

A STUDY ON SIGNIFICANCE OF SAFETY MANAGEMENT IN AUTOMOBILE INDUSTRY

Submitted in partial fulfillment of the requirements for the award of

Master of Business Administration

by

RANJEETH KUMAR.B

39410171



SCHOOL OF BUSINESS ADMINISTRATION

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

April - 2021

DECLARATION

I(**RANJEETH KUMAR.B**)(Reg. No.39410171) herebydeclare that the Project Report entitled “**A STUDY ON SIGNIFICANCE OF SAFETY MANAGEMENT IN AUTOMOBILE INDUSTRY** ”done by me under the guidance of **Mr.JOHN PAUL M ,MBA,MHRM,M.Phil,(Ph.D) Assistant Professor, School of management studies**(Internal Guide) is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

DATE:

PLACE: RANJEETH KUMAR.B



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" grade by NAAC I 12B Status by UGC I Approved by
AICTE Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119

www.sathyabama.ac.in

SCHOOL OF BUSINESS ADMINISTRATION

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of
(RANJEETH KUMAR.B)(Reg. No.39410171) who have done the Project work
entitled **A STUDY ON SIGNIFICANCE OF SAFETY MANAGEMENT IN
AUTOMOBILE INDUSTRY** under my supervision from January 2021 to March
2021.

Mr. JOHN PAUL M

Internal Guide

Dr. BHUVANESWARI G.

Dean – School of Business Administration

Submitted for Viva voce Examination held on _____.

Internal Examiner

External Examiner

ACKNOWLEDGEMENT

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.

I convey my sincere thanks to **Dr. BHUVANESWARI G.**, Dean, School of Business Administration and **Dr. PALANI A.**, Head, School of Business Administration for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **Mr. JOHN PAUL M** Assistant Professor, School of management studies for his/her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the School of Business Administration who were helpful in many ways for the completion of the project.

RANJEETH KUMAR.B

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO
	ABSTRACT	i
	LIST OF TABLES	ii
	LIST OF CHARTS	iv
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Industry Profile	2
	1.3 Need for the Study	10
	1.4 Scope and Significance of Study	10
	1.5 Objectives of the Study	10
	1.6 Limitations of the Study	11
2	REVIEW OF LITERATURE	12
3	RESEARCH METHODOLOGY	19
	3.1 Research Design	19
	3.2 Sampling Technique	19
	3.3 Sources of Data	19
	3.4 Structure of Questionnaire	19
	3.5 Sample Size	19
	3.6 Period of Study	19
	3.7 Analytical Tools	20
4	DATA ANALYSIS AND INTERPRETATION	21
	4.1 Percentage Analysis	21
	4.2 Anova Analysis	41
	4.3 Chi square Analysis	51
5	FINDINGS, SUGGESTIONS AND CONCLUSION	52
	5.1 Findings of the Study	52
	5.2 Suggestions	53

	5.3 Conclusion	54
	REFERENCES	59
	APPENDIX – I (Questionnaire)	55
	APPENDIX – II (Article)	61

ABSTRACT

The primary objective of this Study on significance of Safety management system towards employee motivation in automobile industry. The secondary objective of this To study the employees opinion towards safety management system in automobile industries .To identify the effectiveness of Safety management system towards the employee motivation. To evaluate the outcome of the employees after the Safety management system in automobile industry and to know the level of satisfaction towards the Safety management procedure of the company. The research type used in this study is descriptive in nature, which helped in developing the concept and in decision making. Primary data is used for analysis, which is gathered using questionnaire. Secondary data is also used for the study, which is gather

LIST OF TABLE

TABLE NO	TITLES	Page no
4.1.1	TABLE SHOWING AGE	21
4.1.2	TABLE SHOWING EXPERIENCE	22
4.1.3	TABLE SHOWING SAFETY MEASURES ADOPTED	23
4.1.4	TABLE SHOWING COMMUNICATINGHEALTH &SAFETY	24
4.1.5	TABLE SHOWING PROVIDING MEDICALFACILITY	25
4.1.6	TABLE SHOWING HEALTH & SAFETY TRAINING	26
4.1.7	TABLE SHOWING TRAINING OFFERED WISE CALCULATION	27
4.1.8	TABLE SHOWING PROVIDING DRINKING WATER IN WORK PLACE	28
4.1.9	TABLE SHOWING GETTING STRESSED	29
4.1.10	TABLE SHOWING PROVIDING HEALTH CHEACK UP	30
4.1.11	TABLE SHOWING FREQUENCE MACHINARIES PROPERLY	31
4.1.12	TABLE SHOWING ACCIDENTS HAPPENS	32
4.1.13	TABLE SHOWING PROVIDING SAFETY REQUIREMENTS	33
4.1.14	TABLE SHOWING SAFETY COMMITTTEE FORMED	34
4.1.15	TABLE SHOWING SAFETY INSPECTION ARE HELD	35
4.1.16	TABLE SHOWING SATISFATION OF WORKERS SAFETY	36

4.1.17	TABLE SHOWING ROLE MANAGEMENT IMPLEMENTATION HEALTH & SAFETY	37
4.1.18	TABLE SHOWING FIRST AID CONTENT	38
4.1.19	TABLE SHOWING EFFETIVE DISCIPLINARY PRODUCE HEALTH AND SAFETY	39
4.1.20	TABLE SHOWING SATISFACTION ON WORK TEMPERATURE	40
4.1.21	TABLE SHOWING ENOUGH WORKPLACE	41
4.1.22	TABLE SHOWING LATRINES AND URINALS CLEANED MAITAINED PROPERLY	42
4.1.23	TABLE SHOWING FACTORS MOTIVATE BETTER SAFETY MANAGEMENT SYSTEM	43

LIST OF CHARTS

TABLE NO	TITLES	PAGE NO.
4.1.1	CHART SHOWING AGE	22
4.1.2	CHART SHOWING EXPERIENCE	23
4.1.3	CHART SHOWING SAFETY MEASURES ADOPTED	24
4.1.4	CHART SHOWING COMMUNICATINGHEALTH &SAFETY	25
4.1.5	CHART SHOWING PROVIDING MEDICALFACILITY	26
4.1.6	CHART SHOWING HEALTH & SAFETY TRAINING	27
4.1.7	CHART SHOWING TRAINING OFFERED WISE CALCULATION	28
4.1.8	CHART SHOWING PROVIDING DRINKING WATER IN WORK PLACE	29
4.1.9	CHART SHOWING GETTING STRESSED	30
4.1.10	CHART SHOWING PROVIDING HEALTH CHEACK UP	31
4.1.11	CHART SHOWING FREQUENCE MACHINARIES PROPERLY	32
4.1.12	CHART SHOWING ACCIDENTS HAPPENS	33
4.1.13	CHART SHOWING PROVIDING SAFETY REQUIREMENTS	34
4.1.14	CHART SHOWING SAFETY COMMITTEE FORMED	35

4.1.15	CHART SHOWING SAFETY INSPECTION ARE HELD	36
4.1.16	CHART SHOWING SATISFATION OF WORKERS SAFETY	37
4.1.17	CHART SHOWING ROLE MANAGEMENT IMPLEMENTATION HEALTH & SAFETY	38
4.1.18	CHART SHOWING FIRST AID CONTENT	39
4.1.19	CHART SHOWING EFFETIVE DISCIPLINARY PRODUCE HEALTH AND SAFETY	40
4.1.20	CHART SHOWING SATISFACTION ON WORK TEMPERATURE	41
4.1.21	CHART SHOWING ENOUGH WORKPLACE	42
4.1.22	CHART SHOWING LATRINES AND URINALS CLEANED MAITAINED PROPERLY	43
4.1.23	CHART SHOWING FACTORS MOTIVATE BETTER SAFETY MANAGEMENT SYSTEM	44

CHAPTER 1

INTRODUCTION

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

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

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

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

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

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

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

Occupational health issues are often given less attention than occupational safety issues because the former are generally more difficult to confront.

However, when health is addressed, so is safety, because a healthy workplace is by definition

also a safe workplace. The converse, though, may not be true - a so-called safe workplace is

not necessarily also a healthy workplace. The important point is that issues of both health and

safety must be addressed in every workplace.

1.2 Industry Profile



AUTOMOTIVE INDUSTRIES

Redefining standards in manufacturing

Hinduja Foundries meets the nation's requirement for hi-precision castings at its three advanced manufacturing centers that compare to the best facilities in the world. The centers that are located in Ennore and SIPCOT in Chennai, Tamil Nadu and at Hyderabad boast of over 200 engineering years of experience in foundry systems. Hinduja Foundries first unit was set up at Ennore in 1961. Today the unit boasts of a capacity of 60,000 MT and is equipped with high pressure lines and Gustav Zimmermann and Fritz Hansberg machines. The semi-mechanised, no bake moulding line is from IMF, Italy

The latest and most advanced facility at SIPCOT was established in the year 2007. The facilities are manned by an experienced and committed team with expertise in development, production and delivery of the most complex foundry systems. The unit boasts of an Air impulse moulding line and Kunkel Wagner machines. The capacity of the centre stands at an impressive 72,000 MT

- Metallurgical Microscope with projection facility, photography attachment, incorporated with Micro hardness testing.
- Testing facility for Raw sand like Sieve analysis, Specific Surface area meter, Continuous Clay washer.
- BCIRA - Hot Distortion Tester.
- Dilatometer.
- Gas Pressure Determinator.
- Lustrous Carbon Determinator.

India's largest foundry business group

- In the year 1959 in the city of Madras in South India, British Leyland established an enterprise for the manufacture of automobile castings. The jobbing foundry commenced production in the year 1961 and took the first step to drive the nation ahead on the road to progress.
- Urged by a keenness to prove its credentials the enterprise shaped its castings with great precision. In doing so, the Company shaped its own success.
- Today, Hinduja Foundries is India's largest foundry group with the capacity to produce cylinder block and head ranging from 25 kgs to 500 kgs.
- From castings for automobiles and tractors to industrial engines, construction equipment and power generation equipment, Hinduja Foundries meets the stringent requirement of diverse segments. It even caters to the exceptionally high standards of Defence applications.
- Hinduja Foundries hones its skills by enhancing its developmental capabilities with the most complex castings. The indigenous expertise that drives the organization enables it to keep pace with the constantly changing requirements of the market. At its advanced facilities for tool design and manufacture Hinduja Foundries produces cast iron cylinder blocks, cast iron cylinder heads and cast iron transmission housings. It has won much-coveted quality certifications including ISO 9000, QS 9000 and ISO 14001 certifications that endorse its capabilities.

Hinduja Foundries has attempted to equipping itself with the best in world technology. The organization relies on robotic manufacturing of cores with the unique Robo Core Line of Loramendi and an automated fettling line of MAUS make. The path-breaking technology used enables the organisation to seize growing market demands in India and abroad with both speed and precision. Apart from the Robo Core Line, the manufacturing centers are equipped with:

- Controlled Charging systems
- Induction melting furnaces
- Automated sand plants and controls
- 10 T press pour with Joy stick control
- HPML impact squeeze machines

- Manipulator pick ups at knockout
- Fettling facilities
- Advance Engineering Center equipped with
- Casting & Tooling Design
- Robust Process Development
- Rapid Proto-Typing
- Casting Simulations
- Appropriate Engineering

RAW MATERIALS USED

- Cylinder Blocks
- Cylinder Heads
- Housing
- SG Grey Iron
- **Cylinder Blocks:**



A

cylinder

block is an integrated structure comprising the cylinder(s) of a reciprocating engine and often some or all of their associated surrounding structures (coolant passages, intake and exhaust passages and ports, and crankcase). The term **engine block** is often used synonymously with "cylinder block" (although technically distinctions can be made between **en bloc** cylinders as a discrete unit

versus engine block designs with yet more integration that comprise the crankcase as well).

