameters.

Murlidhar & Kanhere (2017) analysed the byssinosis in Bombay textile mills. It is found that the worldwide occurrence of byssinosis in workers in the dusty section is about 40%. It rates the occurrence of byssinosis in case of Employee state insurance scheme conducts medical check-up in 55 textile mills of Bombay and identify the disease officially.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 METHODOLOGY:

Research methodology is mainly needed for the purpose of framing the research process and the designs and tools that are to be used for the project purpose. Research methodology helps to find the employees satisfaction based on safety measures training. This time research methodology is framed for the purpose of finding the level of **employee industry safety measure in R.K INDUSTRY.**

3.2. RESEARCH DESIGN:

Descriptive Research Design

Descriptive research is a study designed to depict the participants in an accurate way. More simply put, descriptive research is all about describing people who take part in the study.

3.3. SAMPLING TECHNIQUE:

Convenience sampling method

A convenience sample is one of the main types of non-probability sampling methods. A convenience sample is made up of people who are easy to reach.

3.4. SOURCES OF DATA:

Data collection is the term used to describe a process of preparing and collecting data.

- Primary Data – Questionnaire given to 150 respondents
- Secondary Data - Websites and online journals, Published reports & Review of literature from published articles.

3.5. STRUCTURE OF QUESTIONNAIRE:

Questionnaire was divided into two sections. First part was designed to know the general information about employees and the second part contained the respondent's opinions about employees opinion about the safety measure training.

- = Basic Introduction
- = Personal Details
- = Research related Questions
- = Perception Questions
- = Likert Scaling Questions
- = Suggestion Question

3.6. SAMPLE SIZE: The targeted of people is 150.

3.7. PERIOD OF STUDY: The period of study is three months.

3.8. LOCATION & TARGETED PEOPLE OF STUDY: CHENGALPAT

3.9 HYPOTHESIS:

H0- Null hypothesis (there is no significant relationship between the variables).

H1- Alternative hypothesis (there is significant relationship between the variables).

INFERENCE:

After telling the hypothesis the researcher comes out with his conclusion. The explanation of theory can also be considered as inference.

3.10. TOOLS FOR ANALYSIS:

3.10.1. Percentage analysis

Research questions are always answered with a descriptive statistic: generally, either percentage or mean. Percentage is appropriate when it is important to know how many of the participants gave a particular answer. Generally, percentage is reported when the responses have discrete categories.

3.10.2. HYPOTHESIS ANALYTICAL TOOLS(SPSS)

CHI-SQUARE TEST:

The Chi-Square test is a statistical tool, which is used to identify the percentage of responses the respondent has given. It has been used for all the questions in the questionnaire to analyses the appropriate are compared.

Chi-square (χ^2) = $\sum (O_i - E_i)^2 / E_i$

Where,

O – Refers to the Observed frequency

E - Refers to the Expected frequency

$\chi^2 = \sum (O_i - E_i)^2 / E_i$

χ^2 = Chi Square Test d-f= degree of freedom (n-1)

The objective of the chi-square test is to determine comparison of expected frequency (E) with the observed frequency (O) to determine where the difference between the two is greater than which might occur by chance.

Chi-square test question:

1. age of respondents
2. what are the major causes of accident

ANOVA:

Analysis of Variance, i.e., ANOVA in SPSS, is used for examining the differences in the mean values of the dependent variable associated with the effect of the controlled independent variables, after taking into account the influence of the uncontrolled independent variables. Anova is a statistical method that separates variance data into different components to use for additional tests.

It helps to understand how your different groups respond, with a null hypothesis for the test that means of the different group are equal.

Anova test question:

1. work experience of respondents.
2. what are the major problems while operating the machinery

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

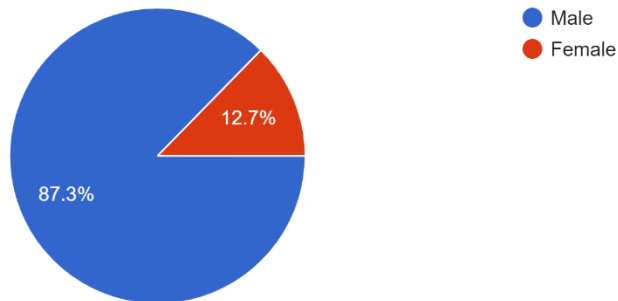
4.1 PERCENTAGE ANALYSIS:

Table 4.1.1 gender of respondents:

S.NO	GENDER	NO.OF.RESPONDENTS	PERCENTAGE
1	Male	131	87.3%
2	Female	19	12.7%
TOTAL		150	100%

Chart 4.1.1 gender of respondents:

Gender?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents gender of male respondents are 87.3% and female respondents are 12.7%.

INFERENCE:

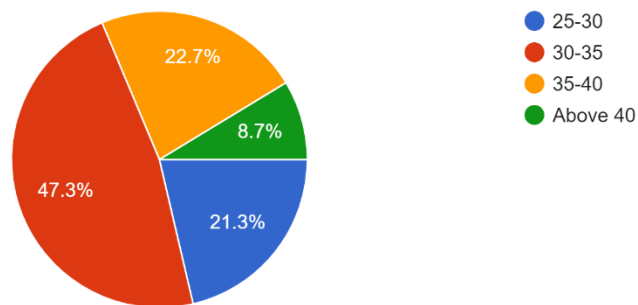
Majority (87.3%) of the respondents are male.

