

## **A STUDY ON EMPLOYEE HEALTH, SAFETY AND WELFARE MEASURES OF CHEMICAL INDUSTRY IN THE VIEW OF SALEM REGION**

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### **ABSTRACT**

Labour health, safety and welfare are the measures of promoting the efficiency of labour. The various welfare measures provided by the employer will have immediate impact on the health, physical and mental efficiency alertness, morale and overall efficiency of the worker and thereby contributing to the higher productivity. Some of the facilities and services which fall within the preview of labour welfare includes adequate canteen facilities, accommodation arrangements, recreational facilities, medical facilities transportation facilities for traveling from & to the place of work.

This paper highlights the welfare measures taken in the chemical industry, the employees' satisfaction level, and to identify the overall quality of work life of the employees. The Data collection was done through schedule. In some cases personal interview was needed at the time of filling up of questionnaire. To analyze, the collected data the researcher used simple percentage analysis, one way ANOVA and Chi-Square test. Different charts and graphs were drawn to interpret the collected data.

**KEYWORDS:** Job Satisfaction, Safety Requirements, Employee Health, Human Resource Management

### **INTRODUCTION OF THE STUDY**

Labour health, safety and welfare are the measures of promoting the efficiency of labour. The various welfare measures provided by the employer will have immediate impact on the health, physical and mental efficiency alertness, morale and overall efficiency of the worker and there are by contributing to the higher productivity. Some of the facilities and services which fall within the preview of labour welfare like adequate canteen facilities, accommodation arrangements, recreational facilities, medical facilities and transportation.

#### **The Concept of Labour Health, Safety and Welfare**

The concept of labour health, safety and welfare are flexible and widely differs with respect to the time, region, industry, country, social value and customs, degree of industrialization the general socio economic development of the people and political ideologies prevailing during a particular time frame.

It is also, molded according to the age group, sex, socio-cultural background, economic status and educational level of workers in various industries. Accordingly, the concept cannot be very precisely defined. However, experts treat it in their own way.

#### **According to the Labour Welfare Committee**

Anything that can do for the intellectual, physical, moral and economic benefits of the worker is very much essential. Whether by the employers, by the government or other agencies over and above what is laid down by law or what is normally expected of the contractual benefits for which the workers have bargained. According to the committee

on labour welfare services such services and amenities as adequate canteens, rest rooms, recreation sanitary, medical facilities, arrangement for travel to and from the place of work and for the accommodation of worker employed at a distance from their home and such other services.

### **The International Labour Organization**

Such services and facilities may to enable the persons employed to perform their work in a healthy & congenial surroundings, Insists on providing amenities conducive to good health and high morale.

### **Labour Welfare in India**

In India, labour welfare started in its broader meaning but has gradually become narrower in outlook. The main objective of their labour welfare scheme is to induce a happy employer and employee relations. Generally, it provides a psychologically satisfactory work environment. To meet the legal requirements one must provide labour welfare facilities. The social reform movement of the 20<sup>th</sup> century included within their scope, the term labour welfare.

Labour welfare aims at providing such service facilities and amenities as would enable the worker in factories and industries to perform their work in healthy congenial atmosphere to good health and high morale.

### **Necessity of Welfare Work in India**

Labour health, safety and welfare activities in India are urgently needed because India is an industrial backward country and the working conditions are not satisfactory in Indian industries. The workers are poor and illiterate. They are generally blamed for being irresponsible and lazy. Labour health, safety and welfare activities are necessary for improving their working conditions and their economic and living standards. In modern society, economic development of labourers plays a vital role in production. Hence, by uplifting labour, the economic development of the nation increases markedly which in turn increases the National productivity.

In olden days, the employers suppressed the workers by paying less salary and extracting more work that too in an unsatisfactory working environment. This has created conflict between the employer and the employee. To safeguard the employees from the ill-treatment of employer, the employee trade unions were formed to solve their genuine problems. The growth provided incentive to the labour legislation in India. The first factories Act was passed in 1881 and the same was amended from time to time. Subsequently the mines Act 01, Dock laborers Act 1934, Dock workers (Regulation and employment Act 1948, plantation labours Act 1951, Motor transport workers Act 1961 and the contract laborers Act 1070 came into existence to take care of the problems of the employees in the relevant & respective areas of domain.

### **About the Industry**

Incorporated in 1997, Synthotex Chemicals is one of the most reputed manufacturers, exporters and suppliers of superior quality dyeing chemicals. They have been industry's expert partner in the field of fabric softeners, textile chemicals, printing binders, emulsifiers, and finishing agents ever since inception. The range of products includes cleaning agents, leather binders, paint binders, flock binders, rubber mould releasing agent, liquid soaps, cleaning agents, textile dyeing chemicals.