In the basic terms of machine elements, the various main parts of an engine (such as cylinder(s), cylinder head(s), coolant passages, intake and exhaust passages, and crankcase) are conceptually distinct, and these items can all be made as discrete pieces that are bolted together. Such construction was very widespread in the early decades of the commercialization of internal combustion engines (1880s to 1920s), and it is still sometimes used in certain applications where it remains advantageous (especially very large engines, but also some small engines). However, it is no longer the normal way of building most petrol engines and diesel engines, because for any given engine configuration, there are more efficient ways of designing for manufacture (and also for maintenance and repair). These generally involve integrating multiple machine elements into one discrete part, and doing the making (such as casting, stamping, and machining) for multiple elements in one setup with one machine coordinate system (of a machine tool or other piece of manufacturing machinery). This yields lower unit cost of production (and/or maintenance and repair).

Cylinder Heads:



In an internal combustion engine, the **cylinder head** (often informally abbreviated to just **head**) sits above the cylinders on top of the cylinder block. It closes in the top of the cylinder, forming the combustion chamber. This joint is sealed by a head gasket. In most engines, the head also provides space for the passages that feed air and fuel to the cylinder, and that allow the exhaust to escape. The head can also be a place to mount the valves, spark plugs, and fuel injectors.

Housing: (Engine Pipe)



An **engine house** is a building or other structure that holds one or more engines. It is often practical to bring engines together for common maintenance, as when train locomotives are brought together.

Types of engine houses include:

- motive power depots (MPD), where locomotives are stored and maintained
- Buildings that housed a steam engine on a mine. Many of these have survived in Cornwall, England, for example at Crown Mines
- Buildings that housed a pumping engine for an atmospheric railway
- House-built engines, where the engine *is* the house. A house-built engine is a large beam engine where the engine house itself forms the frame of the engine.

SG Grey Iron:



Gray iron, or **grey cast iron**, is a type of cast iron that has a graphitic microstructure. It is named after the gray color of the fracture it forms, which is due to the presence of graphite. It is the most common cast iron and the most widely used cast material based on weight.

It is used for housings where the stiffness of the component is more important than its tensile strength, such as internal combustion engine cylinder blocks, pump housings, valve bodies, electrical boxes, and decorative castings. Grey cast iron's high thermal conductivity and specific heat capacity are often exploited to make cast iron cookware and disc brake rotors.

40% Ashok Leyland

60% Customers:

TRACTORS



Construction Equipments



Engine



1.3Need to study

- The provision of a safe place of employment.
- The provision of safe means of access to work.
- The provision of safe systems of working.
- The provision of adequate equipment, materials and clothing to enable employees to carry out their work safely.
- The provision of competent co-workers.
- A duty of care to ensure that employees are not subjected to any unreasonable risks in the workplace.

1.5 OBJECTIVES OF THE STUDY

Study on significance of A study of Significant in safety management in automobile industry

1.5.1 SECONDARY OBJECTIVES

- ▶ To examine the use of an employee perception survey as a predictive tool of successful safety results
- ▶ To identify factors that, when present, suggest a high level of risk-control effectiveness;
- ▶ To examine the use of an employee perception survey as an alternative measure of an effective and successful safety program; and
- ▶ To identify general factors that influence employee perceptions of a company's supervisory/management safety process.
- ▶ To study the safety management
- ▶ To improve the current safety management system
- ▶ To know whether the employees are satisfied with the current safety management and how they are benefited.
- ▶ To improvise the current problems in the current safety procedure

- ▶ To know the process of reporting mechanism of safety of employee
- ▶ To know the safety of the employee.

1.6 LIMITATIONS OF THE STUDY

- The sample size selected by the researcher is limited.
- The study is applicable only to Hindhuja foundries Ltd, Ennore, Chennai.
- Therefore the results cannot be generalized for the whole industry.
- The time factor in collecting the responses as in conducting the research study would be limiting factor.

The respondents were unable or unwilling to give response.

CHAPTER 2

Review of literature

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

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

3) Conor CO Reynolds; M Anne Harris; Peter A Cripton; Meghan Winters (2009),

Bicycling has the potential to improve fitness. Understanding ways of making bicycling safer is important to improving population health. We reviewed studies of the impact of transportation infrastructure on bicyclist safety. To assess safety, studies examining the following outcomes were included: injuries; injury severity;

and crashes. Results to date suggest that sidewalks and multi-use trails pose the highest risk, major roads are more hazardous than minor roads, and the presence of bicycle facilities (e.g. on-road bike routes, on-road marked bike lanes, and off-road bike paths) was associated with the 26 lowest risk. Street lighting, paved surfaces, and low-angled grades are additional factors that appear to improve cyclist safety.

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

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

6) David E. Cantor (2008), The purpose of this paper was to review the literature and call for additional research into the human, operational, and regulatory issues that contribute to workplace safety in the supply chain. This paper identifies several potential research opportunities that can increase awareness of the importance of improving a firm's workplace safety practices. This paper identifies

108 articles which informs, how the logistics and transportation safety has evolved. The paper identifies 14 future research opportunities within the workplace safety in the supply chain, that have been identified can have a positive effect on practitioners confronted with safety issues.

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

8) Shouji Nagashima; Yasushi Suwazono; Yasushi Okubo; Mirei Uetani (2007), The aim was to clarify the influence of working hours on both mental and physical symptoms of fatigue and use the data obtained to determine permissible working hours. The survey of day-shift male workers, using the Self-Rating Depression Scale (SDS) and Cumulative Fatigue Symptoms Index (CFSI). A total of 715 workers participated. In the group working 260–279 h/month, the odds ratios for SDS and 'irritability' and 'chronic tiredness' of the CFSI were increased. In the group working 280 h/month, the odds ratios on CFSI for 'general fatigue', 'physical disorders', 'anxiety' and 'chronic tiredness' were likewise increased. The research clarified that working hours should be <260 h/month in order to minimize fatigue symptoms in male day workers.

9) L Ala-Mursula; J Vahtera; A Kouvonen; A Vaananen; A Linna (2006), The associations of working hours (paid, domestic, commuting, and total) with sickness, absence, and to examine whether these associations vary according to the level of employee control over daily working hours. The study among 25,703 full-time public sector workers in 10 towns in Finland. Long domestic and total

working hours were associated with higher rates of medically certified sickness absences among both genders. Low control over daily working hours predicted medically certified sickness absences for both the women and men. In combinations, high control over working hours reduced the 28 adverse associations of long domestic and total working hours with medically certified absences. Employee control over daily working hours may protect health and help workers successfully combine a full-time job with the demands of domestic work.

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

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

12) N. Haworth; C. Tingvall & N. Kowadlo (2000), In response to an increasing awareness of the role of work-related driving in crashes and the related costs, many private and government organisations have developed programs to improve

fleet safety. The purpose of this project is to investigate the potential to introduce road safety based initiatives in the corporate environment. From the review, that the fleet safety initiatives which have potential to be effective are, Selecting safer vehicles, Some particular driver training and education programs, Incentives, Company safety programs. It is assumed that the degree of influence is likely to decrease as the type of vehicle moves from the fleet towards the private end of the continuum.

13) Graves carol gevecker; Matanoski genevieve m; Tardiff robert g (2000), Carbonless copy paper (CCP), introduced in 1954. Its safety to workers who handle large amounts of CCP has been addressed in numerous studies and reports. This review encompasses the world's literature on CCP and provides a weight-of-evidence analysis of the safety of CCP to workers in the United States. Since 1987, has produced neither primary skin irritation nor skin sensitization under normal conditions of manufacture and use. Finally, very few published complaints have come from the manufacturing sector where the closest and most voluminous contact occurs. Based on the weight of the evidence, NIOSH is anticipated to conclude that CCP is not a hazard to workers and has only a small possibility of producing mild and transient skin irritation.

14) Karen J.M. Niven (2000), A literature review was described which aimed to evaluate economic evaluations of health and safety interventions in healthcare. Problems were identified with valuing benefits in health and safety because they frequently take many years to emerge and are difficult to measure. Understanding of economic techniques within the health and safety professions was limited, resulting in wide-ranging assumptions being made as to the positive economic impact of health and safety interventions. Healthcare managers, health economists, and health and safety professionals have not traditionally worked together and have inherent misunderstandings of each other roles. The review concludes that the aim of future research should be to assist the National Health Service (NHS) to make valid decisions about health and safety investment and risk control methods.

15) A Spurgeon; J M Harrington; C L Cooper (1997), The European Community Directive on Working Time, which should have been implemented in member states of the European Community by November 1996. This paper reviews the current evidence relating to the potential effects on health and performance of extensions to the normal working day. Research to date has been restricted to a limited range of health outcomes--namely, mental health and cardiovascular disorders. Other potential effects 30 which are normally associated with stress--for example, gastrointestinal disorders, musculoskeletal disorders, and problems associated with depression of the immune system, have received little attention. It is concluded that there is currently sufficient evidence to raise concerns about the risks to health and safety of long working hours.

16) Simon Chapple and Tracy Mears (1996), Most OECD countries rely on a mixture of market forces, tort liability, compulsory insurance and government regulation to deal with workplace safety and health issues. There are also other non-efficiency reasons for government involvement in workplace safety and health. However, while markets may not be efficient, government intervention can fail to make any improvement and/or not satisfy cost-benefit criteria. While the empirical evidence is not clear cut, the balance of the evidence suggests that wages may include some consideration for health and safety risks. Evidence also suggests that workers' compensation systems increase the frequency and duration of claims for non-fatal injuries, but may decrease the number of fatal injuries.

17) Peter Hasle and Hans Jorgen Limborg (1995), The scientific literature regarding preventive occupational Health and Safety Activities in Small Enterprises has been reviewed in order to identify effective preventive approaches and to develop a future research strategy. There is a lack of evaluation of intervention studies, both in terms of effect and practical applicability. However, there is sufficiently strong evidence to conclude that workers of small enterprises are subject to higher risks than the larger ones, and that small enterprises have difficulties in controlling risk. The most effective preventive approaches seem to be simple and low cost solutions, disseminated through personal contact. It is important to develop future intervention research strategies, which study the complete intervention system of the small enterprises.

18) International Council on Nanotechnology, Rice University, The report, "Current Knowledge and Practices regarding Environmental Health and Safety in the Nanotechnology Workplace", offers a review and analysis of existing efforts to develop "best practices." This report finds that efforts to catalogue workplace practices have not systematically documented current environment, health and safety practices in a variety of 31 workplace settings and geographies. Moreover, it finds that some existing documents are not publicly available.

19) Maynard, Andrew D, Article from newsletter by Andrew Maynard summarizing the current level of development and government investment in nanotechnology research and development, how nanotechnology presents a potential challenge to conventional approaches to understanding health hazards in the workplace, and how the United States National Institute of Occupational Safety and Health is working to address current and potential adverse health impacts in the workplace from nanotechnology.

20) Scandinavian Journal of Work, Environment, and Health, This article seeks to address a number of important questions concerning the potential health and workplace safety risks raised by the manufacturing, handling, and distributing of engineered neno particles. The article addresses the following questions; (1) the hazards classification of engineered neno particles, (2) exposure metrics, (3) the actual exposures workers may have to different engineered neno particles in the workplace, (4) the limits of engineering controls and personal protective equipment in protecting workers in regard to engineered neno particles, (5) the kind of surveillance programs that should be put in place to protect workers, (6) whether exposure registers should be established, and (7)

CHAPTER 3

3.1 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

- Research design is the specification of the method and procedure for acquiring the information needed to solve the problem.
- The research design followed for this research study is descriptive research design where we find a solution to an existing problem. The problem of this study is to find the Significant of Safety Management
- The research design of this study considering its objectives, scope & coverage was exploratory as well as descriptive in nature

3.2 Sources of data

The two sources of data collection are namely primary & secondary

3.2.1 Primary Data

Primary data are collected through questionnaire

3.2.2 Secondary Data

Secondary data are collected from books and internet

3.3 SAMPLE SIZE

A sample of 150 respondents was taken into consideration for my study and the data was collected

3.4 STRUCTURE OF QUESTIONS

A comprehensive questionnaire covering all aspects of the organizational function was drawn and used in this study. The questionnaire comprised multiple choices and closed ended questions

3.5 ANALYTICAL TOOLS :

Techniques are used to obtain findings and arrange information in logical sequence from the raw data collected. After the tabulation of data the tools provide a scientific and mathematical solutions to complex problems. The present study uses the following statistical tools for analysing the collected data.

