

A STUDY ON EMPLOYEES HEALTH AND SAFETY MEASURES WITH REFERENCE TO KDR PILE FOUNDATION

Submitted in partial fulfillment of the requirements for the award of

MASTER OF BUSINESS ADMINISTRATION

By

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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

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **KAPPA TARIKESU 41410159** who carried out the project entitled "**A STUDY ON EMPOLYEEES HEALTH AND SAFETY MEASURES WITH REFERENCE TO KDR PILE FOUNDATION**" under my supervision from January 2023 to March 2023.

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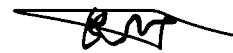
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DECLARATION

KAPPA TARIKESU (41410159) hereby declare that the Project Report entitled “**A STUDY ON EMPOLYEEES HEALTH AND SAFETY MEASURES WITH REFERENCE TO KDR PILE FOUNDATION**” done by me under the guidance of **Dr. D.YAMUNA Ph.D.**, is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

DATE: 05/05/2023



PLACE: Chennai

KAPPA TARIKESU

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TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	
	LIST OF TABLES	22-38
	LIST OF CHARTS	22-38
1	INTRODUCTION	
	1.1 .Introduction	1
	1.2 .Industry Profile	3
	1.3 .Company Profile	7
	1.4 . Need for the study	7
	1.5. Objectives of the Study	8
	1.6.Scope of the study	8
2	REVIEW OF LITERATURE	
	2.1 Review of Literature	9
3	RESEARCH METHODOLOGY	
	3.1 Methodology	13
	3.2.Research Design	13
	3.3. Descriptive Research	13
	3.4. Sample Design	14
	3.5. Design And Pretesting Of Questionnaire	14
	3.6.Method Of Data Collection	15
	3.7. Stratified Sampling	15
	3.8.Hypothesis	16

	DATA ANALYSIS AND INTERPRETATION	
4	4.1 Statistical Tools	17
	4.2. Percentage analysis	17
	4.3.Mann-whitney u-test	18-19
	4.4. Chi Square	20
	FINDINGS,SUGGESTIONS AND CONCLUSION	
5	5.1.Findings of the Study	39
	5.2.Suggestions & Recommendations	43
	5.3. Limitations of the study	44
	5.4.Conclusion	45
	REFERENCES	46
	ANNEXURE I – QUESTIONNAIRE	47-51
	ANNEXURE II – RESEARCH ARTICLE	52

ABSTRACT

The project is done under the title "A STUDY ON EMPLOYEE'S HEALTH AND SAFETY MEASURES IN KDR PILE FOUNDATION". The objective of the study includes, studying about employee's Health and safety measures in KDR Pile Foundation, to identify whether the employee's are satisfied with the other facilities provided to them, to identify the reasons for non use of Personnel Protective Equipment (PPE'S), to analyze the health related issues and health facilities provided to employees.

The sample size taken for the study is 150 and the sampling design used for the study is stratified random sampling. Structured questionnaire were used to collect the primary data from the employees.

The stratified tool which has been used is percentage analysis, weighted average method and chi square test. Using this, the result of the analysis, findings and suggestions have been arrived.

LIST OF TABLE

TABLE NO.	PARTICULARS	PAGE NO.
4.1.1	Table Showing Respondents Based On Age	22
4.1.2	Table Showing Respondents Based On Gender	23
4.1.3	Table Showing Respondents Opinion On Non Use Of PPE Related With Awareness Factors	24
4.1.4	Table Showing Respondent's Opinion On Non Use Of PPE'S Related With Maintenance	26
4.1.5	Table Showing Respondent's Opinion on Satisfactory Level of PPE	28
4.1.6	Table Showing Respondents Marital Status	29
4.1.7	Table Showing Service Statuses Of The Respondents	30
4.1.8	Table Showing Working Experiences Of The Respondents	31
4.1.9	Table Showing Education Qualifications Of Respondents	32
4.1.10	Table Showing Respondents Monthly Income	33
4.1.11	Table Showing Respondent's Health Affected Through Pollution Factors	34
4.1.12	Table Showing Environmental Factors Affecting The Health Of The Respondents	36
4.1.13	Table Showing Risk Factors Affecting The Health Of The Respondents	38

LIST OF CHARTS

CHARTS NO.	PARTICULARS	PAGE NO.
4.1.1	Charts Showing Respondents Based On Age	22
4.1.2	Charts Showing Respondents Based On Gender	23
4.1.3	Charts Showing Respondents Opinion On Non Use Of PPE Related With Awareness Factors	25
4.1.4	Charts Showing Respondent's Opinion On Non Use Of PPE'S Related With Maintenance	27
4.1.5	Charts Showing Respondent's Opinion on Satisfactory Level of PPE	28
4.1.6	Charts Showing Respondents Marital Status	29
4.1.7	Charts Showing Service Statuses Of The Respondents	30
4.1.8	Charts Showing Working Experiences Of The Respondents	31
4.1.9	Charts Showing Education Qualifications Of Respondents	32
4.1.10	Charts Showing Respondents Monthly Income	33
4.1.11	Charts Showing Respondent's Health Affected Through Pollution Factors	35
4.1.12	Charts Showing Environmental Factors Affecting The Health Of The Respondents	37
4.1.13	Chart Showing Risk Factors Affecting The Health Of The Respondents	38

CHAPTER I

1.1 INTRODUCTION:

Accidents and injuries in ports and docks may be caused by environmental factors like bad weather, confined spaces, poor lighting and so on and in many instances, by the need to work fast. A number of accidents could be attributed to non use of Personal Protective Equipments (PPE'S). The type and degree of hazards during dock work vary according to the nature of the cargo and the working conditions.

The basic purpose of employee's health and safety is to make them feel that their organization gives more value to their life and provide best in facilities rather than any other.

Safety training, periodic safety inspections and the provision of proper personal protective equipment (PPEs) are part of the employee safety mandate an organization must follow.

An injury and accident-proof work environment are what every employee looks for. A safe and secure surrounding brings out the workplace productivity in them. It is the right of your entire workforce to have health and safety in the workplace.

Also, this right is applicable for both employees and employers alike. As an employer, you are vested with the supreme responsibility of providing employees with a hazard-free workplace.

Workplace health and safety are essential regardless of the size of a company. All companies, big or small, need to incorporate security in their workplaces.

If you do not consider the safety of the work environment, it might cause severe complications for employees - both mentally and physically. Well-implemented safety measures keep employees safe and also protect industry equipment.

There are other health and safety laws prevalent across all states and territories in Australia. These policies and procedures are impactful because they comprise principles, objectives guiding the workplace health and safety decision-making process. Along with managing legal risks, they outline the benefits laid out to the workers.

However, adopting policies is not the end. Ensuring that your workplace is up to snuff regarding regulations comes attached, for it is paramount. Workplace Health and Safety (WHS), also known as Occupational Health and Safety (OH&S), is one such institution responsible for assessing the potential risks capable enough to hinder the health and welfare of the workforce.

It is not possible to measure the effects of human casualties. They can have grave consequences for employees and their families and friends as well. This is why workplace safety and health measures are necessary. Also, employee protection from injuries or death leads to business success.

Often, we get so busy competing for productivity or speed that the safety part falls short of attention. And accidents are most likely to happen then, especially since we get complacent with the regular activities that we ignore the danger they pose.

The feeling of assurance that one has, knowing that he will return safely from work, is more significant than anything else.

There are occupational safety and health risks in every company. Factors affecting workplace safety include unsafe working conditions and environmental hazards. It can also have substance abuse and workplace violence.

1.2 INDUSTRY PROFILE:

The Indian Construction Market is expected to register a CAGR greater than 10% during the forecast period (2022 - 2027). As COVID-19 expanded across the country in April 2020, the face of the Indian construction industry, which was already battling with inadequate management and a lack of tracking of its labour force, lost its central grip completely, bringing the industry to a halt. COVID wreaked havoc on the value chain at all levels and scales. Availability of construction materials and price inflation became important concerns. Cost overruns, severe delays, and even project cancellations resulted from the lack of timely implementation owing to lockdowns. The cancellation and postponing of projects had a direct impact on MSMEs, with many being forced to close their doors or reduce their operations. This was particularly concerning because the construction industry consists mostly of small-scale specialty construction firms and design studios.

Despite the impact of Covid limitations and lockdowns on construction activity, India saw a fresh supply of 45 million sq ft this year, with 36 million sq ft coming from tier I cities and 8.9 million sq ft coming from tier II and III cities. In 2021, the 3PL and e-commerce sectors, which accounted for 62 percent of total absorption in 2020, continued to drive warehouse demand, followed by the manufacturing sector, which accounted for 14 percent. In 2021, Delhi NCR had the largest absorption among India's main cities, at 18 percent, followed by Pune at 15 percent. Absorption rates were 14 percent and 11 percent in Mumbai and Bangalore, respectively, with 20 percent in tier II and tier III cities.

In 2021, investments in the industrial and logistics sector exceeded USD 1.5 billion, making it the second-highest recipient of such funds after the office sector. This asset class has maintained its popularity due to its high growth potential and consistent returns. In 2022, the market is projected to see ongoing and growing investor interest in this asset class. The commercial real estate sub-sector is positioned for development as people return to workplaces and businesses adapt to hybrid working arrangements. The need for commercial office space is gradually increasing as more companies return their employees to the workplace.

Scope of the Report

Construction is the installation, maintenance, and repair of buildings and other stationary structures, as well as the construction of roadways and service facilities that form fundamental components of structures and are required for their operation. Construction encompasses the processes involved in constructing buildings, infrastructure, and industrial facilities, as well as related operations, from start to finish. A complete assessment of the Indian Construction Market includes an assessment of the economy and contribution of sectors in the economy, market overview, market size estimation for key segments, and emerging trends in the market segments in the report. The report sheds a light on the market trends like growth factors, restraints, and opportunities in this sector. The competitive landscape of the Indian Construction Market is depicted through the profiles of active key players. The report also covers the impact of COVID – 19 on the market and the future projections.

The Indian Construction Market is segmented by Sector (Commercial Construction, Residential Construction, Industrial Construction, Infrastructure (Transportation) Construction, and Energy and Utility Construction). For each segment, the market sizing and forecasts have been done on the basis of value (USD billion).

Key Market Trends

Infrastructure Projects Driving the Market

More than 610 projects (costing INR 7.78 crores) have been identified for implementation as part of the Sagarmala Program between 2015 and 2035 in the areas of port modernization and new port development, port connectivity enhancement, port-linked industrialization, and coastal community development. Bharatmala Pariyojana is a new highways umbrella program that focuses on improving the efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps with effective interventions such as the development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement, Border and International Connectivity Roads, Coastal and Port Connectivity Roads, and Green-field expressways.

In 2022-23, the PM Gati Shakti Master Plan for Expressways will be implemented, allowing for faster transit. In 2022-23, the National Highway network would be expanded by 25,000 kilometers, costing INR 20,000 crore. In 2022, India's road sector will experience enormous growth as additional stretches of national highways are constructed, as well as the approval and completion of several projects and fundraises, making it a better year than the previous one. An integrated multi-modal national network of transportation and logistics, connectivity with isolated and difficult terrains, decongestion of key sites on the road network, and progress with the voluntary vehicle scrappage program will all be on the radar in 2022.