Table 4.1.2 Age of respondents:

S.NO	AGE	NO.OF.RESPONDENTS	PERCENTAGE
1	25-30	32	21.3%
2	30-35	71	47.3%
3	35-40	34	22.7%
4	Above 40	13	8.7%
TOTAL		150	100%

Chart 4.1.2 Age of respondents:

Age?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents 25-30 age of respondents are 21.3% between 30-35 age of respondents are 47.3% between 35-40 age of respondents are 22.7% and above 40 age of respondents are 8.7%.

INFERENCE:

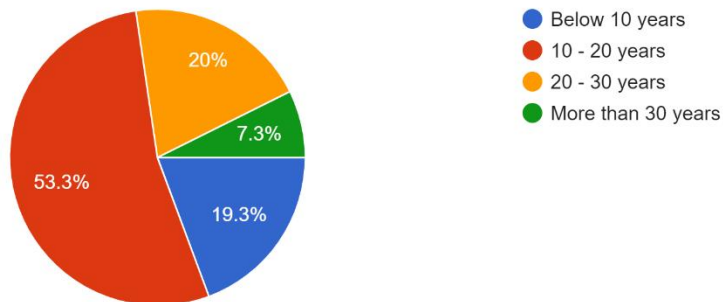
Majority (47.3%) of the respondents are 30-35 years.

Table 4.1.3 work experience of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Below 10 years	29	19.3%
2	10-20 years	80	53.3%
3	20-30 years	30	20%
4	More than 30 years	11	7.3%
TOTAL		150	100%

Chart 4.1.3 work experience of respondents:

Work experience?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 19.3% are below 10 years, 53.3% are 10-20 years, 20% are 20-30 years and 7.3% are more than 30 years.

INFERENCE:

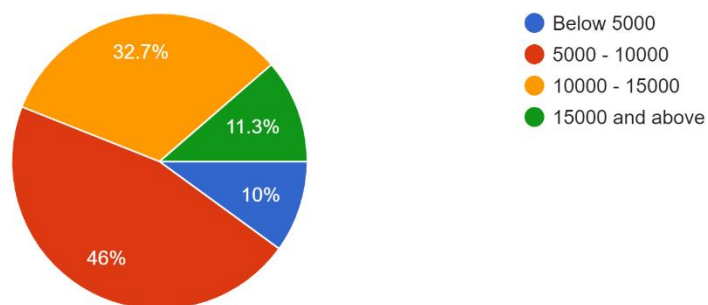
Majority (53.3%) of the respondents are 10-20 years experience.

Table 4.1.4 monthly income of respondent:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Below 5000	15	10%
2	5000-10000	69	46%
3	10000-15000	49	32.7%
4	15000 and above	17	11.3%
TOTAL		150	100%

Chart 4.1.4 monthly income of respondents:

Monthly income?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 10% is below 5000, 46% is 5000-10000, 32.7% is 10000-15000 and 11.3% are 15000 and above.

INFERENCE:

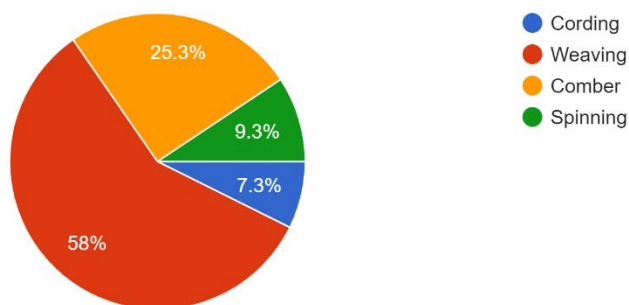
Majority (46%) of the respondents are 5000-10000 income.

Table 4.1.5: which department you are from respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Cording	11	7.3%
2	Weaving	87	58%
3	Comber	38	25.3%
4	Spinning	14	9.3%
TOTAL		150	100%

Chart 4.1.5: which department you are from respondents:

Which department you are from?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 7.3% is cording, 58% is weaving, 25.3% is comber and 9.3% is spinning.

INFERENCE:

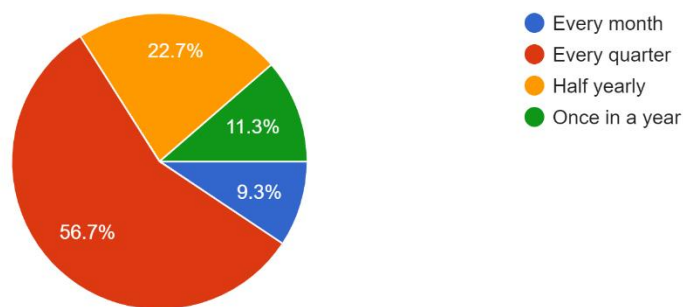
Majority (58%) of the respondents are from weaving department.

Table 4.1.6: how often the safety measures training conducted in your industry respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Every month	14	9.3%
2	Every quarter	85	56.7%
3	Half yearly	34	22.7%
4	Once in a year	17	11.3%
TOTAL		150	100%

Chart 4.1.6: how often the safety measures training conducted in your industry respondents:

How often the safety measures training conducted in your industry?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 9.3% is every month, 56.7% is every quarter, 22.7% is half yearly and 11.3% is once in a year.

INFERENCE:

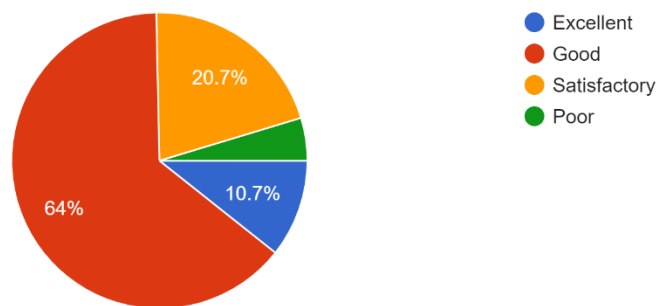
Majority (56.7%) of the respondents are every quarter training.