1. percentage
2. anova
3. Chi-square

3.6 PERCENTAGE ANALYSIS

Percentage analysis shows that entire population on terms of percentage. It reveals the number of belonging in the particular category of the number of people preferring a particular things in terms of percentage. In this study, the number of people who responded in a particular manner is interpreted in forms of percentage. Each table has been calculated on the basis of percentage

CHAPTER-4

4.1 DATA ANALYSIS AND INTERPRETATION

4.1 PERCENTAGE ANALYSIS

Percentage analysis shows that entire population on terms of percentage. It reveals the number of belonging in the particular category of the number of people preferring a particular things in terms of percentage. In this study, the number of people who responded in a particular manner is interpreted in forms of percentage. Each table has been calculated on the basis of percentage

Table 4.1.1: AGE of the respondents

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
BELOW 25	100	66.7%
26 TO 30	24	16%
31 TO 35	10	6.7%
36 TO 40	8	5.3%
ABOVE 40	8	5.3%
TOTAL	150	100%

Source: Primary Data

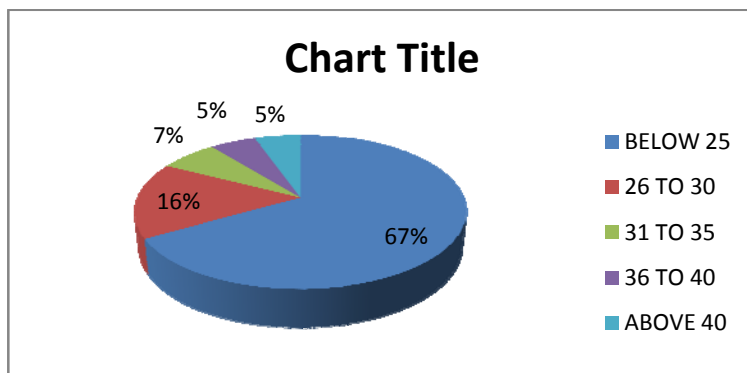


Chart 4.1.1 Age of the respondents

INTERPRETATION:

From the above table is interpreted that the number of respondents below 25 is 66.7%, 26-30 is 16%, 31-35 is 6.7%, 36-40 is 5.3% and Above 40 is 5.3%.

Inference :

Majority of (66.7%) respondents are below 25.

Table 4.1.2 Experience (in years)

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
BELOW 5	88	59.1%
06 TO 10	30	20.1%
11 TO 15	14	9.4%
16 TO 20	9	6%
ABOVE 20	8	5.4%
TOTAL	150	100%

Source : Primary Data

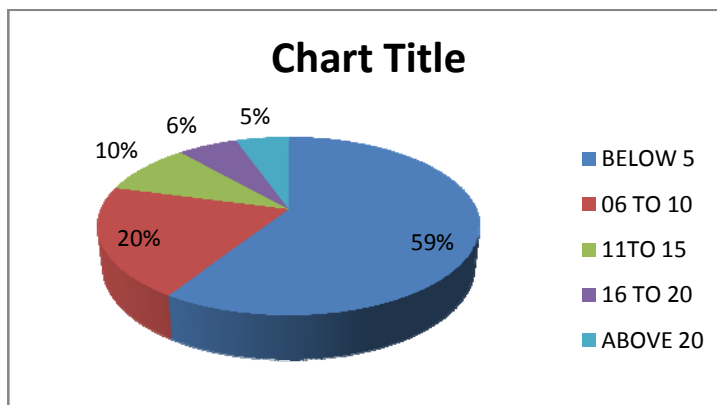


Chart 4.1.2 Experience (in years)

INTERPRETATION:

From the above table is interpreted that the number of respondents Of Work Experience is Below 5 is 59.1% 6-10 is 20% 11-15 is 9.4% 16-20 is 6% and Above 20 is 5.4%

Inference :

The majority of (59.1%) respondents is Below 5 years of experience.

Table 4.1.3 Are you aware of the health and safety measures adopted in the company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES	128	85.3%
NO	22	14.7%
TOTAL	150	100%

Source: primary Data

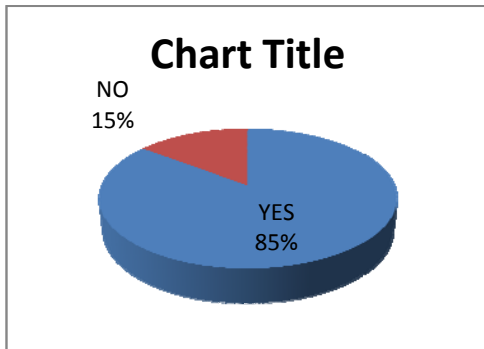


Chart 4.1.3 Are you aware of the health and safety measures adopted in the company

INTERPRETATION :

From the above table is interpreted that the number of respondents are Yes is 85.3% and No is 15%

Inference :

The majority of (85.3%) respondents is YES

Table 4.1.4. Do you have effective arrangements for communicating health and safety matters?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES	128	85.9%
NO	21	14.1%
TOTAL	149	100%

Source : Primary Data

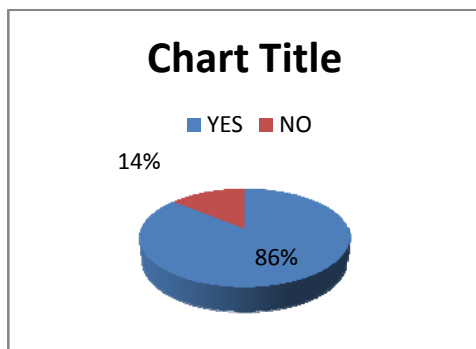


Chart 4.1. Do you have effective arrangements for communicating health and safety matters

INTERPRETATION:

From the above table is interpreted that the number of respondents are Yes is 85.3% and No is 15%

Inference:

The majority of (85.3%) respondents is YES

Table4.1.5 Does the company provide medical facility to the workers?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES	127	84.7%
NO	23	15.3%
TOTAL	150	100%

Source : Primary Data

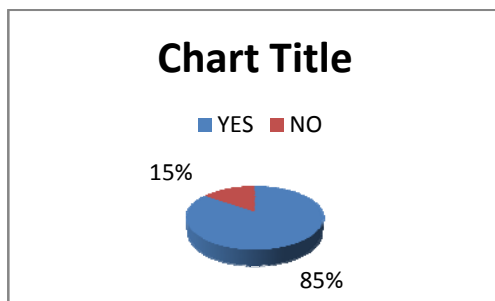


Chart 4.1.5. Does the company provide medical facility to the workers

INTERPRETATION:

From the above table is interpreted that the number of respondents are Yes is 84.7% and No is 15%

Inference:

The majority of (85%) respondents are YES

Table 4.1.6 Have you attended any health and safety training in your company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES	125	83.9%
NO	24	16.1%
TOTAL	149	100%

Source : Primary Data

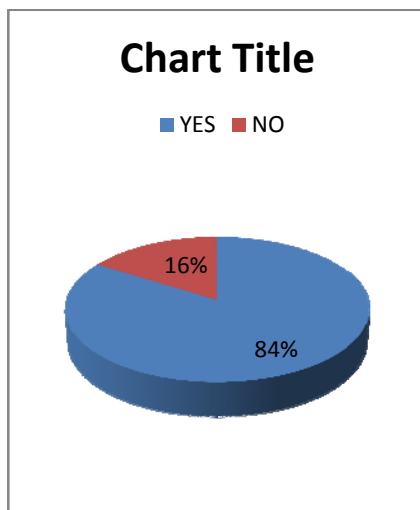


Chart 4.1.6 Have you attended any health and safety training in your company

INTERPRETATION:

From the above table is interpreted that the number of respondents are Yes is 84% and No is 16%

Inference:

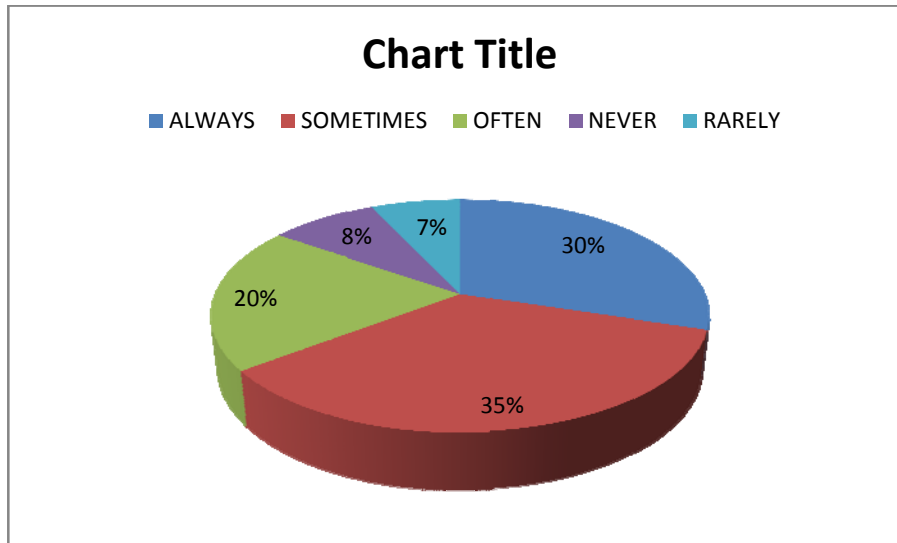
he majority of (84%) respondents Is YES.

Table 4.1.7. How frequent training is offered in the company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
ONCE IN 5 YEAR	61	40.7%
ONCE IN 3 YEAR	26	17.3%
YEARLY ONCE	41	27.3%
MONTHLY	12	8%

RARELY	10	6.7%
TOTAOL	150	100%

Source: Primary Data



Chat 4.1.7 How frequent training is offered in the company

INTERPRETATION:

Form the above table is interpreted that the number of respondents is Once in 5years is 41% Once in 3years 17% Yearly once is 27% Monthly is8% and Rarely is 6.7%.

Inference :

The majority of (41%) respondents are Once in 5years.

Table 4.1.8 Kindly specfy level of satisfaction on providing drinking water facility at work place?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
HIGHLY SATISFIED	84	56%
SATISFIED	23	15.3%
NEUTRAL	25	16.7%
DIS SATISFIED	11	7.3%
HIGHLY DIS SATISFIED	7	4.7%
TOTAOL	150	100%

Source : Primary Data

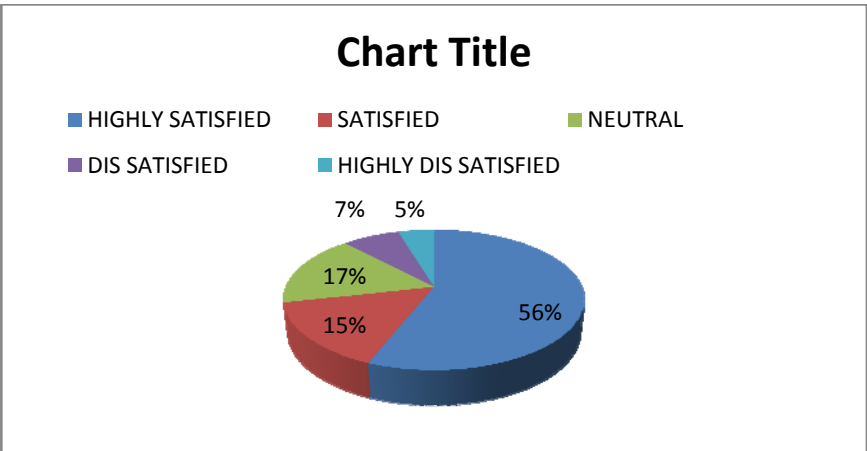


Chart 4.1.8 Kindly specify level of satisfaction on providing drinking water facility at work place

INTERPRETATION:

From the above table is interpreted that the number of respondents are Highly satisfied is 56%, Satisfied is 15%, Neutral is 17% Dissatisfied is 7.3% and Highly Dissatisfied is 5%

Inference:

The majority of 56% respondents are Highly Satisfied.