The government approved the development of 21 Greenfield airports in the country in January 2022. The country's largest airport will be built in Uttar Pradesh's Gautam Buddha Nagar area. The Ministry of Civil Aviation intends to build 21 additional airports across India in the next years. In the next four to five years, the Airports Authority of India (AAI) plans to create new airports as well as expand and upgrade many existing airports at a cost of INR 25,000 cores. This comprises the expansion and alteration of existing terminals, the construction of new terminals, the expansion or strengthening of existing runways, technical blocks, aprons, and the control towers of the Airport Navigation Services. In addition, by 2025, three PPP (Public-Private Partnership) airports in Delhi, Bangalore, and Hyderabad will have invested INR 30,000 cores in expansion plans.

Demand for Luxury Homes Driving the Market

According to an industry report, the residential segment is likely to exceed pre-covid quarterly sales volumes in 2022, and given its strong speed, it could even match pre-demonetization quarterly sales in the second half of 2022. Given the boost that a luxury dwelling has come to lodge in the broader perspective of work-life choices, owning a home is no longer a matter of investing preference, but a necessity. Buyers seek a lifestyle that seamlessly incorporates the work-from-home concept while maintaining the opulence and amenities of luxury living. In 2022, these patterns are projected to continue. In global cities such as Mumbai, Bangalore, and elsewhere, a new class of ultra-rich people is on a luxury home purchasing binge.

Large-scale residences have emerged as a favored choice in residential township developments and will continue to drive real estate expansion in the years ahead. The real estate sector is expected to have a big year in the coming year, thanks to robust demand, changing trends, and new growing markets driving growth. Non-metro cities are rising real estate markets that are expected to lead the industry's growth in the future year. Despite the increase in housing demand, luxury residences in Mumbai are expected to be in high demand, with property prices likely to remain constant.

Following the pandemic, the luxury home market has gained impetus; purchasers are responding positively to residential purchases across segments, with selling prices having corrected in recent quarters, making real estate investment attractive, particularly in the premium sector. According to a January 2022 industry survey, 89 percent of those who wish to acquire real estate chose luxury houses (city apartments, city bungalows, and vacation homes), while the remaining 11% want premium commercial real estate. The most popular budget range for a luxury city apartment or villa was INR 10-25 cores, with 69 percent of respondents choosing this range. Around 21% like to buy in the INR 5-10 cores range, with the remaining 10% preferring to buy in the INR 25 cores range.

Competitive Landscape

The Indian construction market is highly competitive, owing to the presence of major local and international players. However, the market holds opportunities for small and medium players due to increasing government investments in the sector. The Indian construction market presents opportunities for growth during the forecast period, which is expected to further drive market competition. Large players competing with others for a significant share leave the Indian construction market with no observable levels of consolidation.

1.3 COMPANY PROFILE:

KDR PILE FOUNDATION is firm of specialized in the field of piling foundation developments such as contraction silos & railway bridges, tank foundations, tower foundations and deep foundations such as large diameters bored cast- in-situ- piles and under – Reamed piles, all types of piles and fabrication & Erection work in mechanical field.

VISION:

To be the most preferred company in India offering services of both civil and mechanical with defined standards.

MISSION:

Maintain the quality of construction through the synergizing of Experience, Vision, Resource and Professional values.

1.4 NEED FOR THE STUDY:

Organization like KDR PILE FOUNDATION is more prone to labour problems. In order to bring down labour problems, employee health and safety measures should be given due importance. Management must also ensure that facilities provided by should reach the employees.

To find out health related problems among the employee's and how far the health facilities are helpful and also to create the awareness regarding safety equipments among the workers.

Through this research the company can take suitable measures to avoid probable accidents and injuries in ports and docks through personal protective equipments.

1.5 OBJECTIVES OF THE STUDY:

- To study about employee's Health and safety measures in KDR Pile Foundation.
- To identify whether the employee's are satisfaction level with the other facilities provided to them.
- To identify awareness level of use of Personnel Protective Equipment (PPE'S).
- To provide recommendation on improving the health related issues and health facilities provided to employees.

1.6 SCOPE OF THE STUDY:

From the study the management can identify the problem of employee's regarding health and safety of the employees working in the various department of the kdr pile foundation

This study gives feedback in identifying right thing needed for employee's, so as to provide better Health and Safety facilities.

CHAPTER II

REVIEW OF LITERATURES

2.1 REVIEW OF LITERATURES:

Each employer depending on his priorities gives varying degrees of importance to health and safety, it is because the government is not sure that all the employers will provide basic measure that it introduces statutory legislation from time to time to bring about some measures of uniformity in the basic amenities available to industrial workers.

DOCK WORKER'S (SAFETY, HEALTH AND WELFARE) SCHEME 1961.

A comprehensive dock worker's (safety, health and welfare) scheme 1961 has been formed under the dock worker's (Regulation of Employment Act, 1948).

DEFINITIONS:

According to the **Oxford dictionary** employee welfare or labor welfare means "the efforts to make life worth living for workmen"

According to **the labor investigation committee (1946)**, Employee welfare means "anything done for intellectual, physical, moral and economical betterment of the workers, whether by employer, by government or by other agencies, over and above what is normally expected on the part of the contracted benefits for which workers may have bargained"

1. Human resource safety practices and employee injuries.

By Kristy J'Lyn Lauver | [Journal of Managerial Issues](#) - fall, 2007

This study begins the important integration of the human resource and safety literatures, as well as providing findings that HR practices are associated with employee injuries. This provides organizations with some potential steps they can take to improve employee safety. However, this study only begins to touch on

Issues that may make a significant difference in organizational safety, calling for future studies to continue defining what and how HR practices may be associated with reducing employee injuries.

2. THE EFFECTS OF JOB INSECURITY ON EMPLOYEE SAFETY OUTCOMES

JOURNAL OF OCCUPATIONAL HEALTH PSYCHOLOGY
VOLUME 6 ISSUE 2

Job insecurity research has focused primarily on attitudinal (e.g., job satisfaction), behavioral (e.g., employee turnover), and health outcomes. Moreover, research in the area of workplace safety has largely focused on ergonomic factors and personnel selection and training as primary antecedents of safety. Two cross-sectional structural equation modeling analyses and 1 longitudinal regression analysis of 237 food-processing plant employees unite these 2 disparate areas of research by exploring the relatively uncharted relationship between job insecurity and safety outcomes. Results indicate that employees who report high perceptions of job insecurity exhibit decreased safety motivation and compliance, which in turn are related to higher levels of workplace injuries and accidents.

3. Designing Employee Welfare Provision

Ann Davis, Lucy Gibson, (1994) "Designing Employee Welfare Provision", Personnel Review, Vol. 23 Iss: 7, pp.33 – 45

Describes a process through which organizations might seek to implement interventions relating to employee wellbeing. Emphasizes the importance of a comprehensive needs assessment both in obtaining the breadth of information needed to design appropriate interventions and also in providing baseline information against which to evaluate programme effectiveness. Discusses factors which influence the type of intervention appropriate for a particular situation and highlights their design implications. Finally, provides guidance on programmed implementation and evaluation, and discusses some of the advantages and disadvantages of different approaches to tertiary welfare provision.

ILO RECOMMENDATIONS AND CONVENTIONS ON HEALTH AND SAFETY:

WELFARE:

ILO has taken recourse to a number of activities in promoting the welfare of workers, two recommendation deals with various aspects of workers welfare.

The utilization of spare time Rec. (no. 21)1924 deals with the principles and methods for securing the best use of the spare time of workers.

The living in condition(Agriculture) Rec. (no. 16), 1921 recommends that measure should be adopted to regulate the living in condition of agricultural workers with due regard to the climatic or other condition affecting agricultural workers.

Other recommendations dealing with welfare are,

- Welfare facilities (No.102), 1956
- Working housing (No.115), 1961

HEALTH:

A few conventions and recommendations seek to protect workers against certain occupational diseases and health hazards,

The labor inspection (Health Service) Rec (No5), 1919 deals with the establishments of Government Health Services especially for safeguarding health of workers.

The protection of workers health Rec. (No 96) 1953 relates to the protection of health of workers in places of employment and covers a wide range of health aspects including health hazards, medical examination, and notification of occupational diseases and the provisions of first aid facilities.

Rec No 3 suggests making of arrangements for the disinfection of wool infected with anthrax spores either, in the country exporting such wool, or at the port of the entry.

SAFETY:

Particular industries or processes in respect of which Convention or recommendation concerning safety have been adopted include Docks, Making of weight, Building construction and Coalmines.

The prevention of industrial accidents Recommendation (No.31), 1929 the power driven Machinery Rec (No 32), 1929 and the labor inspectors Rec. (No.20), 1923 deals with general problem of safety.

The marking of weight (package transported by vessels) Con(No.27),1929 which has been ratified by India requires every package of one ton or more gross weight consigned for transport by sea or inland water to have its gross weight plainly marked on the outside, on a ship or other vessels.

CHAPTER III

RESEARCH METHODOLOGY

3.1 METHODOLOGY:

Research methodology is a way to systematically solve the research problem it guides us to how research is done scientifically. It consists of different steps that are generally adopted by a researcher to study his research problems along with logic behind them. The research methodology by itself is a process. It has a many stages of activities, grouped together yield the solution to the problem.

3.2 RESEARCH DESIGN:

- A research design is purely and simply the frame work or plan for a study that guides the collection and analysis of data.
- A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure.
- The research design is the conceptual structure within research is conducted it constitutes the blueprint for the collection measurement and analysis of data.

In the research survey conducted, the research design adopted is “DESCRIPTIVE RESEARCH DESIGN”

3.3 DESCRIPTIVE RESEARCH:

In social sciences and business research we quite use the term Ex Post Facto research for descriptive research studies. The main characteristics of this method are that researcher has no control over the variable; he can only report what has happened and what is happening.

Descriptive research is the one the simply describes something such as demographic characteristics of consumers who used the product/services. The study is something occurs or how two variables vary together. This study is typically hypothesis.

3.4 SAMPLE DESIGN:

The population comprises of the entire employee's in KDR Pile Foundation (KDR PILE FOUNDATION). But due to the time constraints it is not possible to have a complete population; the study is among the employee's of TRAFFIC DEPARTMENT which is one of the major departments in KDR PILE FOUNDATION.

The sample size of 150 respondents has been arrived for the study among the population of 186 employees.

The number of employees in traffic department was 186 and it has eleven divisions under which one third of employees have been taken from each division

3.5 DESIGN AND PRETESTING OF QUESTIONNAIRE:

The questionnaire is keeping in view the primary and secondary objective it was designed so as to reduce ambiguity as far as possible, initially the questionnaire was pre tested among the respondents to identify new points that could be included before administration the complete questionnaire and to eliminate bias.

A Total Of Eighteen Questions Were Framed For The Questionnaire Covering Of Personal And Basic Information And Various Aspects of Employees Health And Measures.

- BASIC INFORMATION
- PERSONAL INFORMATION
- RESEARCH RELATED QUESTIONS

3.6 METHOD OF DATA COLLECTION:

The source of data is generally classified as primary and secondary. According to Pauline's Young, the source of information can be classified into documentary source and field source."

The information given collected by individual and group constitute primary or field source.

Books, manuscripts, diaries, letterset are from the secondary or documentary sources.

PRIMARY DATA:

The primary data are those which are collected a fresh and for the first time and thus happen to be original in character. In this survey primary data is obtain through direct interview using questionnaire.