### **METHODOLOGY**

Research in common parlance refers to a search of knowledge. It can be defined as scientific and systematic search for pertinent information on a specific task. Infact, research is an art of scientific investigation. The advanced learner is directory of current English which lays down the meaning of research as a careful investigation or inquiry

especially through search for new facts in ones desired branch of knowledge.

Research methodology is a way to systematically solve a research problem. It may be understood as a science of studying how research is done scientifically. In research it is the responsibility of the researchers to expose the research decisions and to evaluate them before they are implemented. The researcher has specified very clearly and precisely, what decisions is and why the selection is made, so that others can evaluate it.

### Research Design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The researcher has undertaken a descriptive type of research, It describes the characteristics of population or presentation of answer for the questions like where, when and how relating to a particular field. The study will present the state of affairs as it exists. This type of study mainly helps to know the past and to predict the future.

### Data Collection

While dealing with any real life problem, it is obvious that data are inadequate and hence it becomes necessary to collect data that are appropriate. Depending upon the sources of information available data can be classified as

Primary data, Secondary data

### Sample Size

The researcher has chosen the 100 employees in the Salem region..., the sample size is 100.

### Tools for Analysis

- Simple percentage
- Anova
- Chi-square

### Simple Percentage

It is the simplest tool and easy method to express the data in percentage which is also used to compare the datas.

### Anova

As a non-parametric test it can be used to determine the category of data which shows dependency or whether the two classifications are dependent.

## ANALYSIS AND INTERPRETATION

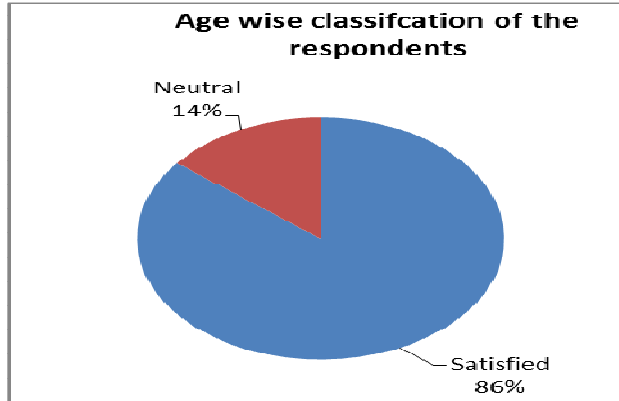
**Table 1: Age Wise Classification of the Respondents**

S. No	Age Group	No. of Respondents	Percentage %
1.	18 – 24 Years	20	20
2.	25 – 34 Years	30	30
3.	35 – 44 Years	27	27
4.	45 – 54 Years	23	23
<b>Total</b>		<b>100</b>	<b>100</b>

Source: Primary data

**Interpretation**

From the above table it could be interpreted that the majority of the respondent, 30 of them come under the age group of 25-34 years and also 27% of the respondents come under the age group of 35-44 years and 23% of the respondents come under the 45-54 years age group and 20% of the respondents belong to the 18-24 years.



**Figure 1: Chart Shows Age Wise Classification of the Respondents**

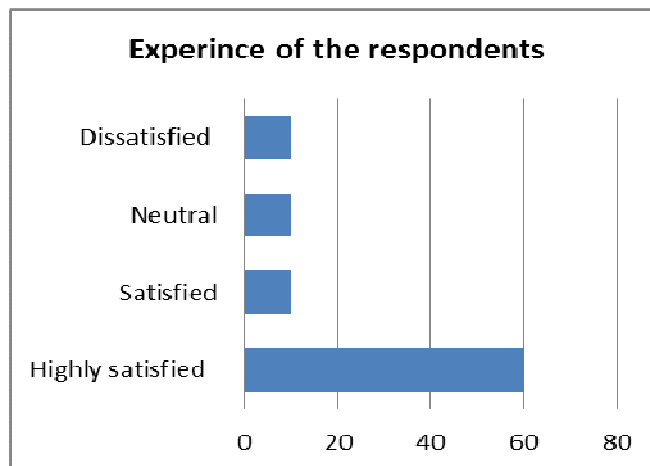
**Table 2: Table Shows Experience of the Respondents**

S. No	Experience	No. of Respondents	Percentage %
1.	Below 1 year	17	17
2.	1 – 2 year	13	13
3.	2 – 3 year	30	30
4.	3 – 4 year	10	10
5.	4 – 5 year	10	10
6.	Above 5 year	20	20
<b>Total</b>		<b>100</b>	<b>100</b>