Table 4.1.7 how do you rate the quality and effectiveness of safety measures training conducted in your industry of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Excellent	16	10.7%
2	Good	96	64%
3	Satisfactory	31	20.7%
4	Poor	7	4.6%
TOTAL		150	100%

Chart 4.1.7 how do you rate the quality and effectiveness of safety measures training conducted in your industry of respondents:

How do you rate the quality and effectiveness of safety measures training conducted by your industry?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 10.7% is excellent, 64% is good, 20.7% is satisfactory and 4.6% is poor.

INFERENCE:

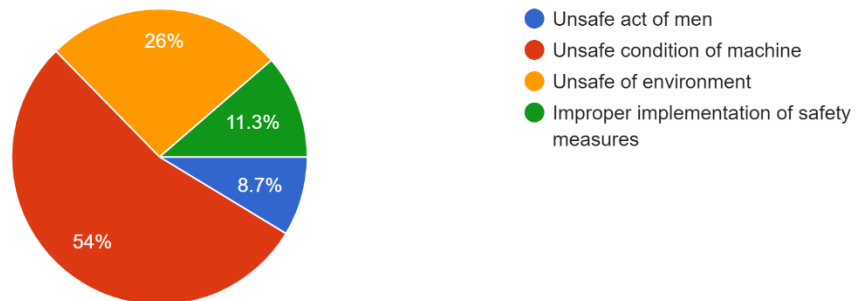
Majority (64%) of the respondents are chosen good in giving safety measures training.

Table 4.1.8 what are the major cause of accident of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Unsafe act of men	13	8.7%
2	Unsafe condition of machines	81	54%
3	Unsafe of environment	39	26%
4	Improper implementation of safety measures	17	11.3%
TOTAL		150	100%

Chart 4.1.8 what are the major cause of accident of respondents:

What are the major cause of accident?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 8.7% is unsafe act of men, 54% is unsafe condition of machines, 26% is unsafe of environment and 11.3% is improper implementation of safety measures.

INFERENCE:

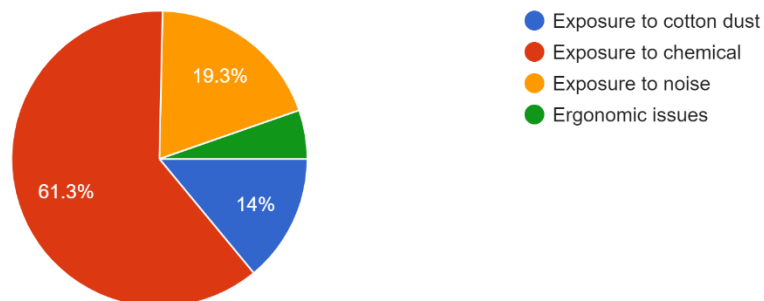
Majority (54%) of the respondents are given unsafe condition of machines.

Table 4.1.9 what are the major safety and health issue can be faced in your industry of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Exposure to cotton dust	21	14%
2	Exposure to chemicals	92	61.3%
3	Exposure to noise	29	19.3%
4	Ergonomic issue	8	5.4%
TOTAL		150	100%

Chart 4.1.9 what are the major safety and health issue can be faced in your industry of respondents:

What are the major safety and health issue can be faced in your industry?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 14% is exposure to cotton dust, 61.3% is exposure to chemicals, 19.3% is exposure to noise and 5.4% is ergonomic issue.

INFERENCE:

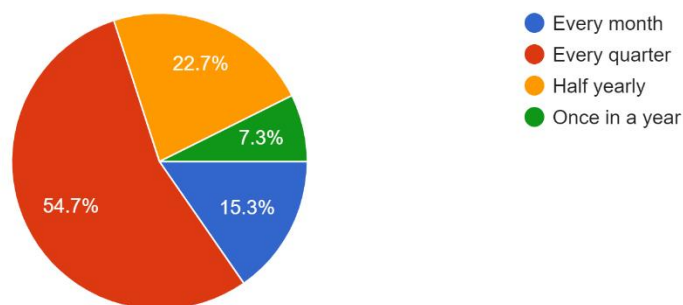
Majority (61.3) of the respondents have chosen exposure to chemicals.

Table 4.1.10 how many times which the accidents are happening of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Every month	23	15.3%
2	Every quarter	82	54.7%
3	Half yearly	34	22.7%
4	Once in a year	11	7.3%
TOTAL		150	100%

Chart 4.1.10 how many times which the accidents are happening of respondents:

How many times of accident happening?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 15.3% is every month, 54.7% is every quarter, 22.7% is half yearly, 7.3% is once in a year.

INFERENCE:

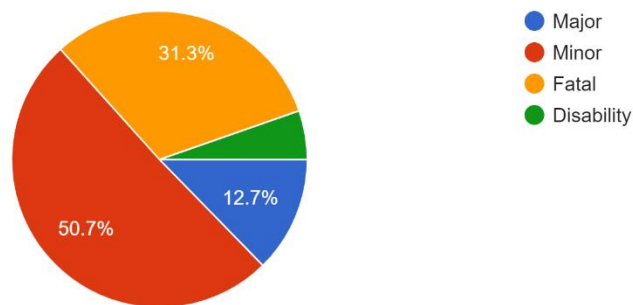
Majority (54.7%) of the respondents chosen accidents happening in every quarter.