SECONDARY DATA:

Secondary data is collected from books, websites , magazines, and from articles.

The difference between primary and secondary data is matters of relatively data which are primary in hands of one become secondary in hands of others. This study pertains to collect data from source that is primary data.

3.7 STRATIFIED SAMPLING:

Under stratified sampling the population is divided into several sub-population that are individually more homogenous than the population (the different sub-population are called 'strata') and then we select each items from stratum to constitute a sample.

Since each stratum is more homogenous than the total population, we are able to get more precise estimate for each stratum and by estimating more accurately each of the components parts, we get better estimate of the whole.

3.8 HYPOTHESIS FRAMED:

- H1: There is no significant difference between the gender and the factors affecting the employee health.
- H2: There is significant difference between the gender and the factors affecting the employee health.
- H3: There is no significant difference in the opinion of respondents belonging to different age groups
- H4: There is significant difference in the opinion of respondents belonging to different age groups

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

4.1 STATISTICAL TOOLS:

The accuracy of the study is enhanced by the use of statistical tools. It helps in clear interpretation of quantitative and qualitative information in a way that is understandable.

The statistical tools are:

- Percentage analysis
- Mann-Whitney u-test
- Chi square test

4.2 PERCENTAGE ANALYSIS:

Percentage method is the simplest devices used in business and economical statistics.

$$P\% = b/a \times 100$$

P represents the number of parts of hundred(i.e)the percent

a represents the base used for comparison.

b represents the given data to be compared with the base.

4.3 Mann-Whitney Test

TO FIND OUT THE RELATIONSHIP BETWEEN THE WORKING ENVIRONMENT AND THE GENDER

Ho: There is no significant difference between the working environment and the gender

H1: There is a significant difference between the working environment and the gender

Test Statistics (a)

	Working environment
Mann-Whitney U	260.00
Wilcoxon W	3341.000
Z	-9.878
Asymp. Sig.(2-tailed)	.000

a Grouping Variable: gender

Inference:

There is a significant difference between the working environment and the gender

4.3 Mann-Whitney Test

To find out the relationship between the experience and the risk factor

Ho: there is no significant difference between the risk factor and the experience

H1: there is a significant difference between the risk factor and the experience

Test Statistics (b)

	Risk factor
Mann-Whitney U	48.000
Wilcoxon W	69.000
Z	-2.631
Asymp. Sig.(2-tailed)	.009
Exact Sig.[2*(1-tailed Sig.)]	.019(a)

Inference:

There is a relationship between the experience and the risk factor

4.4 Chi-Square Test

To find out the relationship between gender and the risk factor

Ho: There is no significant difference between gender and the risk factor

H1: there is a significant difference between gender and the risk factor

Test Statistics

	Gender	Risk factor
Chi-Square(a,b)	.240	9.840
Df	1	3
Asymp.Sig.	.624	.020

Inference:

There is a relationship between the experience and the risk factor

4.4 CHI-SQUARE TEST:

Chi square test is a non parametric test and such no rigid assumptions are necessary in respect of the type of population.

As a non parametric test chi square can be used

- 1) As a test of goodness of fit and
- 2) As a test of independence

As a goodness of fit chi square test enables us to see how well assumed theoretical distribution fits to the observed data. If the calculated X^2 is less than the table value at ascertain level of significance the fit is considered to be good one, but if the calculated value X^2 is greater than its table value the fit not considered to be good one.

$$X^2 = \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Where

O_i = observed frequency of the cell in the i th row and the j th column

E_j = expected frequency of the cell in the i th row and the j th column

The d.f is worked out as follows

$$d.f = (r-1)(c-1)$$

Where r means no of row and c means no of column.

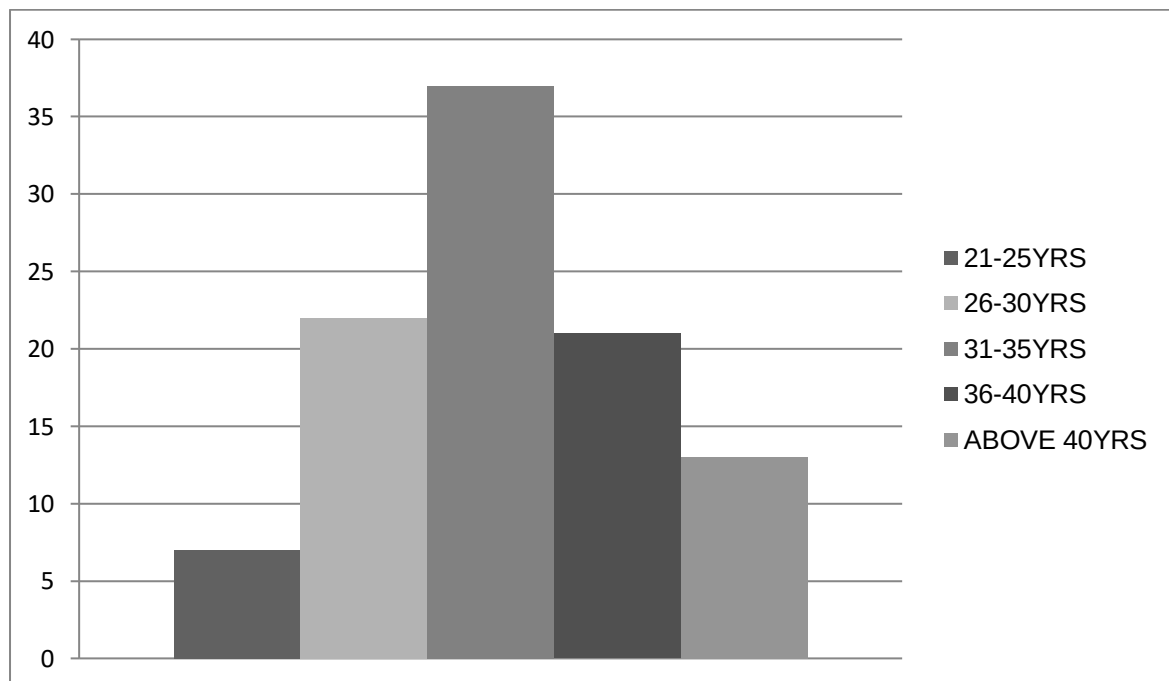
DATA ANALYSIS AND INTERPRETATION

4.1.1 PERCENTAGE ANALYSIS

TABLE 4.1.1 TABLE SHOWING RESPONDANTS BASED ON AGE

AGE	NO OF RESPONDANTS	PERCENTAGE
21-25YRS	10	7
26-30YRS	34	22
31-35YRS	56	37
36-40YRS	31	21
ABOVE 40YRS	19	13
TOTAL	150	100

CHART 4.1.1 CHART SHOWING RESPONDANTS BASED ON AGE



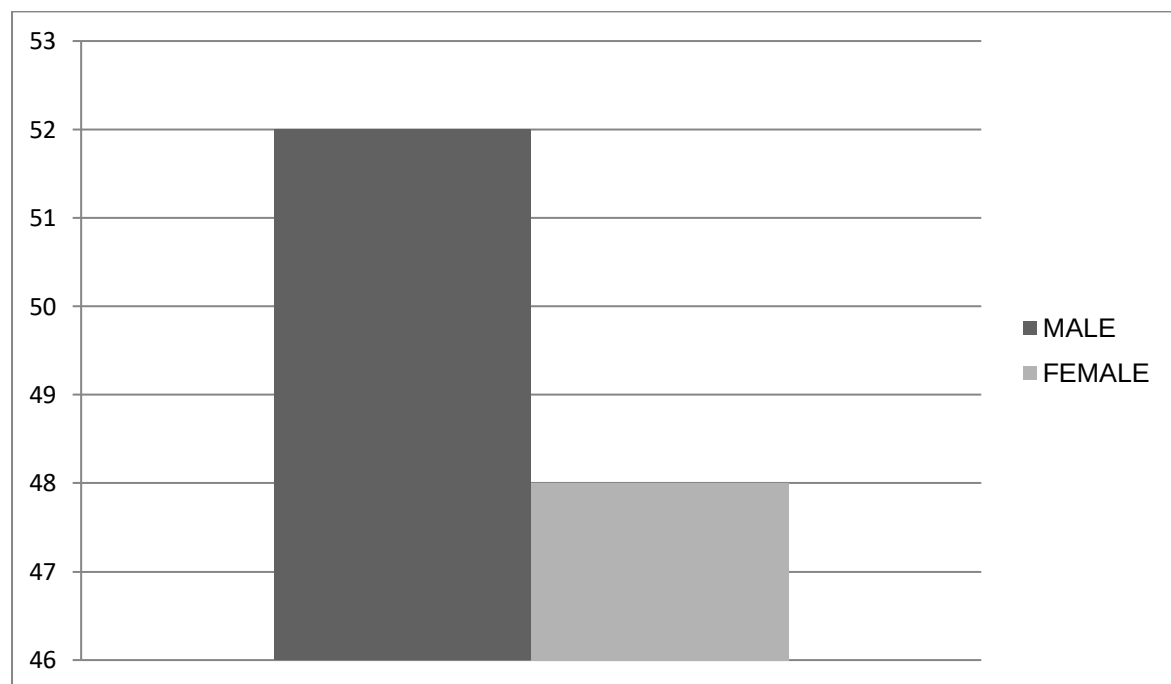
INFERENCE:

From the study it reveals that 22% of the respondents under 26-30 yrs of age, 37% of respondents under 31-35 yrs of age & 21% of respondents under 36-46yrs & 13% of respondents are under the age of above 40yrs.

TABLE 4.1.2 TABLE SHOWING RESPONDENTS BASED ON GENDER

GENDER	NO OF RESPONDENTS	PERCENTAGE (%)
MALE	78	52
FEMALE	72	48
TOTAL	150	100

CHART 2.2 CHART SHOWING RESPONDENTS BASED ON GENDER



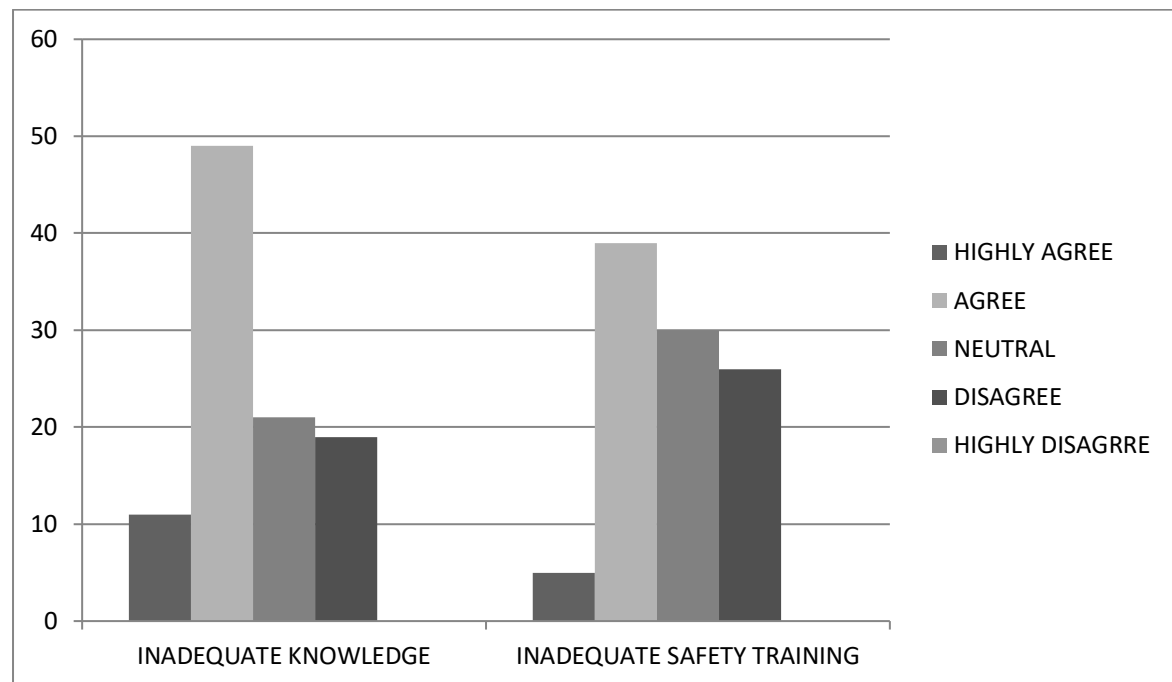
INFERENCE:

From the study it has reveals that, 52% of respondents are male and 48% of the respondents are female.