Source: Primary data

**Interpretation**

The above table shows that 30% of the respondents are having experience to the tune of 2-3 years'. About 20% of the respondents are having more than 5 years of experience 17% of the respondents are having experience below1 year. 13% of the respondents are having 1-2 years' experience 10% of the respondents are having 3-4 years and 4-5 years' experience



**Figure 2: Table Shows Experience of the Respondents**

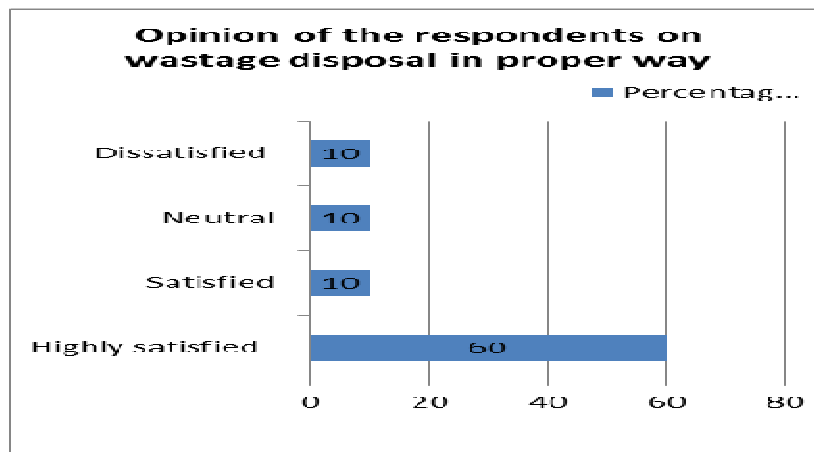
**Table 3: Opinion of the Respondents on Disposal of Waste in Proper Way**

S. No	Opinion of the Respondents	No. of Respondents	Percentage %
1.	Highly satisfied	22	22
2.	Satisfied	48	48
3.	Neutral	17	17
4.	Dissatisfied	7	7
5.	Highly Dissatisfied	8	8
<b>Total</b>		<b>100</b>	<b>100</b>

Source: Primary data

**Interpretation**

The above table that it could be found that 48% of the respondents are satisfied with disposal of waste, 22% of the respondents rate them highly satisfied, 17% of the respondents of them have neutral opinion about, 8% of the respondents opinion are highly dissatisfied, 7% of the respondents are dissatisfied with the wastages disposal.



**Figure 3: Opinion of the Respondents on Disposal of Waste in Proper Way**

**Table 4: Table Shows Periodic Health Check-Up Facility Provided by Organization**

S. No	Opinion of the Respondents	No. of Respondents	Percentage %
1.	Highly satisfied	60	60
2.	Satisfied	10	10
3.	Neutral	10	10
4.	Dissatisfied	10	10
5.	Highly Dissatisfied	10	10
<b>Total</b>		<b>100</b>	<b>100</b>

Source: Primary data

**Interpretation**

The above table that it is evident that 40% of the respondents are highly satisfied 10% of the respondents have opinioned respectively that they are each satisfied, Neutral dissatisfied and highly dissatisfied with the periodic health checkup provide by the organization.

**CHI – SQUARE TEST**

Chi-square test is a non-parametric test used most frequently by the marketing researcher to test the hypothesis procedure that help to ascertain the likelihood of hypothesized population parameter being correct. The objective of chi-square is to determine if real or significant difference exist among various groups. The sample data is presented in the form

of a contingency table with any number of rows or columns.

**Chi-Square Test ( $\chi^2$ ) =  $\sum (O_{ij} - E_{ij})^2 / E_{ij}$**

Where,

$O_{ij}$  = Observed frequency

$E_{ij}$  = Expected frequency

R – Number of rows

C – Number of columns

Expected frequency = Row total  $\times$  Column total

—————  
Grand total

## RELATIONSHIP BETWEEN EXPERIENCE AND SAFETY OFFICER WORK

**Table 5: Expected Frequency Table**

Safety Officer/Experience	HS	S	N	PS	HDS	Total
↓1 Year	9 (3.4)	3 (3.4)	0 (3.4)	4 (3.4)	1 (3.4)	<b>17</b>
1-2 Year	3 (2.6)	1 (2.6)	5 (2.6)	3 (2.6)	1 (2.6)	<b>13</b>
2-3 Year	6 (6)	1.1 (6)	9 (6)	3 (6)	1 (6)	<b>30</b>
3-4 Year	0 (2)	3 (2)	4 (2)	2 (2)	1 (2)	<b>10</b>
4-5 Year	3 (2)	2 (2)	1 (2)	1 (2)	3 (2)	<b>10</b>
↑5 year	1 (4)	5 (4)	6 (4)	4 (4)	5 (4)	<b>20</b>
<b>Total</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>100</b>