Table 4.1.11 how severity of accidents is caused of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Major	19	12.7%
2	Minor	76	50.7%
3	Fatal	47	31.3%
4	Disability	8	5.3%
TOTAL		150	100%

Chart 4.1.11 how severity of accidents is caused of respondents:

How severity of accident caused?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 12.7% is major, 50.7% is minor, 31.3% is fatal and 5.3% is disability.

INFERENCE:

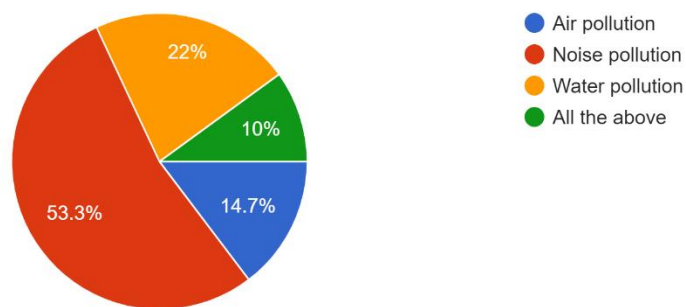
Majority (50.7%) of the respondents chosen severity of accidents is minor.

Table 4.1.12 which causes the most disturbance in your work environment of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Air pollution	22	14.7%
2	Noise pollution	80	53.3%
3	Water pollution	33	22%
4	All the above	15	10%
TOTAL		150	100%

Chart 4.1.12 which causes the most disturbance in your work environment of respondents:

Which causes the most disturbance in your work environment?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 14.7% is air pollution, 53.3% is noise pollution, 22% is water pollution and 10% is all the above.

INFERENCE:

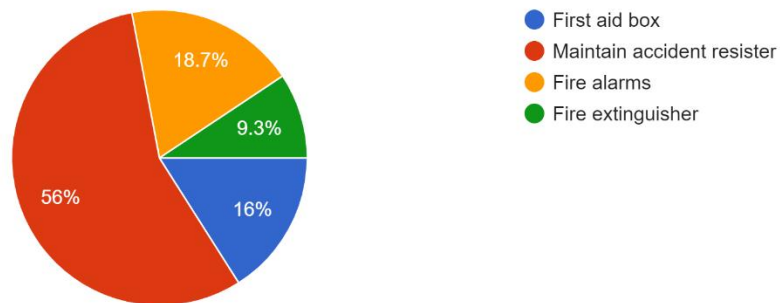
Majority (53.3%) of the respondents is chosen most disturbance in work environment in noise pollution.

Table 4.1.13 what are the possible safety precaution you have to be taken of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	First aid box	24	16%
2	Maintain accident resister	84	56%
3	Fire alarms	28	18.7%
4	Fire extinguishers	14	9.3%
TOTAL		150	100%

Chart 4.1.13 what are the possible safety precaution you have to be taken of respondents:

What are the possible safety precaution you have to be taken?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 16% is first aid box, 56% is maintain accident resister, 18.7% is fire alarms and 9.3% is fire extinguishers.

INFERENCE:

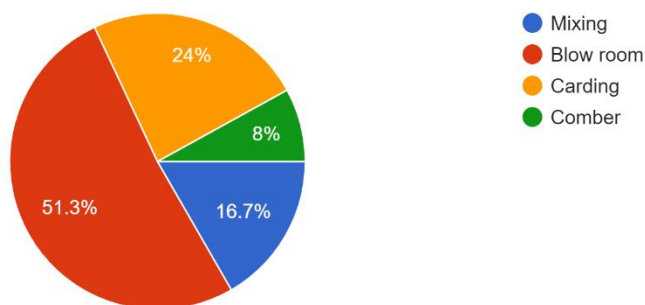
Majority (56%) of the respondents are chosen main accident resister.

Table 4.1.14 which department has faced more accidents of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	MIXING	25	16.7%
2	BLOW ROOM	77	51.3%
3	CARDING	36	24%
4	COMBER	12	8%
TOTAL		150	100%

Chart 4.1.14 which department has faced more accidents of respondents:

Which department has facing more accident?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 16.7% is mixing, 51.3% is blow room, 24% is carding and 8% is comber.

INFERENCE:

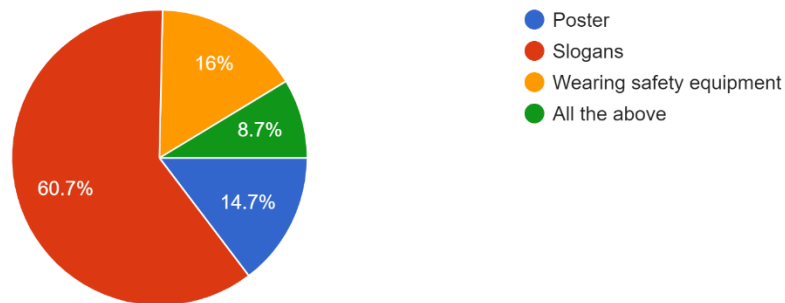
Majority (51.3%) of the respondents are chosen accidents faced in blow room.

Table 4.1.15 which method will improve the safety measure inside the organization of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Poster	22	14.7%
2	Slogans	91	60.7%
3	Wearing safety equipment	24	16%
4	All the above	13	8.7%
TOTAL		150	100%

Chart 4.1.15 which method will improve the safety measure inside the organization of respondents:

Which method will improve the safety measure inside the industry?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents 14.7% is poster, 60.7% is slogans, 16% is wearing safety equipment and 8.7% is all the above.