Table 4.1.9 Kindly specify the frequency of getting work stress in your job?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
ALWAYS	44	29.7%
SOMETIMES	44	29.7%
OFTEN	29	19.6%
RARELY	24	16.2%
NOT AT ALL	7	4.7%
TOTAL	148	99.9%

Source : Primary Data

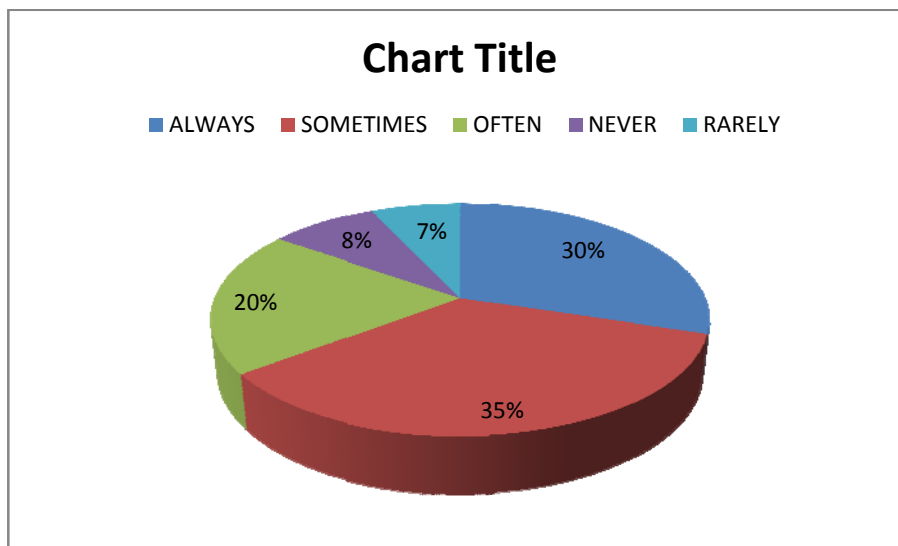


Chart 4.1.9 Kindly specify the frequency of getting work stress in your job

INTERPRETATION:

From the above table is interpreted that the number of respondents is Always is 30%, Sometimes is 30%, Often is 19%, Rarely 16% and Not at all is 5%.

Inference:

The majority of 30% respondents are Always or Sometimes.

Table 4.1.10 How often the company provide health check up for workers?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YEARLY	71	47.7%
HALF YEARLY	37	24.8%
QUARTERLY	15	10.1%
MONTHLY	19	12.8%
RARELY	7	4.7%
TOTAL	149	100%

Source : Primary Data

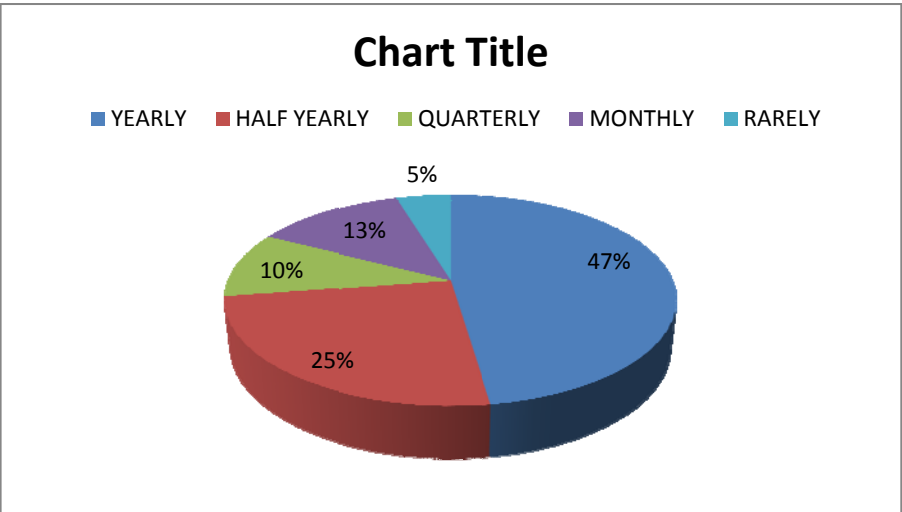


Chart 4.1.10 How often the company provide health check up for workers

INTERPRETATION:

From the above table is interpreted that the number of respondents is Yearly is 47%, Half Yearly is 25%, Quarterly is 10% , Monthly is 13% and Rarely is 5%.

Inference :

The majority of 47% respondents are Yearly.

Table 4.1.11 Kindly specify the frequency interval of maintenance machineries properly?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
ALWAYS	43	28.7%
SOMETIMES	50	33.3%
OFTEN	29	19.3%
NEVER	12	8%
RARELY	10	6.7%

NOT AT ALL	6	4%
TOTAL	150	100%

Source : Primary Data

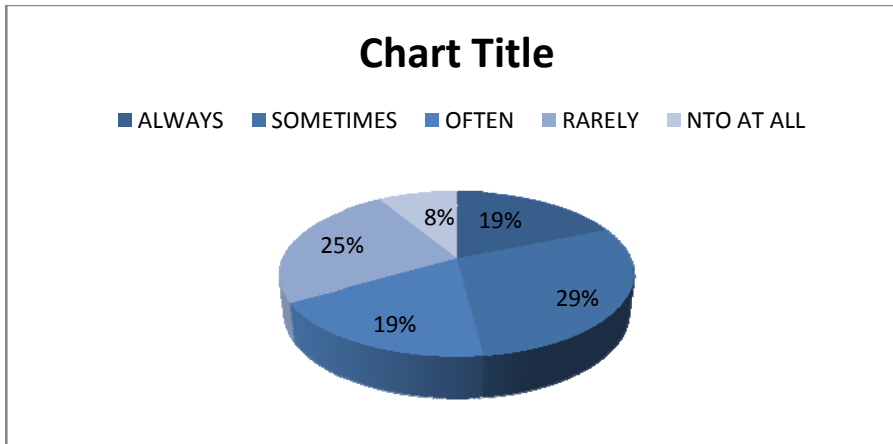


Chart 4.1.11 Kindly specify the frequency interval of maintenance machineries properly

INTERPRETATION:

From the above table is interpreted that the number of respondents is Always is 30%, Sometimes is 35%, Often is 20 %, Never is 8, Rarely 7% and Not at all is 4%

Inference:

The majority of 35% respondents are by Sometimes

Table 4.1.12 How often the accidents happen?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
ALWAYS	28	18.7%
SOMETIMES	44	29.3%
OFTEN	28	18.7%
RARELY	37	24.7%
NTO AT ALL	13	8.7%

TOTAL	150	100%
-------	-----	------

Source : Primary Data

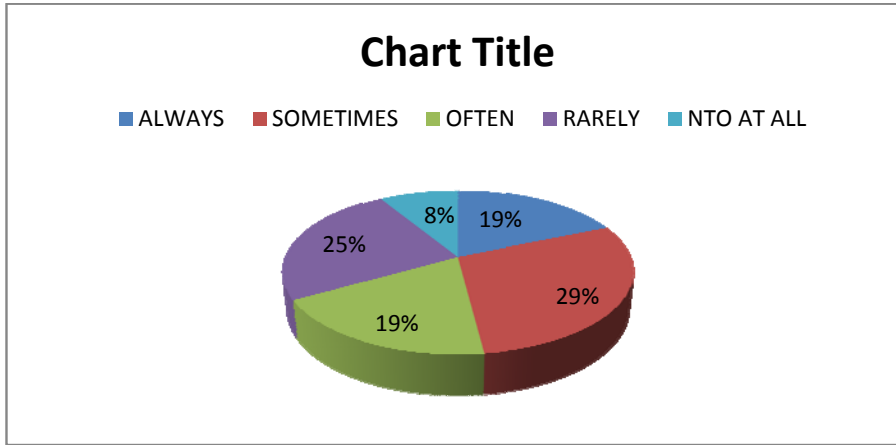


Chart 4.1.12. How often the accidents happen

INTERPRETATION:

From the above table is interpreted that the number of respondents is Always is 19%, Sometimes is 29%, Often is 19 %, Rarely 25% and Not at all is 8%.

Inference:

The majority of 29% respondents are Sometimes

Table 4.1.13. Are they providing the safety requirements for work?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES	123	82%
NO	27	18%
TOTAL	150	100%

Source : Primary Data

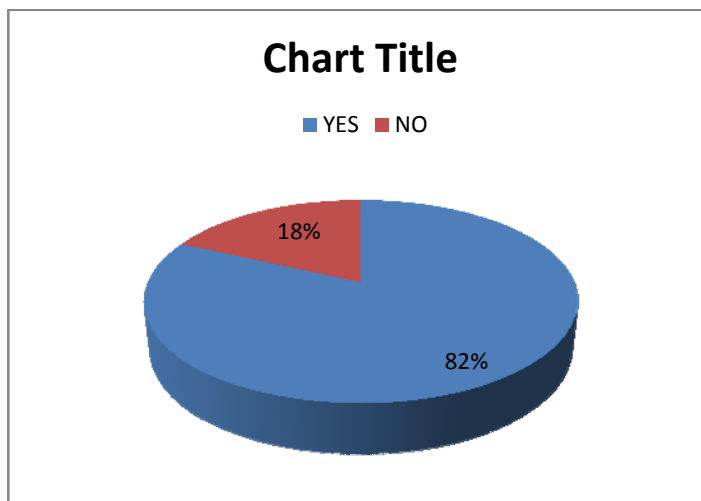


Chart 4.1.13 Are they providing the safety requirements for work

INTERPRETATION:

From the above table is interpreted that the number of respondents are YES is 82%, and NO is 18%

Inference :

The majority of 82% respondents are Yes

Table 4.1.14. Whether safety committee formed in the company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES	114	76%
NO	36	24%
TOTAL	150	100%

Source : Primary Data

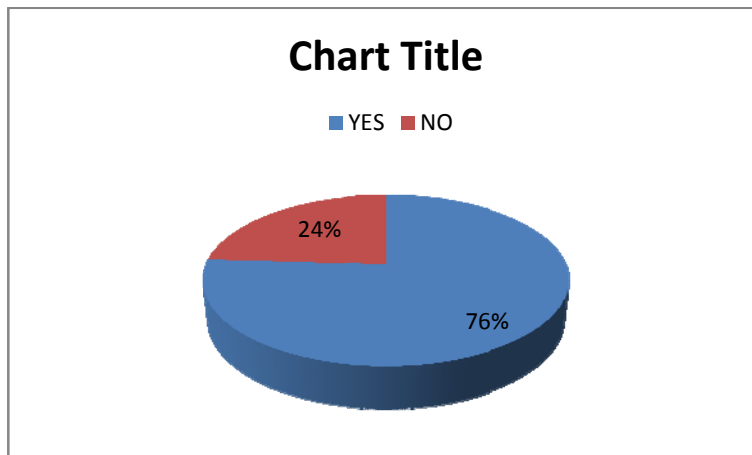


Chart 4.1.14. Whether safety committee formed in the company

INTERPRETATION

From the above table is interpreted that the number of respondents are Yes is 76%,No

Is and 24%.