TABLE 4.1.3 TABLE SHOWING RESPONDENT'S OPINION ON NON USE OF PPE'S RELATED WITH AWARENESS FACTORS

AWARENESS FACTORS	INADEQUATE KNOWLEDGE ABOUT THE WORK AND MACHINES	PER %	INADEQUATE SAFETY TRAINING	PER %
SCALE LEVEL				
HIGHLY AGREE	17	11	8	5
AGREE	73	49	59	39
NEUTRAL	31	21	45	30
DISAGREE	29	19	38	26
HIGHLY DISAGREE	0	0	0	0
TOTAL	150	100	150	100

CHART 4.1.3 CHART SHOWING RESPONDENT'S OPINION ON NON USE OF PPE'S RELATED WITH AWARENESS FACTORS



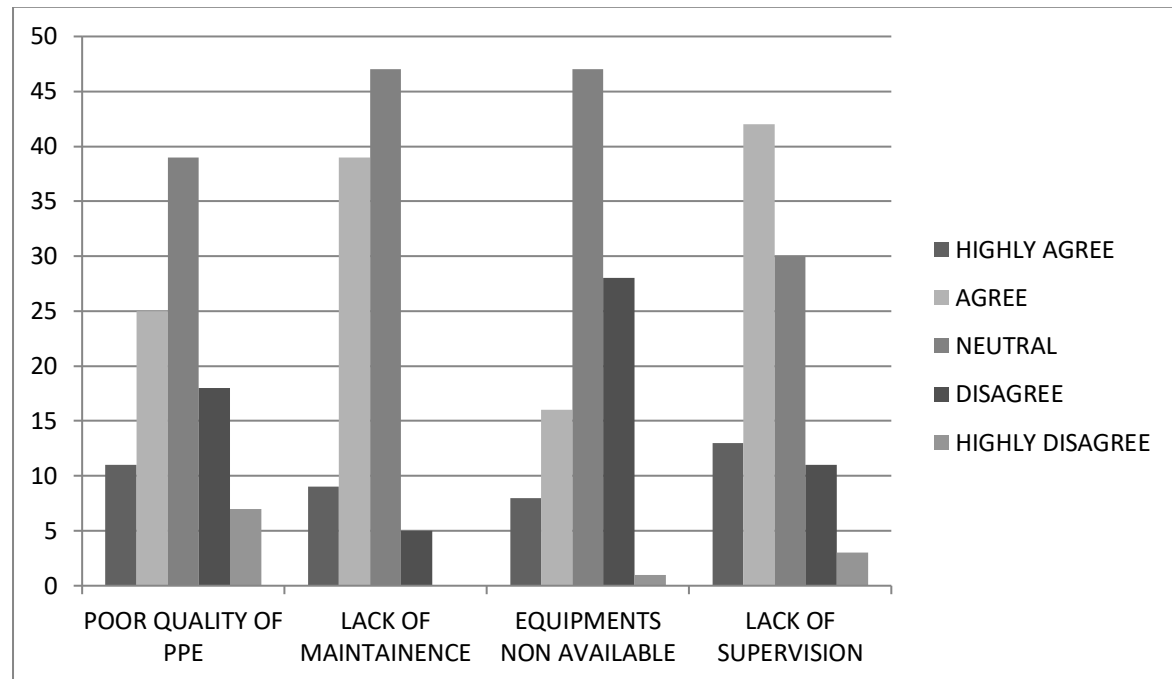
INFERENCE:

From the study it reveals that 60% of respondents positively agree that there is inadequate knowledge about the work & machines for the non use of PPE's 21% of respondent's gives their response as neutral and 19% of respondents negatively disagree. For inadequate safety training 44% of respondents positively agree, 30% of respondents give their response as neutral and 26% of respondents negatively disagree.

**TABLE 4.1.4 TABLE SHOWING RESPONDENTS OPINION ON NON USE OF PPE'S
RELATED WITH MAINTAINENCE**

MAINTAINCE FACTOR	POOR QUALITY OF PPE	PER %	LACK OF MAINTAINENCE	PER %	EQUIPMENTS NON AVAILABLE	PER%	LACK OF SUOERVI SION	PER %
S CALE LEVEL								
HIGHLY AGREE	17	11	14	9	12	8	21	14
AGREE	38	25	59	39	24	16	63	42
NETURAL	59	39	70	47	70	47	45	30
DIS AGREE	26	18	7	5	42	28	17	11
HIGHLY DIS AGREE	10	7	0	0	2	1	4	3
TOTAL	150	100	150	100	150	100	150	100

CHART 4.1.4 CHART SHOWING RESPONDENTS OPINION ON NON USE OF PPE'S RELATED WITH MAINTAINENCE



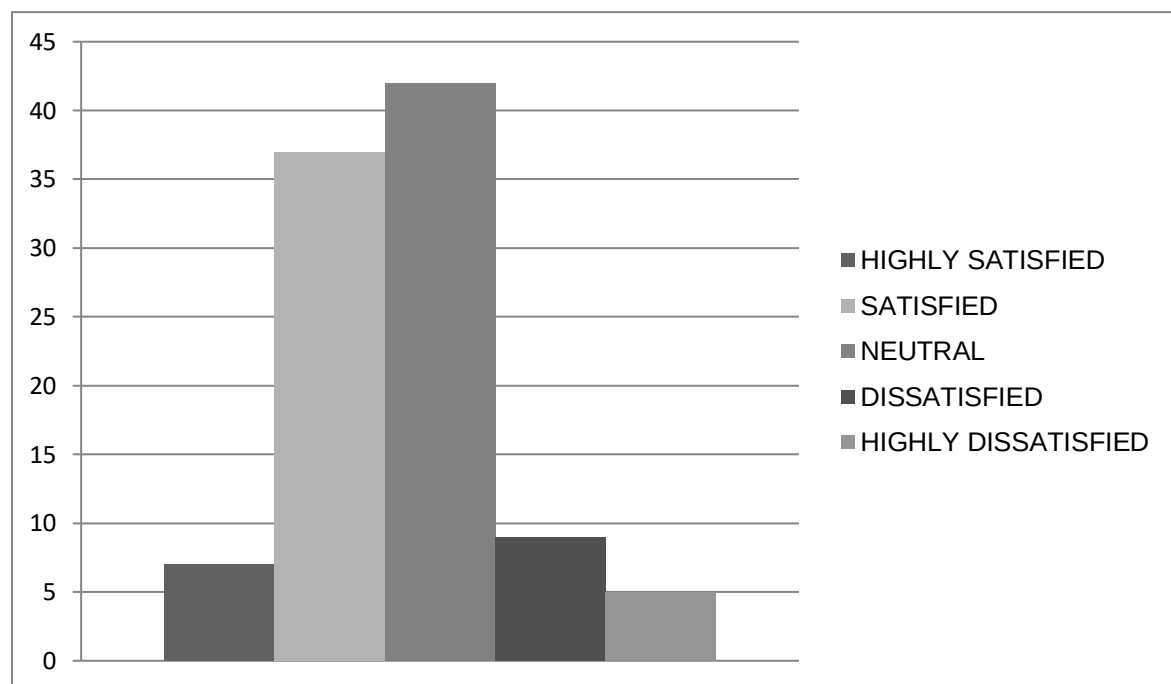
INFERENCE:

From the study it reveals that, for poor quality of PPEs 36% of respondents positively agree, 39% of respondents give as neutral and 25% of respondents negatively disagree. For lack of maintenance 48% of respondents positively agree, 47% of respondents give their response as neutral and 5% of respondents negatively disagree. For equipments non available 24% of respondents positively agree, 47% of respondents give their response as neutral and 29% of respondents negatively disagree. For lack of supervision 56% of respondents positively agree, 30% of respondents give as neutral and 14% of respondents negatively disagree.

TABLE 4.1.5 TABLE SHOWING RESPONDENTS OPINION ON SATISFACTORY LEVEL OF PPE

SATISFACTORY LEVEL	NO OF RESPONDENTS	PERCENTAGE%
HIGHLY SATISFIED	10	7
SATISFIED	56	37
NEUTRAL	63	42
DISSATISFIED	14	9
HIGHLY SATISFIED	7	5
TOTAL	150	100

CHART 4.1.5 CHART SHOWING RESPONDENTS OPINION ON SATISFACTORY LEVEL OF PPE



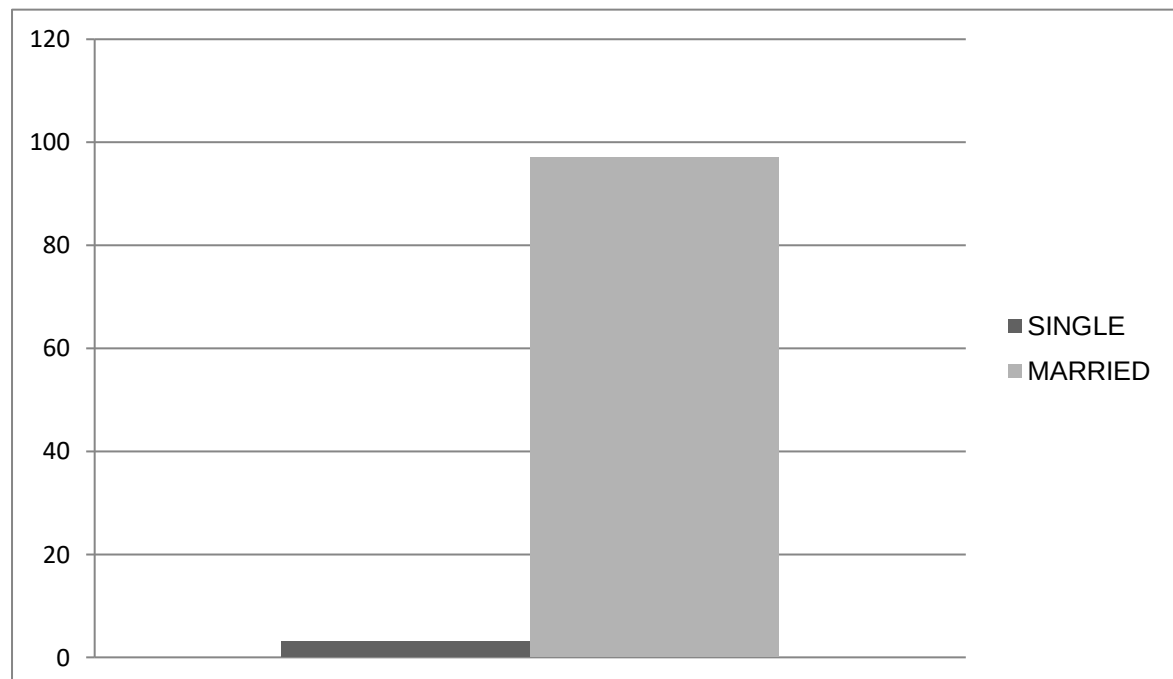
INFERENCE:

From the study it reveals that, 7% of respondents are highly satisfied with PPE's, 37% of respondents are satisfied, 42% of respondents give their response as neutral, 9% of respondents are dissatisfied and 5% of respondents are highly dissatisfied with the satisfactory level of PPE's.