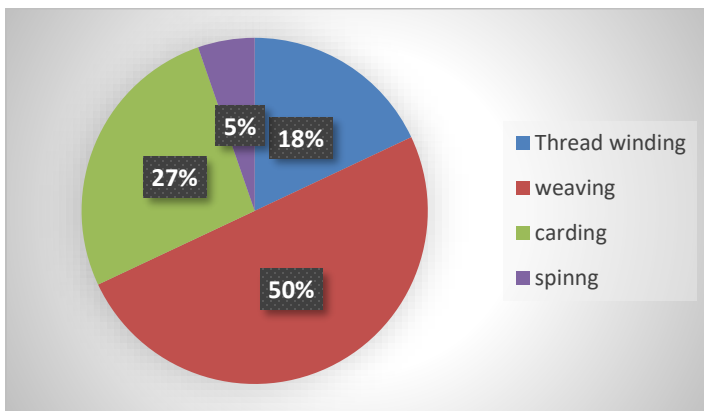
INFERENCE:

Majority (60.7%) of the respondents are chosen slogans to improve the safety measure.

Table 4.1.16 what kind of machine you are using in your section of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Thread winding machine	27	18%
2	weaving machine	75	50%
3	Carding machine	40	26.7%
4	Spinning machine	8	5.3%
TOTAL		150	100%

Chart 4.1.16 what kind of machine you are using in your section of respondents:



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 18% is thread winding, 50% is weaving, 26.7% is carding and 5.3% is spinning.

INFERENCE:

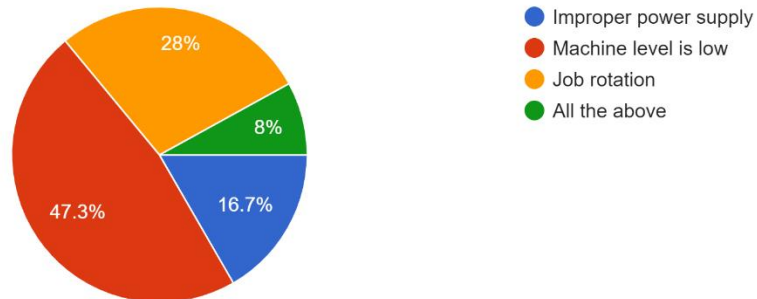
Majority (50%) of the respondents chosen weaving machine.

Table 4.1.17 what are the major problems while operating the machinery of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Improper power supply	25	16.7%
2	Machine level is low	71	47.3%
3	Job rotation	42	28%
4	All the above	12	8%
TOTAL		150	100%

Chart 4.1.17 what are the major problems while operating the machinery of respondents:

What are the major problems while operating the machinery?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 16.7% is improper power supply, 47.3% is machine level is low, 28% is job rotation and 8% is all the above.

INFERENCE:

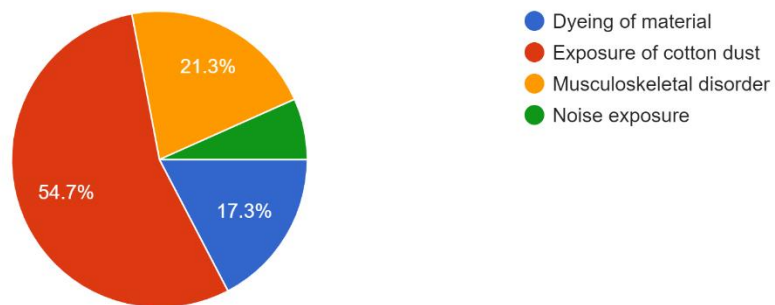
Majority (47.3%) of the respondents are chosen machine level is low.

Table 4.1.18 what are the health risks are affecting while operating the machinery of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Dyeing of materials	26	17.3%
2	Exposure to cotton dust	82	54.7%
3	Musculoskeletal disorder	32	21.3%
4	Noise exposure	10	6.7%
TOTAL		150	100%

Chart 4.1.18 what are the health risks are affecting while operating the machinery of respondents:

What are the health risks are affecting while operating machinery?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 17.3% is dyeing of materials, 54.7% is exposure to cotton dust, 21.35 is musculoskeletal disorder and 6.7% is noise exposure.

INFERENCE:

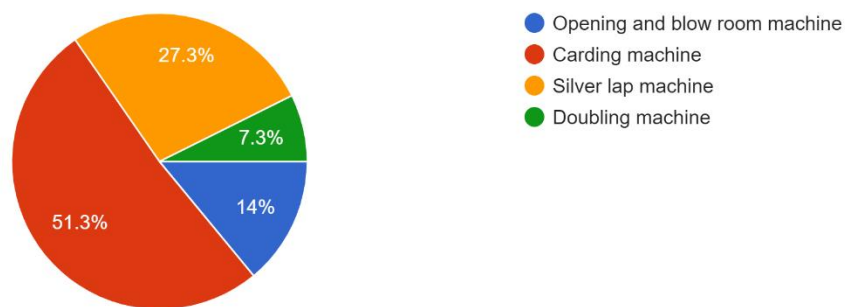
Majority (54.7%) of the respondents are chosen exposure to cotton dust.

Table 4.1.19 which type of machine is most difficult to operate of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Opening and blow room machine	21	14%
2	Carding machine	77	51.3%
3	Silver lap machine	41	27.3%
4	Doubling machine	11	7.3%
TOTAL		150	100%

Chart 4.1.19 which type of machine is most difficult to operate of respondents:

Which type of machine is most difficult to operate?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number respondents were 14% is opening and blow room machine, 51.3% is carding machine, 27.3% is silver lap machine and 7.3% is doubling machine.