Inference :

The majority of 76% respondents are YES

Table 4.1.15. How often the safety inspections are held in your company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YEARLY	81	54%
MONTHLY	37	24.7%
WEEKLY	15	10%
DAILY	5	3.3%
RARELY	12	8%
TOTAL	150	100%

Source : Primary Data

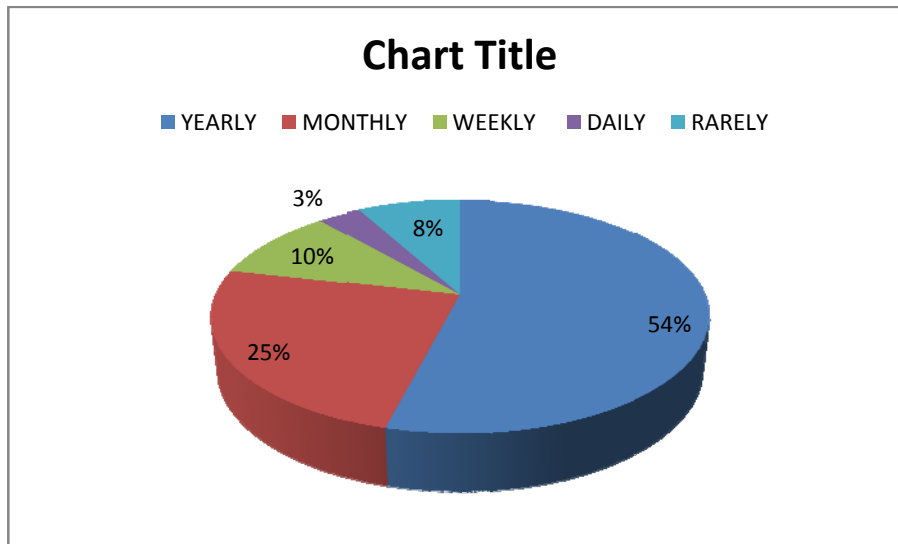


Chart 4.1.15. How often the safety inspections are held in your company

INTERPRETATION:

From the above table is interpreted that the number of respondents are Yearly is 54%, Monthly is 24.7%, Weekly is 10%, Daily is 3.3% and Rarely is 8%

Inference :

The majority of 54% respondents are Yearly.

Table 4.1.16 Satisfactory level of the health and safety measures taken in the company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
HIGHLY SATISFIED	79	52.7%
SATISFIED	28	18.7%
NEUTRAL	29	19.3%
DIS SATISFIED	11	7.3%
HIGHLY DIS SATISFIED	3	2%
TOTAOL	150	100%

Source : Primary Data

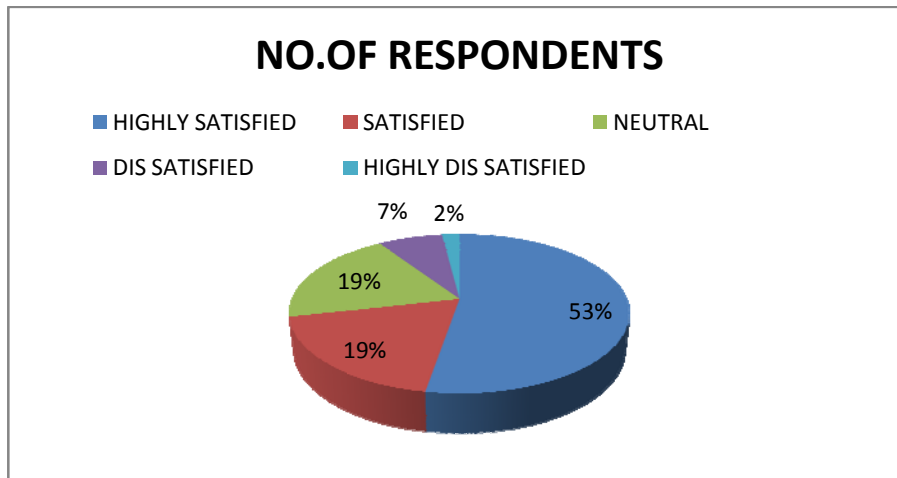


Chart 4.1.16. Satisfactory level of the health and safety measures taken in the company

INTERPRETATION:

Form the above table is interpreted that the number of respondents are Highly satisfied is 53%,Satisfied is 19%,Neutral is 19%Dissatisfied is 7% and Highly satisfied is2%.

Inference:

The majority of 53% respondents are Highly satisfied

Table 4.1.17 The role of management in implementing health and safety?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
EXCELLENT	70	46.7%
GOOD	43	28.7%
VERY GOOD	21	14%
POOR	13	8.7%
VERY POOR	3	2%
TOTAL	150	100%

Source: Primary Data

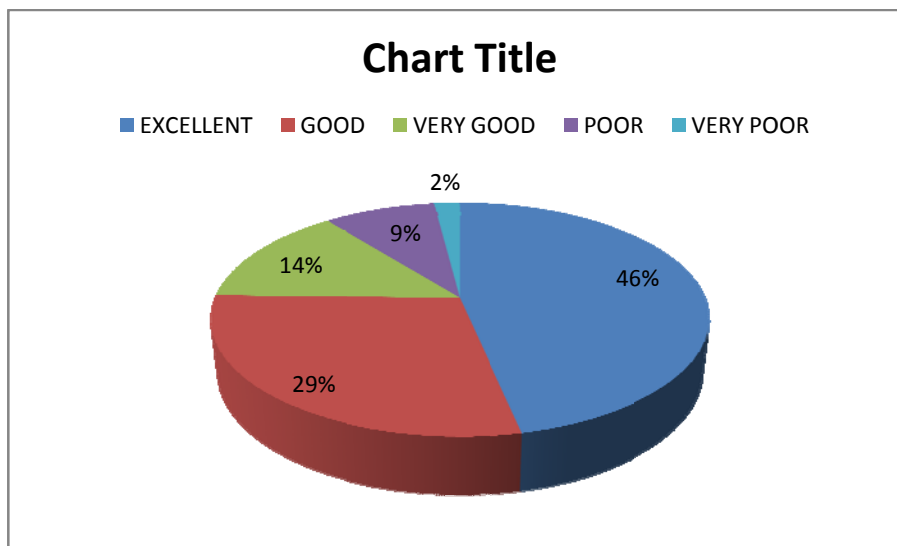


Chart 4.1.17 The role of management in implementing health and safety

INTERPRETATION:

From the above table is interpreted that the number of respondents are Excellent is 46%, Good is 29%, Very Good is 14% and Poor is 9%, and Very Poor is 2%

Inference :

The majority of 46% respondents are Excellent.

Table 4.1.18 Do you know the first aid activities and contents of the first aid kit?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONGLY AGREE	60	40%
AGREE	40	26.7%
NEUTRAL	23	19.3%
STRONGLY DISAGREE	5	3.3%
DISAGREE	16	10.7%
TOTAL	150	100%

Source : Primary Data

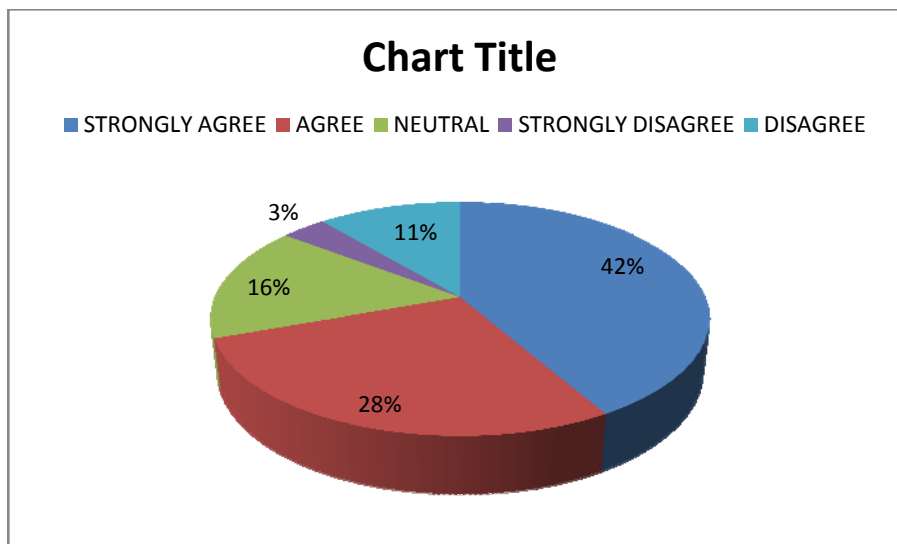


Chart 4.1.18 Do you know the first aid activities and contents of the first aid kit

INTERPRETATION:

From the above table is interpreted that the number of respondents are Strongly Agree is 42%, Agree is 28%, Neutral is 16%, Strongly Dissagree is 7.3% and Disagree is 11%

Inference:

The majority of 42% Strongly Agree.

Table 4.1.19 The company implements effective disciplinary procedure to maintain health and safety?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONGLY AGREE	59	39.3%
AGREE	43	28.7%
NEUTRAL	33	22%
STRONGLY DISAGREE	9	6%
DISAGREE	6	4%
TOTAL	150	100%

Source : Primary Data

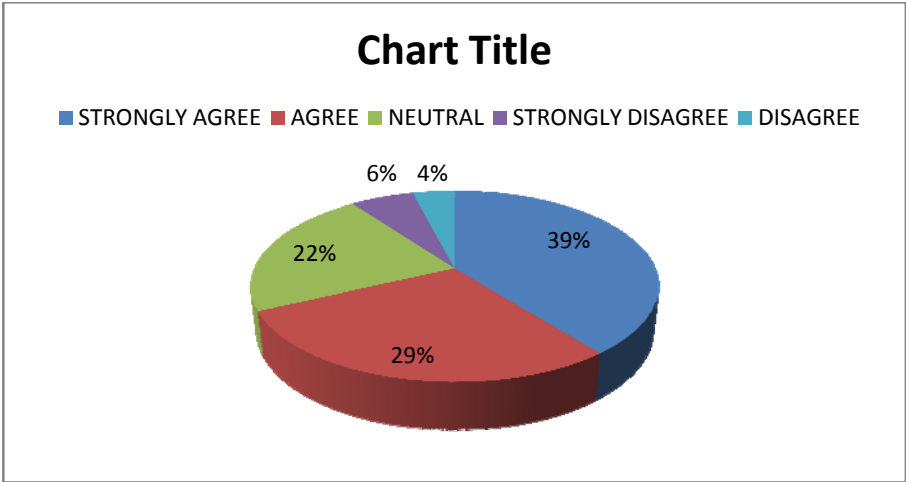


Chart 4.1.19 The company implements effective disciplinary procedure to maintain health and safety

INTERPRETATION:

From the above table is interpreted that the number of respondents are Strongly agree is 39%, Agree is 29%, Neutral is 22%, Strongly Disagree is 6.5% and Disagree is 4%

Inference :

The majority of 39% respondents are Strongly Agree.

Table 4.1.20 The working temperature is reasonable to work?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONGLY AGREE	69	46%
AGREE	36	24%
NEUTRAL	27	18%
STRONGLY DISAGREE	4	2.7%
DISAGREE	14	9.3%
TOTAL	150	100%

Source : Primary Data

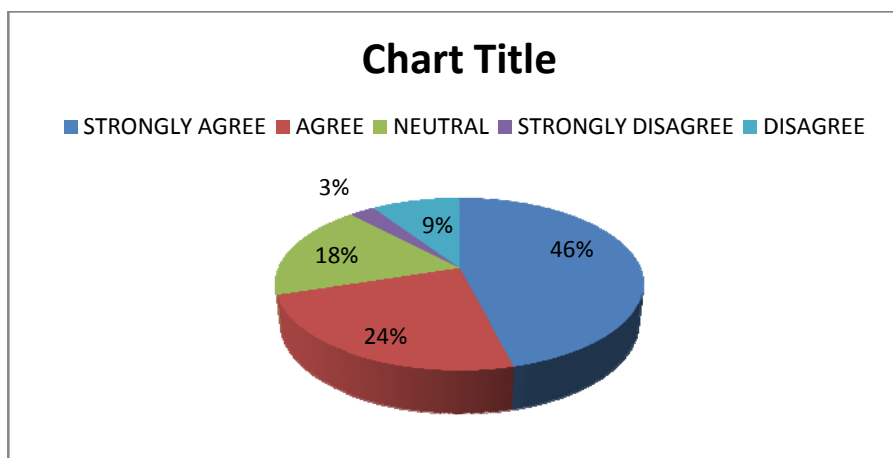


Chart 4.1.20 The working temperature is reasonable to work

INTERPRETATION:

From the above table is interpreted that the number of respondents are Strongly Agree is 46%, Agree is 24%, Neutral is 18%, Strongly Dissagree is 3% and Disagree is 9%

Inference :

The majority of 46% respondents are Strongly Agree.