TABLE 4.1.6 TABLE SHOWING RESPONDENTS MARITAL STATUS

MARITAL STATUS	NO OF RESPONDENTS	PERCENTAGE (%)
SINGLE	4	3
MARRIED	146	97
TOTAL	150	100

CHART 4.1.6 CHART SHOWING RESPONDENTS MARITAL STATUS



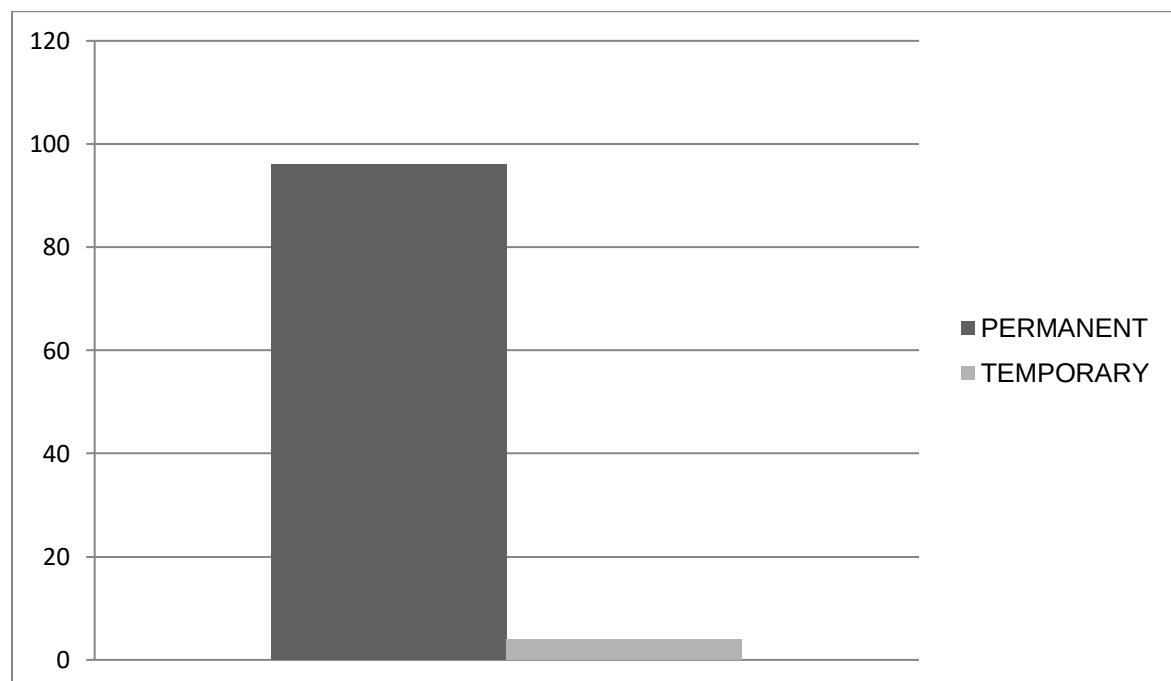
INFERENCE:

From the study reveals that 97% or respondents are married.

TABLE 4.1.7 TABLE SHOWING SERVICE STATUSES OF THE RESPONDENTS

SERVICE STATUS	NO OF RESPONDENTS	PERCENTAGE (%)
PERMANENT	144	96
TEMPORARY	6	4
TOTAL	150	100

CHART 4.1.7 CHART SHOWING SERVICE STATUSES OF THE RESPONDENTS



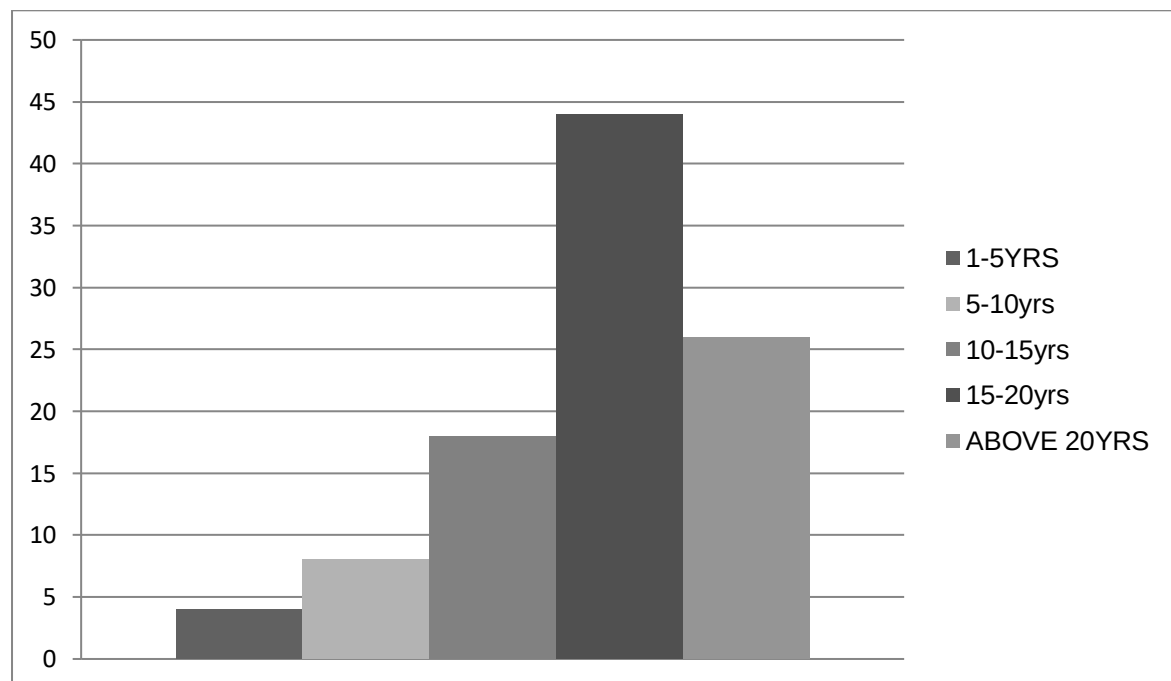
INFERENCE:

From the study it has reveals that, 96% of respondents are permanent in their job.

TABLE 4.1.8 TABLE SHOWING WORKING EXPERIENCES OF THE RESPONDENTS

EXPERIENCE	NO OF RESPONDENTS	PERCENTAGE (%)
1-5 YRS	6	4
5-10YRS	12	8
10-15YRS	27	18
15-20YRS	66	44
ABOVE 20YRS	39	26
TOTAL	150	100

CHART 4.1.8 CHART SHOWING WORKING EXPERIENCES OF THE RESPONDENTS



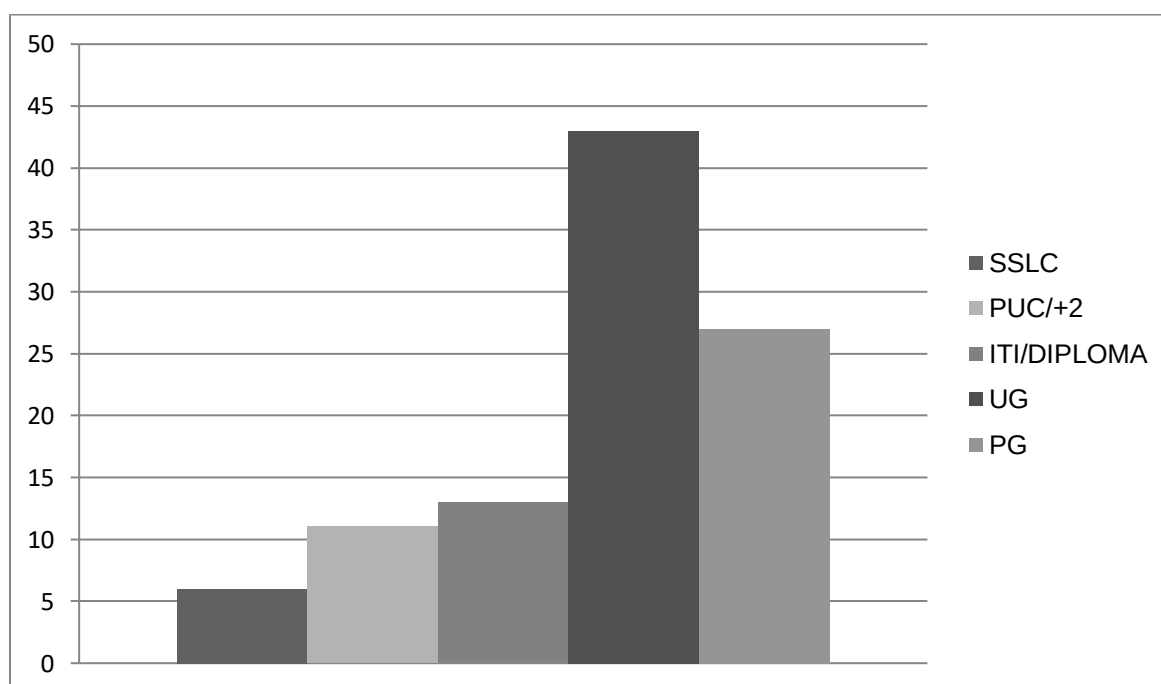
INFERENCE:

From the study it has reveals that, 18% has 11-15 yrs of experience, 44% has 16-20 yrs of experience and 26% of respondents have above 20 yrs of experience.