INFERENCE:

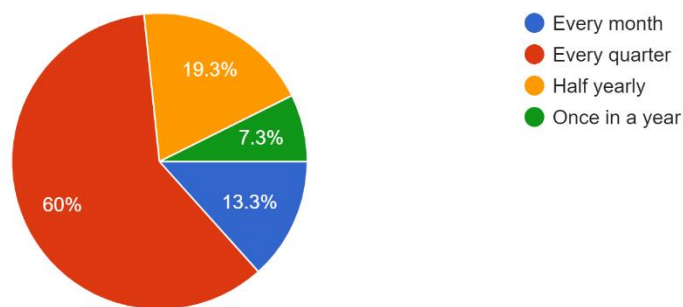
Majority (51.3%) of the respondents are chosen carding machine.

Table 4.1.20 how often the first aid training will be conducted in your industry of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Every month	20	13.3%
2	Every quarter	90	60%
3	Half yearly	29	19.3%
4	Once in a year	11	7.3%
TOTAL		150	100%

Chart 4.1.20 how often the first aid training will be conducted in your industry of respondents:

How often the first aid training will be conducted in your industry?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 13.3% is every month, 60% is every quarter, 19.3% and 7.3% is once in a year.

INFERENCE:

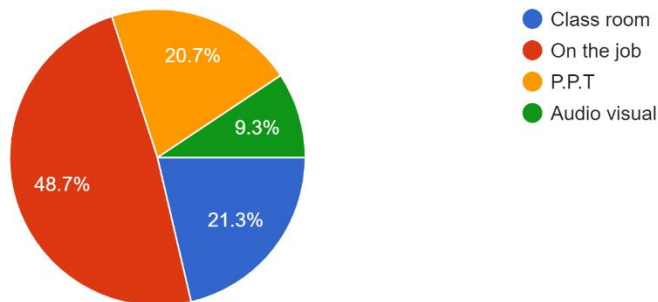
Majority (60%) of the respondents are chosen every quarter.

Table 4.1.21 how do you learn the safety and first aid training of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Class room	32	21.3%
2	On the job	73	48.7%
3	P.P.T	31	20.7%
4	Audio visual	14	9.3%
TOTAL		150	100%

Chart 4.1.21 how do you learn the safety and first aid training of respondents:

How do you learn the safety and first aid training?
150 responses



INTERPRETATION:

From the above it is interpreted that the number of respondents were 21.3% is class room, 48.7% is on the job, 20.7% is P.P.T and 9.3% is audio visual.

INFERENCE:

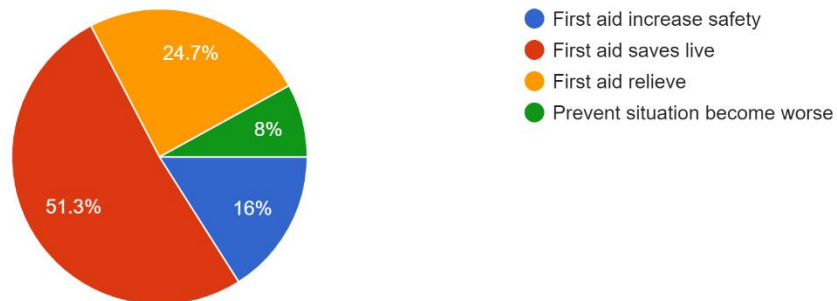
Majority (48.7%) of the respondents are chosen on the job.

Table 4.1.22 why do you think first aid training is to be important of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	First aid increases safety	24	16%
2	First aid saves live	77	51.3%
3	First aid relieves pain	37	24.7%
4	Prevents situation becomes worse	12	8%
TOTAL		150	100%

Chart 4.1.22 why do you think first aid training is to be important of respondents:

Why do you think first aid training is to be important?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 16% is first aid increases safety, 51.3% is first aid saves live, 24.7% is first aid relieves pain and 8% is prevents situation becomes worse.

INFERENCE:

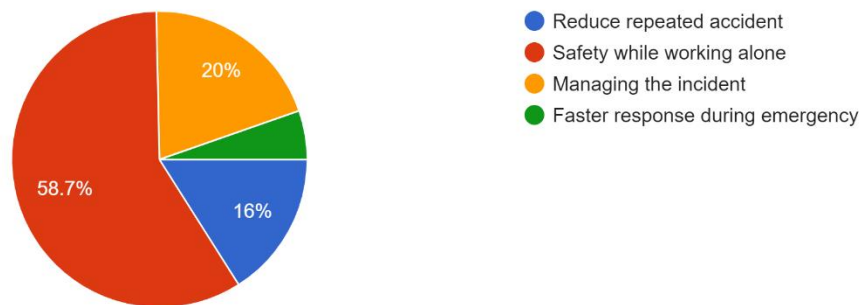
Majority (51.3%) of the respondents were chosen first aid saves live.

Table 4.1.23 what are the benefits you had in the first aid training of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PARTICULARS
1	Reduce repeated accidents	24	16%
2	Safety while working alone	88	58.7%
3	Managing the incidents	30	20%
4	Faster response during emergency	8	5.3%
TOTAL		150	100%

Chart 4.1.23 what are the benefits you had in the first aid training of respondents:

What are the benefits you had in the first aid training program?
150 responses



INTERPRETATION:

From the above table it is interpreted that the number of respondents were 16% is reduce repeated accidents, 58.7% is safety while working alone, 20% is managing accidents and 5.3% is faster response during emergency.

INFERENCE:

Majority (58.7%) of the respondents are chosen safety while working alone.