Table 4.1.21 Do you have enough space to work?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONGLY AGREE	65	43.3%
AGREE	33	22%
NEUTRAL	31	20.7%
STRONGLY DISAGREE	11	7.3%
DISAGREE	10	6.7%
TOTAL	150	100%

Source : Primary Data

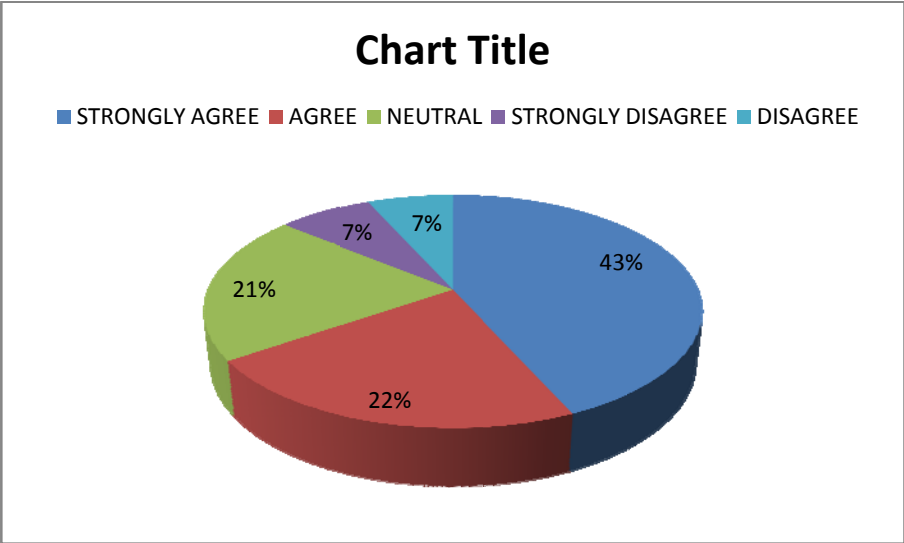


Chart 4.1.21 Do you have enough space to work

INTERPRETATION:

From the above table is interpreted that the number of respondents are Strongly Agree is 43%, Agree is 22%, Neutral is 21%, Srtrongly Dissagree is 7% and Disagree is 7%

Inference:

The majority of 43% respondents are StronglyAgree.

Table 4.1.22 The latrines and urinals are cleaned and maintained properly?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONGLY AGREE	67	44.7%
AGREE	30	20%
NEUTRAL	30	20%
STRONGLY DISAGREE	12	8%
DISAGREE	11	7.3%
TOTAL	150	100%

Source : Primary Data

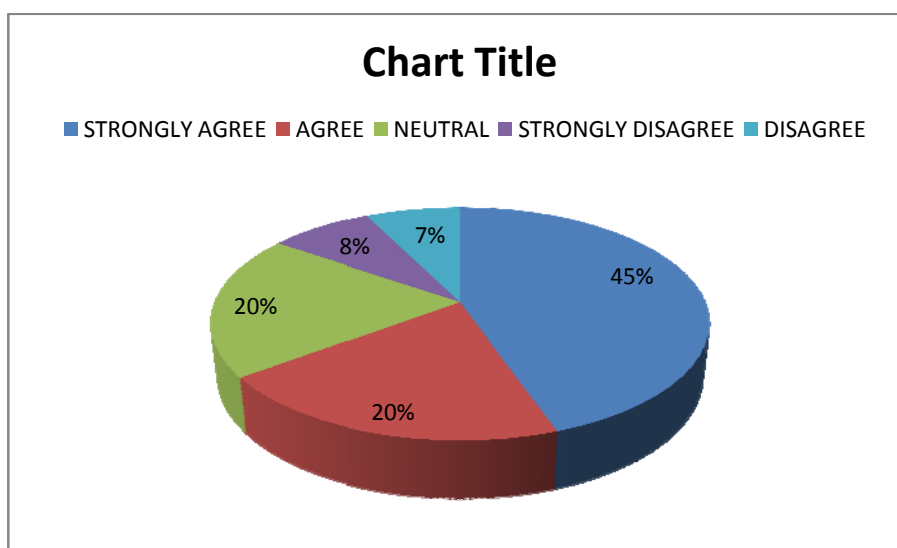


Chart 4.1.22 The latrines and urinals are cleaned and maintained properly

INTERPRETATION:

From the above table is interpreted that the number of respondents are Strongly Agree is 45%, Agree is 20%, Neutral is 20%, Strongly Dissagree is 8 and Disagree is 7%

Inference:

The majority of 45% respondents are Strongly Agree

Table 4.1.23 Do you think that your environment is safe to work?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONGLY AGREE	68	45.3%
AGREE	33	22%
NEUTRAL	26	17.3%
STRONGLY DISAGREE	8	5.3%
DISAGREE	15	10%
TOTAL	150	99.9%

Source : Primary Data

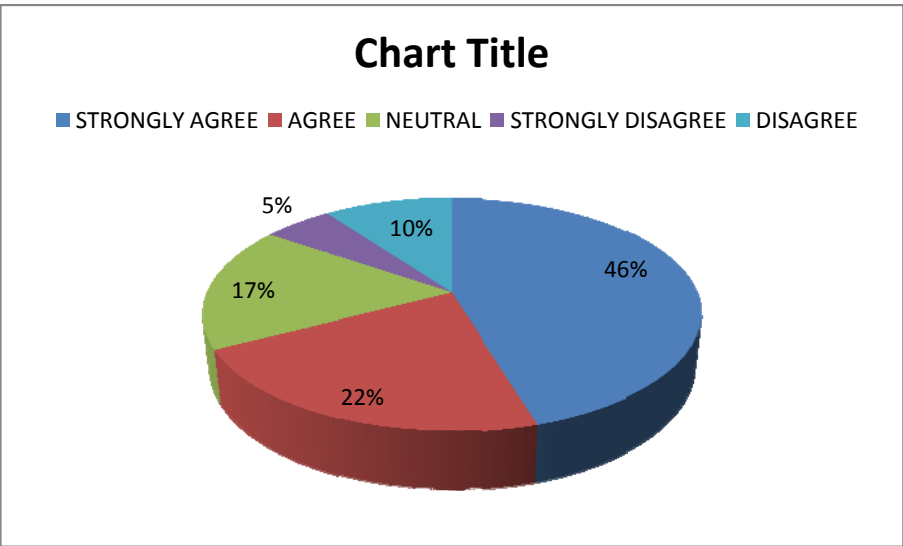


Chart 4.1.23 Do you think that your environment is safe to work

INTERPRETATION:

From the above table is interpreted that the number of respondents are Strongly Agree

is 46%, Agree is 22%, Neutral is 17%, Strongly Dissagree is 5% and Disagree is 10%

Inference:

The majority of 46% respondents are Strongly Agree.

Table 4.1.24 kindly specify the factor that motivate the Better Safety Management System 1 to 9

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONG RULES	67	44.7%
TYPE OF LEADERSHIP	68	45.3%
LEVEL OF MOTIVATION	66	44%
WORKING CULTURE	79	52.7%
PERSONAL INVOLMENT	58	38.7%
RISK FREE WORK SLOW	46	30.7%
HIGH PRODUCTIVITY	32	21.3%
BETTER BRAND IMAGE	24	16%
CORDINATION SUPPORTIVE OF EMPLOYEES	39	26%
TOTAL	479	319.4%

Source: Primary Data

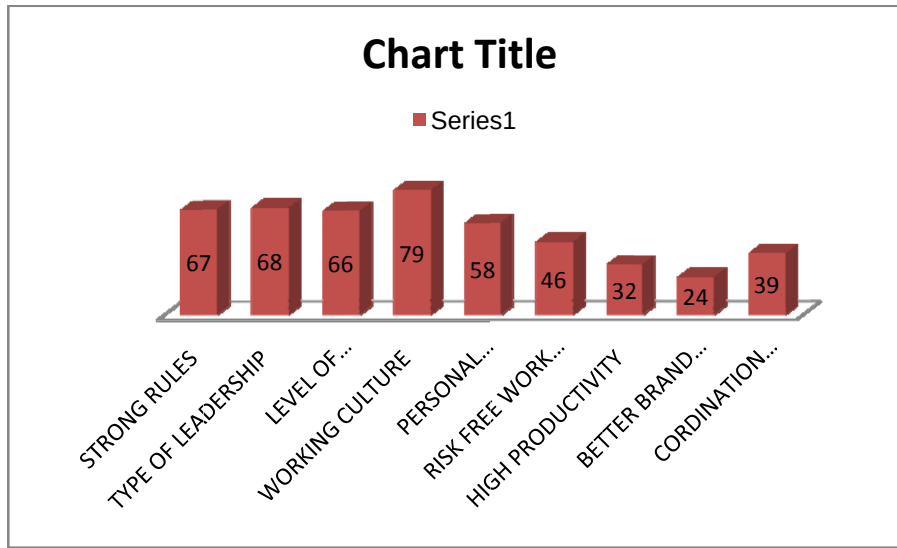


Chart 4.1.24 kindly specify the factor that motivate the Better Safety Management System 1 to 9

INTERPRETATION:

From the above table is interpreted that the number of respondents are Strong Rules is 67%, Type of Leadership is 68%, Level of Motivation is 66%, Working culture is 79%, Personal Involvement is 58%, Risk Free Work Slow is 46%, High Productivity is 32%, Better Brand Image is 24% and Coordination Supportive Of Employees is 39%.

Inference:

The majority of 82.1% respondents are Working Culture.

4.2 ONE WAY ANNOVA

Age of respondents and their opinion about present organizational environment

H0 (Null Hypothesis) = There is no significant relationship between age of respondents and their opinion about present organizational environment.

H1 (Alternate Hypothesis) = There is a significance relationship between age of respondents and their opinion about present organizational environment

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound
19)Do you know the first aid activities and contents of the first aid kit?	1	101	4.05	.899	.089	3.87
	2	24	4.42	.929	.190	4.02
	3	10	4.20	.789	.249	3.64
	4	8	4.25	.707	.250	3.66
	5	8	3.50	1.604	.567	2.16
	Total	151	4.10	.943	.077	3.95
20)The company implements effective disciplinary procedure to maintain health and safety?	1	101	4.05	.899	.089	3.87
	2	24	4.21	1.141	.233	3.73
	3	10	4.00	.943	.298	3.33
	4	8	4.25	.886	.313	3.51
	5	8	3.50	1.604	.567	2.16
	Total	151	4.05	.985	.080	3.89

Descriptive

		95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
19)Do you know the first aid activities and contents of the first aid kit?	1	4.23	1	5
	2	4.81	1	5
	3	4.76	3	5

	4	4.84	3	5
	5	4.84	1	5
	Total	4.25	1	5
20)The company implements effective disciplinary procedure to maintain health and safety?	1	4.23	1	5
	2	4.69	1	5
	3	4.67	3	5
	4	4.99	3	5
	5	4.84	1	5
	Total	4.21	1	5

ANOVA

		Sum of Squares	df	Mean Square	F
19)Do you know the first aid activities and contents of the first aid kit?	Between Groups	5.824	4	1.456	1.665
	Within Groups	127.686	146	.875	
	Total	133.510	150		
20)The company implements effective disciplinary procedure to maintain health and safety?	Between Groups	3.365	4	.841	.864
	Within Groups	142.211	146	.974	
	Total	145.576	150		

ANOVA

Sig.