TABLE 4.1.9 TABLE SHOWING EDUCATION QUALIFICATIONS OF RESPONDENTS

QUALIFICATION	NO OF RESPONDENTS	PERCENTAGE (%)
SSLC	9	6
PUC/+2	17	11
ITI/DIPLOMA	19	13
UG	65	43
PG	40	27
TOTAL	150	100

CHART 4.1.9 CHART SHOWING EDUCATION QUALIFICATIONS OF RESPONDENTS

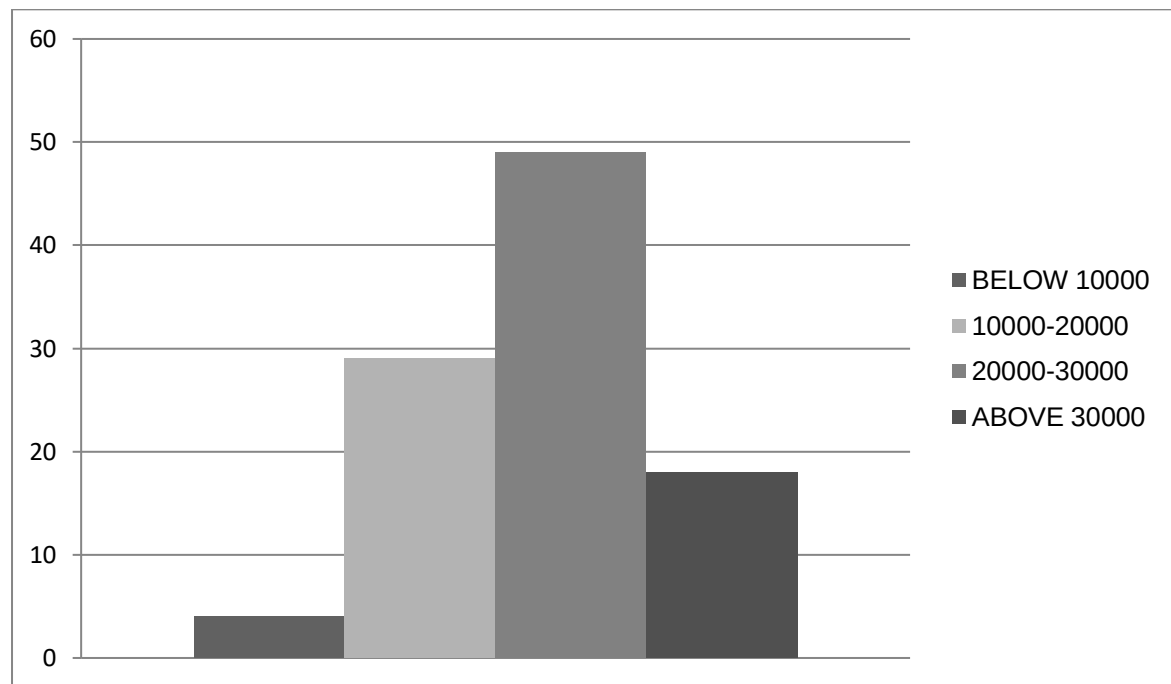


INFERENCE:

From the study it has reveals that, education qualification up to SSLC 6%, +2 11%, ITI/Diploma 13%, UG degree 43% and PG degree 27%. Most of the respondents have been up to UG degree.

TABLE 4.1.10**TABLE SHOWING RESPONDENTS MONTHLY INCOME**

MONTHLY INCOME	NO OF RESPONDENTS	PERCENTAGE (%)
BELOW 10000	6	4
10000-20000	44	29
20000-30000	73	49
ABOVE 30000	27	18
TOTAL	150	100

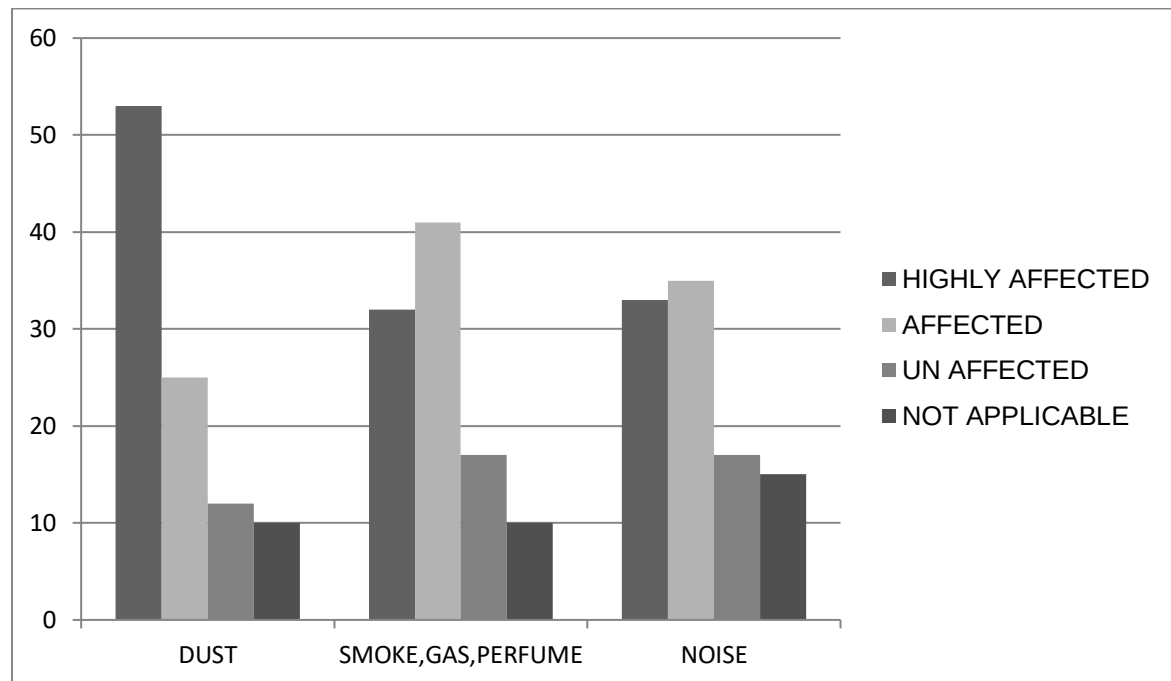
CHART 4.1.10**CHART SHOWING RESPONDENTS MONTHLY INCOME****INFERENCE:**

From the study it has reveals that, respondents earning monthly income Rs10000-20000 are 29%, Rs 20000-30000 are 49% and above Rs 30000 are 18%. Most of them come under the income group of Rs 20000 to 30000.

**TABLE 4.1.11 TABLE SHOWING RESPONDENT’S HEALTH AFFECTED
THROUGH POLLUTION FACTORS**

POLLUTION FACTORS	DUST	PER %	SMOKE GAS, & PERFUMES	PER %	NOISE	PER %
AFFECTED LEVEL						
HIGHLY AFFECTED	79	53	48	32	50	33
AFFECTED	38	25	62	41	52	35
UN AFFECTED	18	12	25	17	26	17
NOT APPLICABLE	15	10	15	10	22	15
TOTAL	150	100	150	100	150	100

CHART 4.1.11 CHART SHOWING RESPONDENT'S HEALTH AFFECTED THROUGH POLLUTION FACTORS



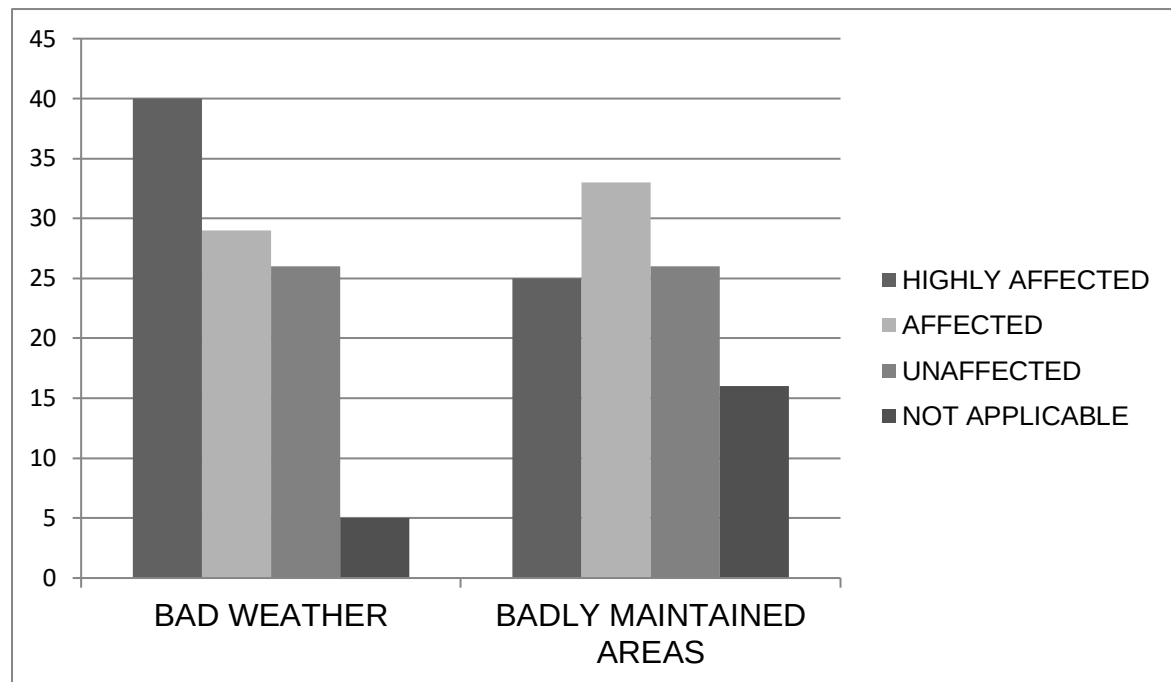
INFERENCE:

From the study it reveals that, For dust, 78% of respondents gives positively affected, 13% of respondents are somewhat affected and 9% of respondents gives negatively affected. For smoke, gas and fumes, 60% of respondents gives positively affected, 20% of respondents are somewhat affected and 20% of respondents gives negatively scale. For noise, 58% of respondents gives positively affected, 23% of respondents are somewhat affected and 19% of respondents gives negatively affected

**TABLE 4.1.12 TABLE SHOWING ENVIROMENTAL FACTORS AFFECTING
THE HEALTH OF THE RESPONDENTS**

ENVIRONMENTAL FACTORS	BAD WEATHER	PER (%)	BADLY MAINTAINED AREAS	PER (%)
AFFECTED LEVEL				
HIGHLY AFFECTED	60	40	38	25
AFFECTED	44	29	49	33
UN AFFECTED	38	26	39	26
NOT APPLICABLE	8	5	24	16
TOTAL	150	100	150	100

CHART 4.1.12 CHART SHOWING ENVIROMENTAL FACTORS AFFECTING THE HEALTH OF THE RESPONDENTS



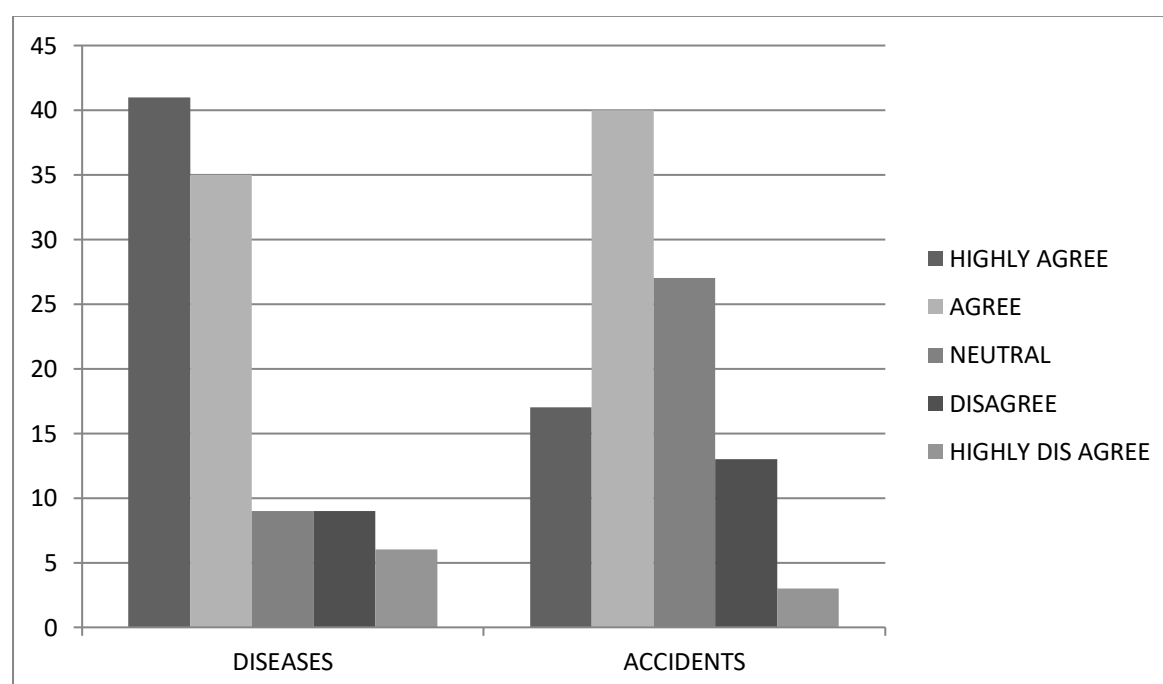
INFERENCE:

From the study it reveals that, From bad weather, 69% of respondents gives positively affected, 13% of respondents gives neither positive nor negative scale and 18% of respondents gives negative scale. From badly maintained areas, 58% of respondents gives positively affected, 17% of respondents gives neither positive nor negative scale and 25% of respondents gives negative scale

TABLE 4.1.13 TABLE SHOWING RISK FACTORS AFFECTING THE HEALTH OF THE RESPONDENTS

RISK FACTOR	DISEASES	PER %	ACCIDENTS	PER %
SCALE LEVEL				
HIGHLY AGREE	62	41	25	17
AGREE	52	35	60	40
NEUTRAL	14	9	41	27
DIS AGREE	14	9	19	13
HIGHLY DIS AGREE	8	6	5	3
TOTAL	150	100	150	100

CHART 4.1.13 CHART SHOWING RISK FACTORS AFFECTING THE HEALTH OF THE RESPONDENTS



INFERENCE:

From the study it reveals that, 76% of respondents positively agree that there is risk of catching disease, 9% gives their response as neutral and 15% of respondents negatively disagree and there is no risk of catching disease. For accidents while working, 57% of respondents positively agree, 27% of response as neutral and 16% of respondents negatively disagree.

CHAPTER V

SUMMARY OF FINDINGS, SUGGESTION & CONCLUSION

5.1 FINDINGS OF THE STUDY:

The study conducted in Health & Safety Measures of employees, each activity has different factors based on that the findings has been revealed.

1. Personal Details:

- From the study it reveals that 7% of respondents has under the age of 21-25 yrs 22% of the respondents under 26-30 yrs of age, 37% of respondents under 31-35 yrs of age & 21% of respondents under 36-46yrs & 13% of respondents are under the age of above 40yrs.
- From the study it has reveals that, 52% of respondents are male and 48% of the respondents are female.
- From the study reveals that, 3% of respondents are unmarried and 97% or respondents are married.
- From the study it has reveals that, 96% of respondents are permanent and 4% of respondents are temporary in their job.
- From the study it has reveals that, 4% of respondents have 1-5 yrs of experience, 8% has 6-10 yrs of experience, 18% has 11-15 yrs of experience, 44% has 16-20 yrs of experience and 26% of respondents have above 20 yrs of experience.
- From the study it has reveals that, education qualification up to SSLC 6%, +2 11%, ITI/Diploma 13%, UG degree 43% and PG degree 27%. Most of the respondents have been up to UG degree.
- From the study it has reveals that, respondents earning monthly income below Rs 10000 are 4%, Rs10000-20000 are 29%, Rs 20000-30000 are 49% and above Rs 30000 are 18%. Most of them come under the income group of Rs 20000 to 30000.

HEALTH FACILITIES

2. Pollution Factor

- From the study it reveals that, For dust, 78% of respondents gives are not affected, 13% of respondents are somewhat affected and 9% of respondents are affected.
- For smoke, gas and fumes, 60% of respondents are not affected, 20% of respondents are somewhat affected and 20% of respondents are affected.
- For noise, 58% of respondents are not affected, 23% of respondents are somewhat affected and 19% of respondents are affected

3. Environmental Factors

- From the study it reveals that, From bad weather, 69% of respondents are not affected, 13% of respondents gives neither positive nor negative scale and 18% of respondents are affected.
- From badly maintained areas, 58% of respondents are satisfied, 17% of respondents give neither positive nor negative scale and 25% of respondents are not satisfied.

4. Risk Factor

- From the study it reveals that, 76% of respondents positively agree that there is risk of catching disease, 9% gives their response as neutral and 15% of respondents negatively disagree and there is no risk of catching disease.
- For accidents while working, 57% of respondents positively agree, 27% of response as neutral and 16% of respondents negatively disagree.

5. Hospital Facilities

From the study it reveals that, 62% of respondents have visited KDR Pile Foundation hospital for health related issues and 38% of respondents' have not visited the hospital regularly.

- From the study it reveals that, respondents are not regularly visiting KDR PILE FOUNDATION hospital for health issues are 14% due to more waiting time involved, 32% due to more procedure involved, 44% gives their response that service is not good, 7% give their response that there is lack of medical resource and 3% of respondents gives other reasons.
- From the table it reveals that, 3% of respondents are highly satisfied, 26% are satisfied, 39% of respondents give their response as neutral, 24% of respondents are dissatisfied & 8% of respondents are highly dissatisfied with the hospital facilities.

SAFETY

6. Psychological Factors

- From the study it reveals that 54% of respondents positively agree that it is uncomfortable working environment 30% gives their response as neutral & 16% of respondents negatively disagree.
- For Lack of concern for safety 56% of respondents positively agree, 25% gives their response as neutral & 19% of respondents negatively disagree.
- For stress became a regular habit for the non use of PPE's 48% of respondents positively agree, 42% gives their response as neutral & 10% of respondents negatively disagree.

7. Awareness Factors

- From the study it reveals that 60% of respondents positively agree that there is inadequate knowledge about the work & machines for the non use of PPE's 21% of respondent's gives their response as neutral and 19% of respondents negatively disagree.
- For inadequate safety training 44% of respondents positively agree, 30% of respondents give their response as neutral and 26% of respondents negatively disagree.

8 Maintenance Factors

- From the study it reveals that, for poor quality of PPEs 36% of respondents positively agree, 39% of respondents give as neutral and 25% of respondents negatively disagree.
- For lack of maintenance 48% of respondents positively agree, 47% of respondents give their response as neutral and 5% of respondents negatively disagree.
- For equipments non available 24% of respondents positively agree, 47% of respondents give their response as neutral and 29% of respondents negatively disagree.
- For lack of supervision 56% of respondents positively agree, 30% of respondents give as neutral and 14% of respondents negatively disagree.
- From the study it reveals that, 7% of respondents are highly satisfied with PPE's, 37% of respondents are satisfied 42% of respondents give their response as neutral, 9% of respondents are dissatisfied and 5% of respondents are highly dissatisfied with the satisfactory level of PPE's.

5.2 SUGGESTION:

HEALTH

- Employee's health has been affected with pollution factors so the administration office should be reengineered with dust free glass doors& windows.
- Employees have been satisfied with the KDR Pile Foundation hospital, even though employees need referrals for outside treatment so, it should be given to the needy employees.

SAFETY

- Awareness regarding safety should be given to the workers related to the use of Personal Protective Equipments like documentary films, seminars taken over by speaker & real life examples like direct talk among the workers with the affected worker by the non use of PPE's.
- There should be proper supervision in the working areas; while the worker is not using respective PPE's for the specified work then strict action should be taken over the worker, as simple mistake leads to a big problem.
- Workers should not get irritate to use PPE's, so well equipped and newly designed Personal Protective Equipments should be given to them so it will make a desire towards PPE's and they will became a regular user of PPE's.

5.3 LIMITATIONS OF THE STUDY:

- The study involves certain problem like employee's doesn't spent time to reply for the questions.
- Few employees are reluctant to give complete information.
- There were possibilities of ambiguous replies, omission of replies to certain questions.
- Questionnaire was translated in Tamil to some of the respondents which may also lead to misunderstanding of questions.
- The company is working on shift system and some of the employees who are working in night shift have not been covered under the study.

5.4 CONCLUSION

The world is competitive to be successful for an organization the employees plays a major role they should be motivated, satisfied, self contented in their field of specialization. Retaining of employees in an organization needs a lot of effort like better treatment, good pay factor and status in the society.

Apart from this one should be fittest in the working place which helps a lot in the productivity and smooth running of an organization. Employees are considered as the assets of an organization to their wellbeing importance should be given, so health and safety of employees must be given importance to increase the productivity of an organization.

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ANNEXURE I - QUESTIONNAIRE

A STUDY ON EMPLOYEE'S HEALTH AND SAFETY MEASURES IN KDR PILE FOUNDATION

QUESTIONNAIRE

PERSONAL DETAIL:

1. **NAME**(optional):
2. **AGE** : ()21-25YRS ()26-30YRS ()31-35YRS ()36-40YRS ()ABOVE 40YRS
3. **GENDER** : ()MALE ()FEMALE
4. **MARITAL STATUS:** ()UN MARRIED ()MARRIED
5. **SERVICE STATUS:** ()PERMANENT ()TEMPORARY
6. **DEPARTMENT:**
7. **EXPERIENCE:**

Upto 5 years	5 to 10 years	10 to 15 years	15 to 20 years	Above 20 years

8. QUALIFICATION:

SSLC	PUC/+2	ITI/DIPLOMA	UG	PG

9. MONTHLY INCOME:

BELOW 10000	10001 TO 20000	20001 TO 30000	ABOVE 30000

HEALTH

The following are the factors which affects your health due to your working conditions (please tick the approximate mark through which you are affected)

10. POLLUTION:

Factors	Highly agree	Agree	Neutral	Disagree	Highly disagree
Air pollution from dust					
Pollution from smoke, gas and fumes					
Noise pollution					

11. ENVIRONMENT:

Factors	Highly agree	Agree	Neutral	Disagree	Highly disagree
Working outside in bad weather					
Badly maintained areas					

12. RISK FACTOR:

Factors	Highly agree	Agree	Neutral	Disagree	Highly disagree
Chances of catching diseases					
Risk of traffic accidents while working					

13. HOSPITAL FACILITIES:

Do you visit hospital regularly for health related issues?

☐ Yes

☐ No

If no why

☐ waiting time is more

☐ more procedure involved

☐ service is not good

☐ lack of medical resource? Others

If yes, satisfactory level of hospital facilities provided inside the work place

☐ highly satisfied

☐ satisfied

☐ neutral

☐ dissatisfied

☐ highly satisfied

14. Do you want any extra facilities to be provided related to your health facilities?

(if yes)

please.....
.....