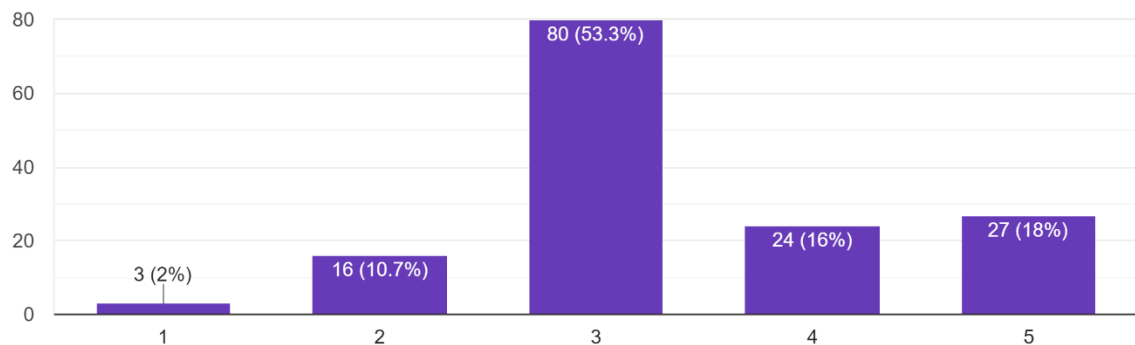
Table 4.1.24 how does this safety measure and first aid training will useful of respondents:

S.NO	PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
1	Highly satisfied	3	2%
2	satisfied	16	10.7%
3	Neutral	80	53.3%
4	dissatisfied	24	16%
5	Highly dissatisfied	27	18%
TOTAL		150	100%

Chart 4.1.24 how does this safety measure and first aid training will useful of respondents:

How does this safety measure first aid training will be useful?

150 responses



INTERPRETATION:

From the above it is interpreted that the number of respondents were 2% is 1, 10.7% is 2, 53.3% is 3, 16% is 4 and 18% is 5.

INFERENCE:

Majority (53.3%) of the respondents are chosen neutral.

STATISTICAL ANALYSIS:

4.2 CHISQUARE:

HYPOTHESIS:

H0: There is no significant difference between the age and the causes of major accidents

H1: There is significant difference between the age and the causes of major accidents

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AGE OF THE RESPONDENTS * WHAT ARE THE MAJOR CAUSES OF ACCIDENT	150	100.0%	0	0.0%	150	100.0%

AGE OF THE RESPONDENTS * WHAT ARE THE MAJOR CAUSES OF ACCIDENT Crosstabulation

			WHAT ARE THE MAJOR CAUSES OF ACCIDENT				Total
			Unsafe act of men	Unsafe condition of machine	Unsafe of environment	Improper implementation of safety measure	
AGE OF THE RESPONDENTS	25 - 30	Count	4	19	8	1	32
		% within AGE OF THE RESPONDENTS	12.5%	59.4%	25.0%	3.1%	100.0%
	30 - 35	Count	5	45	18	3	71
		% within AGE OF THE RESPONDENTS	7.0%	63.4%	25.4%	4.2%	100.0%
	35 - 40	Count	1	13	11	9	34
		% within AGE OF THE RESPONDENTS	2.9%	38.2%	32.4%	26.5%	100.0%
	Above 40	Count	3	4	2	4	13
		% within AGE OF THE RESPONDENTS	23.1%	30.8%	15.4%	30.8%	100.0%
Total	Count	13	81	39	17	150	
	% within AGE OF THE RESPONDENTS	8.7%	54.0%	26.0%	11.3%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.741 ^a	9	.002
Likelihood Ratio	25.052	9	.003
Linear-by-Linear Association	8.465	1	.004
N of Valid Cases	150		

a. 7 cells (43.8%) have expected count less than 5. The minimum expected count is 1.13.

INTERPRETATION:

Since the p value (0.002) is less than 0.05. we accept the alternate hypothesis and reject the null hypothesis. Hence there is significant between age and the cause of accidents.

4.3 ANOVA:

H0: There is no significant association between work experience of the respondents and major problems of operating the machine.

H1: There is significant association between work experience of the respondents and major problems of operating the machine.

WORK EXPERIENCE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
improper power supply	26	2.15	.834	.164	1.82	2.49	1	4
machine level is low	71	2.14	.850	.101	1.94	2.34	1	4
job rotation	41	2.10	.831	.130	1.84	2.36	1	4
all the above	12	2.33	.651	.188	1.92	2.75	2	4
Total	150	2.15	.822	.067	2.01	2.28	1	4

ANOVA

WORK EXPERIENCE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.521	3	.174	.253	.859
Within Groups	100.253	146	.687		
Total	100.773	149			

INTERPRETATION: Since the p value (0.002) is less than 0.05. we accept the alternate hypothesis and reject the null hypothesis. Hence there is significant between work experience and major problems while operating the machine.

CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS:

- Majority (87.3%) of the respondents are male.
- Majority (47.3%) of the respondents are 30-35 years.
- Majority (53.3%) of the respondents are 10-20 years experience.
- Majority (46%) of the respondents are 5000-10000 income.
- Majority (58%) of the respondents are from weaving department.
- Majority (56.7%) of the respondents are every quarter training.
- Majority (64%) of the respondents are chosen good in giving safety measures training.
- Majority (54%) of the respondents are given unsafe condition of machines.
- Majority (61.3) of the respondents have chosen exposure to chemicals.
- Majority (54.7%) of the respondents chosen accidents happening in every quarter.
- Majority (50.7%) of the respondents chosen severity of accidents is minor.
- Majority (53.3%) of the respondents is chosen most disturbance in work environment in noise pollution.
- Majority (56%) of the respondents are chosen main accident resister.
- Majority (51.3%) of the respondents are chosen accidents faced in blow room.
- Majority (60.7%) of the respondents are chosen slogans to improve the safety measure.
- Majority (50%) of the respondents chosen weaving machine.
- Majority (47.3%) of the respondents are chosen machine level is low.
- Majority (54.7%) of the respondents are chosen exposure to cotton dust.
- Majority (51.3%) of the respondents are chosen carding machine.
- Majority (60%) of the respondents are chosen every quarter.
- Majority (48.7%) of the respondents are chosen on the job.
- Majority (51.3%) of the respondents were chosen first aid saves live.
- Majority (58.7%) of the respondents are chosen safety while working alone.
- Majority (53.3%) of the respondents are chosen neutral.