19)Do you know the first aid activities and contents of the first aid kit?	Between Groups	.161
	Within Groups	
	Total	
20)The company implements effective disciplinary procedure to maintain health and safety?	Between Groups	.487
	Within Groups	
	Total	

Post Hoc Tests

Homogeneous Subsets

19) Do you know the first aid activities and contents of the first aid kit?

Duncan^{a,b}

2)Age	N	Subset for alpha = 0.05	
		1	2
5	8	3.50	
1	101	4.05	4.05
3	10	4.20	4.20
4	8	4.25	4.25
2	24		4.42
Sig.		.069	.380

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.451.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

20) The company implements effective disciplinary procedure to maintain health and safety?

Duncan^{a,b}

2)Age	N	Subset for alpha = 0.05	
		1	
5	8		3.50

3	10	4.00
1	101	4.05
2	24	4.21
4	8	4.25
Sig.		.093

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.451.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
18)The role of management in implementing health and safety? * 2)Age	151	15.1%	848	84.9%	999	100.0%

18)The role of management in implementing health and safety? * 2)Age Crosstabulation

Count

		2)Age				
		1	2	3	4	5
18)The role of management in implementing health	Excellent	51	12	3	3	1
	Good	29	7	2	4	2

and safety?	Poor	10	0	1	0	2
	Very Good	11	4	4	1	1
	Very Poor	0	1	0	0	2
Total		101	24	10	8	8

18)The role of management in implementing health and safety? * 2)Age Crosstabulation

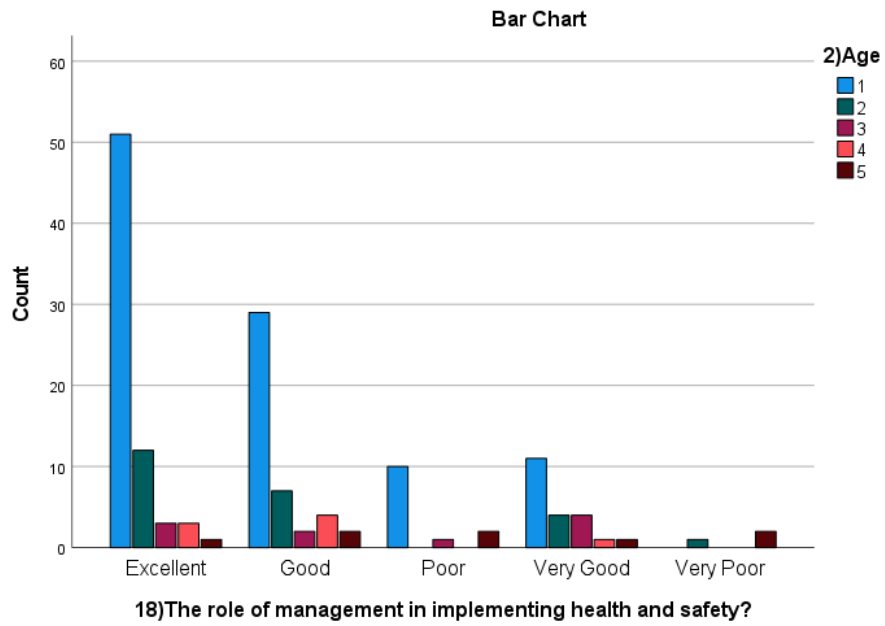
Count

		Total
18)The role of management in implementing health and safety?	Excellent	70
	Good	44
	Poor	13
	Very Good	21
	Very Poor	3
Total		151

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	40.111 ^a	16	.001
Likelihood Ratio	28.455	16	.028
N of Valid Cases	151		

a. 19 cells (76.0%) have expected count less than 5.
The minimum expected count is .16.



CHAPTER-5

5.1 FINDINGS:

- 67% respondents are from age Below 25
- 60% respondents are work experience Below 5 years
- 85.3% respondents is YES the health and safety measures adopted in the company
- 85.3% respondents is YES effective arrangements for communicating health and safety matters
- 85.3% respondents is YES the company provide medical facility to the workers
- 84% respondents Is YES Have you attended any health and safety training in your company
- 41% respondents are Once in 5years training is offered in the company
- 56% respondents are Highly Satisfied. on providing drinking water facility at work place
- 30% respondents are Always or Sometimes getting work stress in your job
- 47% respondents are Yearly the company provide health check up for workers
- 35% respondents are by Sometimes the frequency interval of maintenance machineries properly
- 29% respondents are Sometimes the accidents happen
- 82% respondents are Yes they providing the safety requirements for work
- 76% respondents are YES safety committee formed in the company
- 54% respondents are Yearly the safety inspections are held in your company

- 53% respondents are Highly satisfied of the health and safety measures taken in the company
- 46% respondents are Excellent The role of management in implementing health and safety
- 42% Strongly Agree know the first aid activities and contents of the first aid kit
- 39% respondents are Strongly Agree The company implements effective disciplinary procedure to maintain health and safety
- 46% respondents are Strongly Agree The working temperature is reasonable to work
- 43% respondents are Strongly Agree have enough space to work
- 45% respondents are Strongly Agree The latrines and urinals are cleaned and maintained properly
- 46% respondents are Strongly Agree that your environment is safe to work
- 82.1% respondents are Working Culture the factor that motivate the Better Safety Management System 1 to 9

5.2 SUGGESTIONS

- The company has to create the awareness for the workers regarding health and safety.
- They have to provide effective arrangements to the workers for communicating their health and safety matters.
- It is better to provide frequent health and safety training, at least once in a year.
- The company has to provide enough drinking water facility available at all the time.
- The management has to take necessary steps to reduce the stress level of the workers.

- Orientation programmes can be conducted to make the workers to feel that their work environment is safe to work.
- The maintenance department has to maintain the machines properly to reduce lead-time
- Proper training has to be given to the workers to avoid frequent accidents.
- Meditation practices can be given to avoid electric shocks, finger injuries etc. due to lack of concentration.
- Safety committee has to be formed to monitor the health and safety issues.
- The company has to conduct the regular inspections to ensure higher level of safety in the workplace.
- Cordial relationship has to be maintained between the management and the workers to implement the health and safety policies and measures in a smooth manner.

5.3 CONCLUSION

It is revealed from the study that, the health and safety measures adopted in Hindhuja foundries Pvt. Ltd. are provided to the workers according to the provisions of the factories Act. It reveals that the awareness of the workers about health and safety in the workplace is inadequate. Also repeated accidents like electric shocks, finger injuries are occurred in the workplace. Suitable ideas were suggested to avoid those accidents and to improve the health and safety measures. The role of management in implementing health and safety in the organization is very effective. Most of the workers were satisfied with the health and safety measures adopted in the company. If the company implements effective disciplinary procedures; it will help the company to go with their policies and also to maintain health and safety in the organization.

APPENDIX – I

QUESTIONNAIRE:

1) Name (Optional) :

2) Age :

(a) Below 25 (b) 26-30 (c) 31-35 (d) 36-40 (e) Above 40

3) Experience (in years):

(a) Below 5 (b) 6-10 (c) 11-15 (d) 16-20 (e) Above 20

4) Are you aware of the health and safety measures adopted in the company?

(a) Yes (b) No

5) Do you have effective arrangements for communicating health and safety matters?

(a) Yes (b) No

6) Does the company provide medical facility to the workers?

(a) Yes (b) No

7) Have you attended any health and safety training in your company?

(a) Yes (b) No

8) How frequent training is offered in the company?

(a) Once in 5 year (b) once in 3 year (c) yearly once (d) Monthly (e) Rarely

9) Do you have proper drinking water facility inside your work place?

(a) Always (b) Sometimes (c) Often (d) Rarely (e) Not at all

10) Do you have any stress towards work?

(a) Always (b) Sometimes (c) Often (d) Rarely (e) Not at all

11) How often the company provide health checkup for workers?

(a) Yearly (b) Half yearly (c) Quarterly (d) Monthly (e) Rarely

12) Are the machines maintained properly?

(a) Always (b) Sometimes (c) Often (d) Rarely (e) Not at all

13) How often the accidents happen?

(a) Always (b) Sometimes (c) Often (d) Rarely (e) Not at all

14) Are they providing the safety requirements for work?

(a) Yes (b) No

15) Whether safety committee formed in the company?

(a) Yes (b) No

16) How often the safety inspections are held in your company?

(a) Yearly (b) Monthly (c) Weekly (d) Daily (e) Rarely

17) Satisfactory level of the health and safety measures taken in the company?

(a) Very much satisfied (b) Satisfied (c) Neutral (d) Dissatisfied (e) Highly dissatisfied

18) The role of management in implementing health and safety?

(a)Excellent (b) Best (c) Better (d) Good (e) poor

NO PARAMETERS	AGREE	STRONGLY AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
19) Do you know the first aid activities and contents of the first aid kit?					
20)The company implements effective disciplinary procedure to maintain health and safety?					
21)The working					

temperature is reasonable to work?					
22) Do you have enough space to work?					
23)The latrines and urinals are cleaned and maintained properly?					
26) Do you think that your environment is safe to work?					

Reference

- Arun Monappa (1994); Industrial Relation (8th Edition)
- K Aswathappa (2014); Human Resource Management (7th Edition);
Mc Graw
- Hill Education.
- Armstrong, M. (2004); Handbook of Human Resources Management
Practice
- (9th Edition) London: Kogan Page.
- P. Subba Rao (2008); Essentials of Human Resource Management
and
- Industrial Relations (3rd Edition); Himalaya Publishing House.
- Emmanuel I. Akpan (2011); Effective Safety & Health Management
Policy for
- Improved Performance of Organization in Africa: *International Journal
of*
- *Business & Management*, Volume 6, No. 3, pp. 159-165.
- D.M. Yakubu & I. M. Bakri (2013); Evaluation of Safety & Health
- Performance on construction sites : *Journal of Management &
Sustainability*,
- Volume 3, No. 2, pp. 100-109.
- Noor Aina Amrillah, Wan Izatul Asma, Shaladdin Muda & Aziz Amiri
(2013);
- Operationalisation of Safety culture to foster safety & health in the
Malaysian
- Manufacturing Industries: *Asian Social Science*, Volume 9, No. 7, pp.
283-289.

- Collins Badu Agyemang, Joseph Gerald Nyanyofio & Gerald Dapaah Gyamfi
- (2014) ; Job Stress, sector of work & shift work pattern as correlates of worker
- health & safety : A study of Manufacturing company in Ghana : *International Journal of Business & Management*, Volume 9, No. 7, pp. 59-69.
- Fariba Kiani (2014); Preventing injuries in workers : the role of management practices in decreasing injuries reporting : *International Journal of Health policy & Management*, pp. 171-177.
- Joseph M Putti (1980); The management of securing and maintaining the workforce, S Chand & Co Ltd. Ram Nagar, New Delhi.

Web sites

www.wikipedia.com

www.google.com

WWW.HINDUJAFUNDADRIES.COM

APPENDIX II

A STUDY ON SIGNIFICANCE OF SAFETY MANAGEMENT IN AUTOMOBILE INDUSTRY

1Mr.Ranjeeth Kumar.B and 2Mr. John Paul M.

1 Student, School of Business Administration 2 Assistant Professor, School of Business Administration Sathyabama Institute of science and Technology. Chennai 600119, Tamil Nadu, India.

ABSTRACT:

The primary objective of this Study on significance of Safety management in Automobile industry. The secondary objective of this to know satisfaction level in the existing Safety management in Automobile industry. To know decision taken by the top management are satisfied in Automobile industry . To know the effectiveness of Safety management settlement in Automobile industry The research type used in this study is descriptive . Primary data is used for analysis using questionnaire. Secondary data from internet. I have use two data tools using spss namely anova and chi square for analysis and also use percentage analysis .The study is for 3 months. Used raw data for analysis that collected from the response

Key word: Safety management Workers safety And satisfaction

INTRODUCTION

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

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

OBJECTIVES OF THE STUDY

The primary objective of this Study on significance of Safety management in Automobile industry and the secondary objective is to know satisfaction level in the existing Safety management in Automobile industry. To know decision taken by the top management are satisfied in Automobile industry. To know the effectiveness of Safety management settlement in Automobile industry

Review of literature

Grievance

According to Rose (2004) Lack of any dissatisfaction related to work and workplace Revealed in a formal way by the employee to his immediate supervisor. Grievance is just a dissatisfaction in the world place .