SAFTEY

The factors indicated below are responsible for non use of personal protective equipments (PPE) among the worker(Please give an appropriate tick mark based on your opinion)

15. PHYCOLOGICAL FACTOR:

Factors	Highly agree	Agree	Neutral	Disagree	Highly disagree
Uncomfortable working environment					
Unsatisfied organization climate					
Lack of concern for own safety					
Stress became a regular habit					

16. AWARENESS FACTOR:

Factor	Highly agree	agree	neutral	disagree	Highly disagree
inadequate knowledge about the work and machines					
Inadequate safety training					

17. MAINTENANCE FACTOR:

Factor	Highly agree	Agree	Neutral	Disagree	Highly disagree
Poor quality of PPE					
Lack of maintenances					
Equipments not available					
Lack of supervision					

18. Satisfactory level personal protective equipments provided at your work place.

- () highly satisfactory
- () satisfied
- () neutral
- () dissatisfied
- () highly dissatisfied

A STUDY ON EMPLOYEES HEALTH AND SAFETY MEASURES WITH REFERENCE TO KDR PILE FOUNDATION

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

Dr. Yamuna D. Ph.D Assistant Professor, School of Management Studies,

KAPPA TARIKESU

41410159

ABSTRACT

The project is done under the title “A STUDY ON EMPLOYEE’S HEALTH AND SAFETY MEASURES IN KDR PILE FOUNDATION”. The objective of the study includes, studying about employee’s Health and safety measures in KDR Pile Foundation, to identify whether the employee’s are satisfied with the other facilities provided to them, to identify the reasons for non use of Personnel Protective Equipment (PPE’S), to analyze the health related issues and health facilities provided to employees.

The sample size taken for the study is 150 and the sampling design used for the study is stratified random sampling. Structured questionnaire were used to collect the primary data from the employees.

The stratified tool which has been used is weighted average method and chi square test. Using this, the result of the analysis, findings and suggestions have been arrived.

1. INTRODUCTION:

Accidents and injuries in ports and docks may be caused by environmental factors like bad weather, confined spaces, poor lighting and so on and in many instances, by the need to work fast. A number of accidents could be attributed to non use of Personal Protective Equipments (PPE'S). The type and degree of hazards during dock work vary according to the nature of the cargo and the working conditions. The basic purpose of employee's health and safety is to make them feel that their organization gives more value to their life and provide best in facilities rather than any other.

2. REVIEW OF LITERATURES:

Each employer depending on his priorities gives varying degrees of importance to health and safety, it is because the government is not sure that all the employers will provide basic measure that it introduces statutory legislation from time to time to bring about some measures of uniformity in the basic amenities available to industrial workers.

3. SAMPLE DESIGN

The population comprises of the entire employee's in KDR Pile Foundation (KDR PILE FOUNDATION). But due to the time constraints it is not possible to have a complete population; the study is among the employee's of TRAFFIC DEPARTMENT which is one of the major departments in KDR PILE FOUNDATION.

The sample size of 150 respondents has been arrived for the study among the population of 186 employees.

The number of employees in traffic department was 186 and it has eleven divisions under which one third of employees have been taken from each division.

4. METHOD OF DATA COLLECTION

The source of data is generally classified as primary and secondary. According to Pauline's Young, the source of information can be classified into documentary source and field source."

The information given collected by individual and group constitute primary or field source.

Books, manuscripts, diaries, letterset are from the secondary or documentary sources.

4.1 PRIMARY DATA:

The primary data are those which are collected a fresh and for the first time and thus happen to be original in character. In this survey primary data is obtain through direct interview using questionnaire.

4.2 SECONDARY DATA:

Secondary data is collected from books, websites , magazines, and from articles.

The difference between primary and secondary data is matters of relatively data which are primary in hands of one become secondary in hands of others. This study pertains to collect data from source that is primary data.

5. STRATIFIED SAMPLING:

Under stratified sampling the population is divided into several sub-population that are individually more homogenous than the population (the different sub-population are called 'strata') and then we select each items from stratum to constitute a sample.

Since each stratum is more homogenous than the total population, we are able to get more precise estimate for each stratum and by estimating more accurately each of the components parts, we get better estimate of the whole.

6. HYPOTHESIS FRAMED:`

- H1: There is no significant difference between the gender and the factors affecting the employee health.
- H2: There is significant difference between the gender and the factors affecting the employee health.

7. STATISTICAL TOOLS:

The accuracy of the study is enhanced by the use of statistical tools. It helps in clear interpretation of quantitative and qualitative information in a way that is understandable.

The statistical tools are:

- Mann-Whitney u-test
- Chi square test

8. Mann-Whitney Test

To Find Out the Relationship between the Working Environment and the Gender
Test Statistics (a)

	Working environment
Mann-Whitney U	260.00
Wilcoxon W	3341.000
Z	-9.878
Asymp. Sig.(2-tailed)	.000

a Grouping Variable: gender

Inference:

There is a significant difference between the working environment and the gender.

9. Chi-Square Test

To find out the relationship between gender and the risk factor

Test Statistics

	Gender	Risk factor
Chi-Square(a,b)	.240	9.840
Df	1	3
Asymp.Sig.	.624	.020

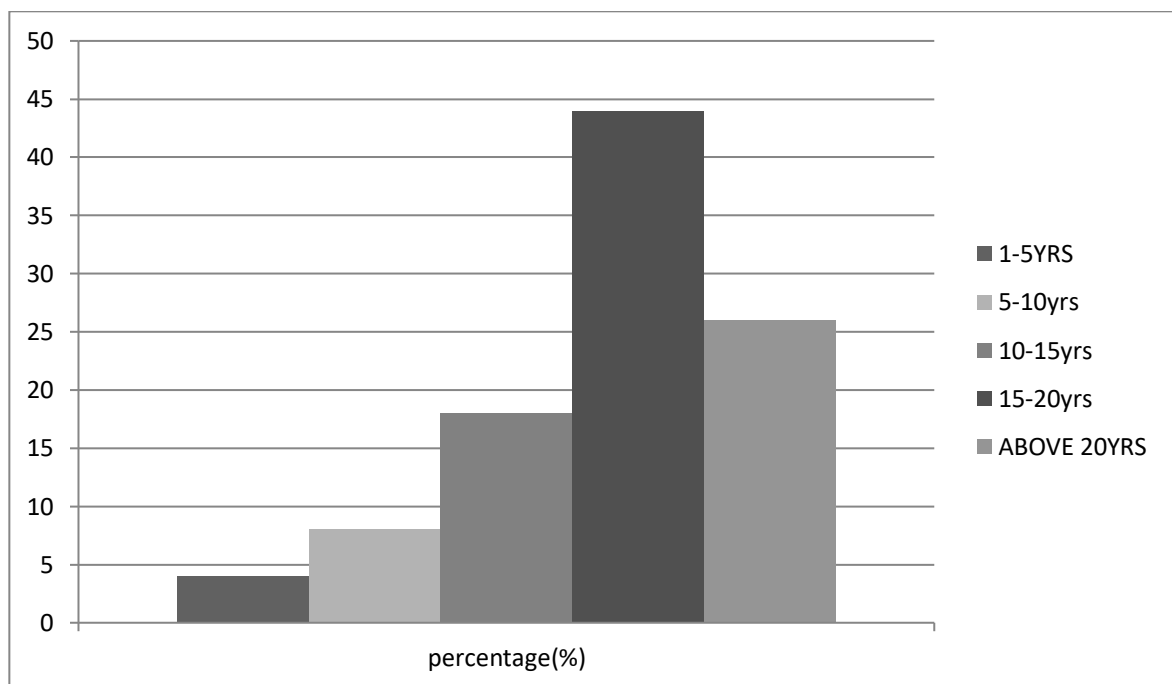
Inference:

There is a relationship between the experience and the risk factor

1. TABLE SHOWING WORKING EXPERIENCE OF THE RESPONDENTS

EXPERIENCE	NO OF RESPONDENTS	PERCENTAGE (%)
1-5 YRS	6	4
5-10YRS	12	8
10-15YRS	27	18
15-20YRS	66	44
ABOVE 20YRS	39	26
TOTAL	150	100

1.1 CHART SHOWING WORKING EXPERIENCE OF THE RESPONDENTS



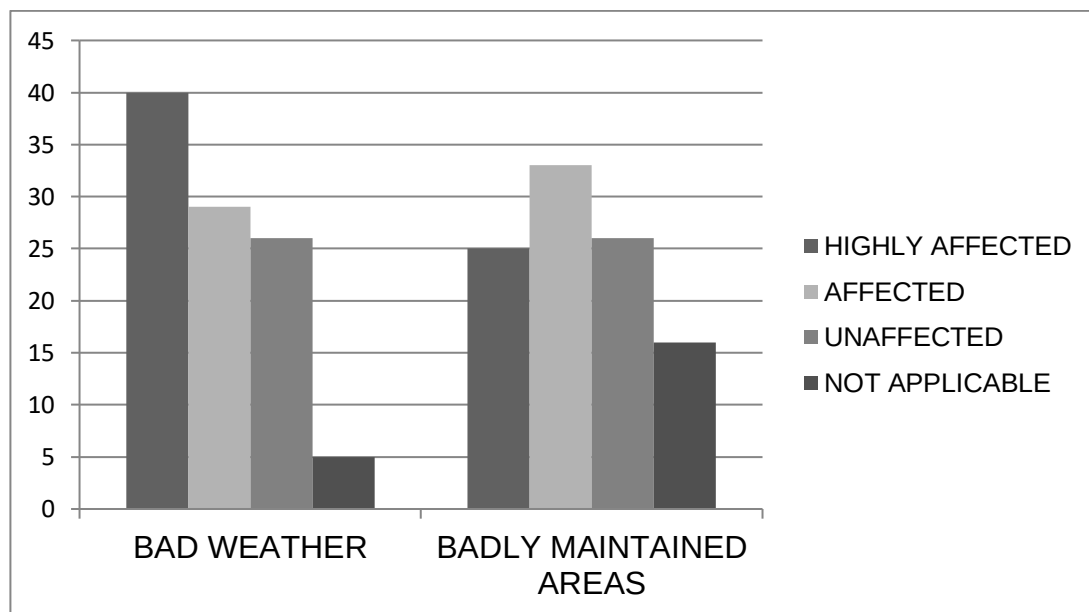
INFERENCE:

From the study it has reveals that, 18% has 11-15 yrs of experience, 44% has 16-20 yrs of experience and 26% of respondents have above 20 yrs of experience.

1.2 TABLE SHOWING ENVIROMENTAL FACTORS AFFECTING THE HEALTH OF THE RESPONDENTS

ENVIRONMENTAL FACTORS AFFECTED LEVEL	BAD WEATHER	PER (%)	BADLY MAINTAINED AREAS	PER (%)
HIGHLY AFFECTED	60	40	38	25
AFFECTED	44	29	49	33
UN AFFECTED	38	26	39	26
NOT APPLICABLE	8	5	24	16
TOTAL	150	100	150	100

1.3 CHART SHOWING ENVIROMENTAL FACTORS AFFECTING THE HEALTH OF THE RESPONDENTS



INFERENCE

From the study it reveals that, From bad weather, 69% of respondents gives positively affected, 13% of respondents gives neither positive nor negative scale and 18% of respondents gives negative scale. From badly maintained areas, 58% of respondents gives positively affected, 17% of respondents gives neither positive nor negative scale and 25% of respondents gives negative scale.

10. CONCLUSION

The world is competitive to be successful for an organization the employees plays a major role they should be motivated, satisfied, self contented in their field of specialization. Retaining of employees in an organization needs a lot of effort like better treatment, good pay factor and status in the society.

Apart from this one should be fittest in the working place which helps a lot in the productivity and smooth running of an organization. Employees are considered as the assets of an organization to their wellbeing importance should be given, so health and safety of employees must be given importance to increase the productivity of an organization.

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