5.2 SUGGESTIONS:

- The organization should provide sufficient personal equipment to employees working in all departments.
- Every fatal accident should thoroughly be enquired and given wide publicity among workers.
- The organization should arrange for the medical checkups at regular period of time.

- If the organization follows material handling principles and the machines are guarded properly there is a chance to reduce majority accidents happening inside the organization.
- Analyzing each accident and including what safety practice was violated. Management must come forward to reward the department which considerably reduced the number of accidents in addition to some financial incentive etc.

5.3 LIMITATIONS OF STUDY:

- The time period of the study is short, so detailed study was not made.
- Only certain factors are considered in the study to measure the safety measure provided inside the R.K INDUSTRY.
- Some false information might be given by the employees due to fear of their superior.

5.4 CONCLUSION:

The study on industrial safety management in R.K INDUSTRY tells that the most of the employees are dissatisfied with the safety management practiced inside the organization. The organization has to concentrate more on safety measures and can provide safety equipment like masks to improve the safety inside the organization. The safety training must be given properly and compulsorily to avoid accidents inside the organization. The first aid training must be given to both labour and supervisors who are working in various departments. They will improve the safety of the organization. The improved training method formulated has been tried at the industry. Even though its application was initially resisted by the management, slowly the management started appreciating this programme and offered full assistance. The managers from the beginning have been enthusiastic in our modified training programme. In the beginning the supervisors' showed reluctance in this training programme but later on they also found that this improved training programme improves the discipline and morale of the workers and they extended their co-operation. In fact, the supervisors' initial reluctance disappeared and the supervisors helped the workers to explain the questionnaire and induced them to answer the questionnaire in correct perspective.

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ANNEXURE-1 QUESTIONNAIRE

1.Name of respondents?

2.Gender of respondents?

a. male

b. female

3.Age of respondents?

a. 25 - 30

b. 30 – 35

c. 35 – 40

d. Above 40

4. Work experience of respondents?

a. Below 10 years

b. 10 – 20 years

c. 20 – 30 years

d. More than 30 years

5.Monthly income of respondents?

a. Below 5000

b. 5000 – 10000

c. 10000 – 15000

d. 15000 and above

6. which department you are from?

a. Cording

b. Weaving

c. Comber

d. Spinning

7. how often the safety measures training conducted in your industry?

a. Every month

b. Every quarter

c. Half yearly

d. Once in a year

8. how do you rate the quality and effectiveness of safety measures training conducted in your industry?

- a. Excellent
- b. Good
- c. Satisfactory
- d. Poor

9. what are the major cause of accidents?

- a. Unsafe act of men
- b. Unsafe condition of machines
- c. Unsafe of environment
- d. Improper implementation of safety measures

10. what are the major safety and health issue can be faced in your industry?

- a. Exposure to cotton dust
- b. Exposure to chemicals
- c. Exposure to noise
- d. Ergonomic issues

11. how many times which the accidents are happening?

- a. Every month
- b. Every quarter
- c. Half yearly
- d. Once in a year

12. how severity of accidents is caused?

- a. Major
- b. Minor
- c. Fatal
- d. Disability

13. which causes the most disturbance in your work environment?

- a. Air pollution
- b. Noise pollution
- c. Water pollution
- d. All the above

14. what are the possible safety precaution you have to be taken?

- a. First aid box
- b. maintains accident resister
- c. Fire alarms
- d. Fire extinguishers

15. which department has faced more accidents?

- a. Mixing
- b. Blow room
- c. Carding
- d. Comber

16. which method will improve the safety measure inside the organization?

- a. Poster
- b. Slogans
- c. Wearing safety equipment
- d. All the above

17. what kind of machine you are using in your section?

- a. Thread winding machine
- b. Dyeing machine
- c. Carding machine
- d. Spinning machine

18. what are the major problems while operating the machinery?

- a. Improper power supply
- b. Machine level is low
- c. Job rotation
- d. All the above

19. what are the health risks are affecting while operating the machinery?

- a. Dyeing of materials
- b. Exposure to cotton dust
- c. Musculoskeletal disorder
- d. Noise exposure

20. which type of machine is most difficult to operate?
- a. Opening and blow room machine
 - b. Carding machine
 - c. silver lap machine
 - d. Doubling machine
21. how often the first aid training will be conducted in your industry?
- a. Every month
 - b. Every quarter
 - c. Half yearly
 - d. Once in a year
22. how do you learn the safety and first aid training?
- a. Class room
 - b. On the job
 - c. P.P.T
 - d. Audio visual
23. why do you think first aid training is to be important?
- a. First aid increases safety
 - b. First aid saves live
 - c. First aid relieves pain
 - d. Prevents situation becoming worse
24. what are the benefits you had in the first aid training?
- a. Reduce repeated accidents
 - b. Safety while working alone
 - c. Managing the incidents
 - d. faster response during emergency
25. how does this safety measure and first aid training will useful.?
- a. highly satisfied
 - b. satisfied
 - c. neutral
 - d. dissatisfied
 - e. highly dissatisfied