Organization goals

Brian S. Klass (1989) Has identified some of the impacts of defects such as attendance, low productivity, turnover, and distribution behaviour. Mostly the target are making the employee dissatisfied some goals are very hard to achieve for identify the grievance.

Work place

Freeman and Medoff (1984), Their study revealed that the motive for leaving rates is less in unionized appearances than in non-unionized workplaces. In workplace employee to employees relationships has to be good and also employee to supervise relationship has to be more than satisfied. Maintain the work place with the good environment.

Supervisor handling

Bemmels and Reshef (1991) Mentioned that the supervisor's behaviour and personal attitudes may affect their style of dealing with grievances. Every supervisor has to be know about employees and pic the correct style of grievance handle process . Make sure that grievance handled by supervisor has to be effective to the employees.

Expression

Kaufman and Taras (1999), His study shows that non-union workers are less capable of resolving grievances and receive less benefits because they are unable to express it. Most of the employee will not express the feeling how the feel about organisation. Every employees has to express their feelings to supervisor.

Adopt the challenge

Joshua C. Polster (2011) Over the past fifty years, non-union employers have increasingly adopted systematic grievance redressal procedures that allow employees to challenge a company's decision or policy and provide appellate manager judgments on the challenge.

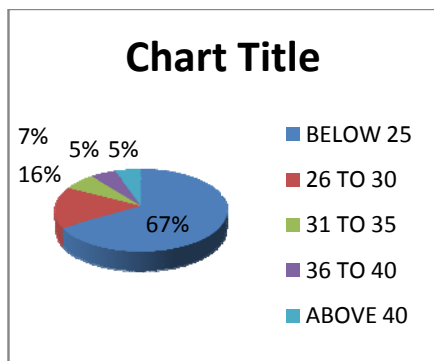
RESEARCH METHODOLOGY

Based on my study I use descriptive research . And also I take 150 respondent for my study . I use questionnaire as a Primary data and Secondary data from books. This is only article of my full research

RESULT

TABLE SHOWING AGE

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
BELOW 25	100	66.7%
26 TO 30	24	16%
31 TO 35	10	6.7%
36 TO 40	8	5.3%
ABOVE 40	8	5.3%
TOTAL	150	100%

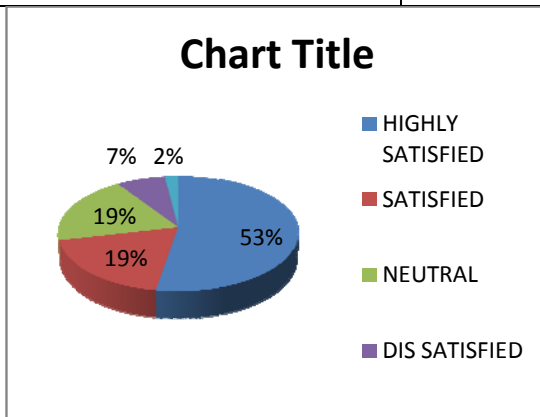


INFERENCE

Majority of the respondents are Below25

Satisfactory level of the health and safety measures taken in the company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
HIGHLY SATISFIED	79	52.7%
SATISFIED	28	18.7%
NEUTRAL	29	19.3%
DIS SATISFIED	11	7.3%
HIGHLY DIS SATISFIED	3	2%
TOTAOL	150	100%

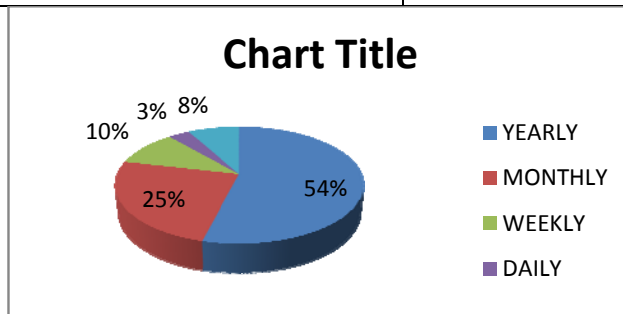


INFERENCE

Majority of the respondents are Highly satisfied.

How often the safety inspections are held in your company?

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YEARLY	81	54%
MONTHLY	37	24.7%
WEEKLY	15	10%
DAILY	5	3.3%
RARELY	12	8%
TOTAL	150	100%



INFERENCE

Majority of the respondents are Yearly.

ONE WAY ANNOVA

Age of respondents and their opinion about present organizational environment

H0 (Null Hypothesis) = There is no significant relationship between age of respondents and their opinion about present organizational environment.

H1 (Alternate Hypothesis) = There is a significance relationship between age of respondents and their opinion about present organizational environment

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound
19)Do you know the first aid activities and contents of the first aid kit?	1	101	4.05	.899	.089	3.87
	2	24	4.42	.929	.190	4.02
	3	10	4.20	.789	.249	3.64
	4	8	4.25	.707	.250	3.66
	5	8	3.50	1.604	.567	2.16
	Total	151	4.10	.943	.077	3.95
20)The company implements effective disciplinary procedure to maintain health and safety?	1	101	4.05	.899	.089	3.87
	2	24	4.21	1.141	.233	3.73
	3	10	4.00	.943	.298	3.33
	4	8	4.25	.886	.313	3.51
	5	8	3.50	1.604	.567	2.16
	Total	151	4.05	.985	.080	3.89

Descriptive

		95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
19)Do you know the first aid activities and contents of the first aid kit?	1	4.23	1	5
	2	4.81	1	5
	3	4.76	3	5

	4	4.84	3	5
	5	4.84	1	5
	Total	4.25	1	5
20)The company implements effective disciplinary procedure to maintain health and safety?	1	4.23	1	5
	2	4.69	1	5
	3	4.67	3	5
	4	4.99	3	5
	5	4.84	1	5
	Total	4.21	1	5

ANOVA

		Sum of Squares	df	Mean Square	F
19)Do you know the first aid activities and contents of the first aid kit?	Between Groups	5.824	4	1.456	1.665
	Within Groups	127.686	146	.875	
	Total	133.510	150		
20)The company implements effective disciplinary procedure to maintain health and safety?	Between Groups	3.365	4	.841	.864
	Within Groups	142.211	146	.974	
	Total	145.576	150		

ANOVA

Sig.

19)Do you know the first aid activities and contents of the first aid kit?	Between Groups	.161
	Within Groups	
	Total	
20)The company implements effective disciplinary procedure to maintain health and safety?	Between Groups	.487
	Within Groups	
	Total	

Post Hoc Tests

Homogeneous Subsets

19) Do you know the first aid activities and contents of the first aid kit?

Duncan^{a,b}

2)Age	N	Subset for alpha = 0.05	
		1	2
5	8	3.50	
1	101	4.05	4.05
3	10	4.20	4.20
4	8	4.25	4.25
2	24		4.42
Sig.		.069	.380

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.451.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

20) The company implements effective disciplinary procedure to maintain health and safety?

Duncan^{a,b}

2)Age	N	Subset for alpha = 0.05	
		1	
5	8		3.50

3	10	4.00
1	101	4.05
2	24	4.21
4	8	4.25
Sig.		.093

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.451.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
18)The role of management in implementing health and safety? * 2)Age	151	15.1%	848	84.9%	999	100.0%

18)The role of management in implementing health and safety? * 2)Age Crosstabulation

Count

		2)Age				
		1	2	3	4	5
18)The role of management in implementing health	Excellent	51	12	3	3	1
	Good	29	7	2	4	2

and safety?	Poor	10	0	1	0	2
	Very Good	11	4	4	1	1
	Very Poor	0	1	0	0	2
Total		101	24	10	8	8

18)The role of management in implementing health and safety? * 2)Age Crosstabulation

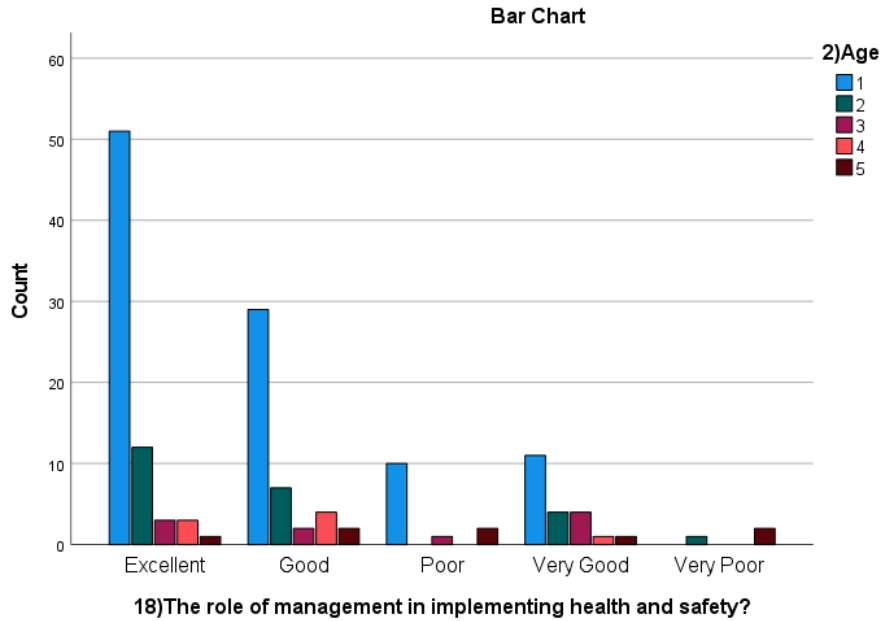
Count

		Total
18)The role of management in implementing health and safety?	Excellent	70
	Good	44
	Poor	13
	Very Good	21
	Very Poor	3
Total		151

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	40.111 ^a	16	.001
Likelihood Ratio	28.455	16	.028
N of Valid Cases	151		

a. 19 cells (76.0%) have expected count less than 5.
The minimum expected count is .16.



FINDINGS:

- 67% respondents are from age Below 25
- 53% respondents are Highly satisfied of the health and safety measures taken in the company
- 82.1% respondents are Working Culture the factor that motivate the Better Safety Management System 1 to 9
- 46% respondents are Strongly Agree that your environment is safe to work
- Supervisors has a good relationship with the employees
- Most of the employees are not involved in organization goals
- And also I find that most of the employees are under employees

SUGGESTIONS

- The company has to create the awareness for the workers regarding health and safety.
- According to my study Orientation programmes can be conducted to make the workers to feel that their work environment is safe to work.
- According to my study They have to provide effective arrangements to the workers for communicating their health and safety matters
- According to my study most of the employees suggested to have a suggestion first aid box
- According to my study supervisor has to spend time with employees

CONCLUSION

The study was about employee provided to the workers according to the provisions of the factories Act. It reveals that the awareness of the workers about health and safety in the workplace is inadequate. Also repeated accidents like electric shocks, finger injuries are occurred in the workplace. Suitable ideas were suggested to avoid those accidents and to improve the health and safety measures. The role of management in implementing health and safety in the organization is very effective. Most of the workers were satisfied with the health and safety measures adopted in the company. If the company implements effective disciplinary procedures; it will help the company to go with their policies and also to maintain health and safety in the organization.

Reference

- Arun Monappa (1994); Industrial Relation (8th Edition).
- K Aswathappa (2014); Human Resource Management (7th Edition); Mc Graw Hill Education.
- Armstrong, M. (2004); Handbook of Human Resources Management Practice (9th Edition) London: Kogan Page Medoff, J. L. (1984). What do unions do? Indus. & Lab.
 - Joseph M Putti (1980); The management of securing and maintaining the workforce, S Chand & Co Ltd. Ram Nagar, New Delhi on