**Table 6**

O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E
9	3.4	5.6	31.36	9.22
3	3.4	-0.4	0.16	0.04
0	3.4	-3.4	11.56	3.4
4	3.4	0.6	0.36	0.10
1	3.4	-2.4	5.76	1.69
3	2.6	0.4	0.16	0.061
1	2.6	-1.6	2.56	0.98
5	2.6	2.4	5.46	2.21
3	2.6	0.4	0.16	0.06
1	2.6	-1.6	2.56	0.98
6	6	0	0	0
11	6	5	25	4.16
9	6	3	9	1.5
3	6	-3	9	1.5
1	6	-5	25	4.16
0	2	-2	4	-2
3	2	1	1	0.5

**Table 6: Contd.**

4	2	2	4	-31.561
2	2	0	0	0
1	2	-1	1	0.5
3	2	1	1	0.5
2	2	0	0	0
1	2	-1	1	0.5
1	2	-1	1	0.5
3	2	1	1	0.5
1	4	-3	9	2.25
5	4	1	1	0.25
6	4	2	4	1
4	4	0	0	0
5	4	1	1	0.25

$\Sigma (O - E)^2 / E = 37.811$

- Degree of Freedom** : **20**
- Calculated Value** : **37.811**
- Tabulated Value** : **31.40**
- Level of Significance** : **5%**

**Null-Hypothesis**

**H<sub>0</sub>:** There is no significant relationship between experience and safety office work.

**Alternative-Hypothesis**

**H<sub>1</sub>:** There is significant relationship between experience and safety office work.

**Interpretation**

From the above table, tabulated value 31.410. When compared to the calculated value 37.811 is higher than table value. The result of experience and safety officer works support to the alternative hypothesis.

There is a significant relationship between the experience and safety office work is effective by the organization.

**ONE WAY ANOVA**

The simple form of anlysis of variance is one-way model, which we use with simple random samples in order to campare the offer of a single independent on the dependent. The various elements of one way ANOVA analysis are,

- Variance between sample
- Variance within sample

SS between = Total ss between – Correction factor.

SS with in = Total ss – total ss between

Correction factor = (T<sup>2</sup>) Total Square / N

## RELATIONSHIP BETWEEN AGE AND PERIODIC HEALTH CHECKUP FACILITIES OF THE ORGANIZATION

**Table 7**

Source Variation	Sample Square	Degree of Freedom	Measures of Square	F – Ratio	F – Limit (5%)
SS between	-318.81	(K – 1) (4 – 1)3	(-318.81/3)- 106.27	-18.35	(3, 96)2.76
SS within	556.6	(n – k) (100 – 4) 96	(556.6/96)5.79		

<b>Table Value</b>	:	<b>2.76</b>
<b>Calculated Value</b>	:	<b>-18.35</b>
<b>Degree of Freedom</b>	:	<b>(3, 96)</b>

### Interpretation

The above table shows that the calculated value is lower than the table value 5% of level of significance with the degree of freedom being  $V_1 = 3$ ,  $V_2 = 96$  this analysis support the null hypothesis. This indicates there is no significant relationship between age and periodic health checkup facilities of the organization.

## RELATIONSHIP BETWEEN INCOME AND MEDICAL RE-IMBURSEMENT FACILITIES OF THE ORGANIZATION

**Table 8**

Source Variation	Sample Square	Degree of Freedom	Measures of Square	F – Ratio	F – Limit (5%)
SS between	4.49	(K – 1) (4 – 1)3	(4.49/3)1.497	0.58	(3, 96)2.68
SS within	248.02	(n – k) (100 – 4) 96	(248.02/96)2.58		

<b>Table Value</b>	:	<b>2.68</b>
<b>Calculated Value</b>	:	<b>0.58</b>
<b>Degree of freedom</b>	:	<b>(3, 96)</b>

### Interpretation

The above table shows that the calculated value is lower than the table value 5% of level of significance with the degree of freedom being  $V_1 = 3$ ,  $V_2 = 96$  this analysis support the null hypothesis. This indicates there is no significant relationship between income and medical re-imburement facilities of the organization.

### Implications

Most of the respondents satisfied (except some) with the facilities provided by the organization. Organization should maintain same in the future years to come. The 60% of the respondents are not satisfied with the medical reimbursement facilities. So industry has to concentrate towards settlement of funds internally. The firms can also provide the mask and overcoat in order to avoid the health hazards. If the firm shows interest to motivate the employees by exposing them to various training programme that would improve their performance. They can have the concentration about instructions hear to the self-acting machines.



## DISCUSSIONS

The employees of this industry enjoy not only the satisfaction of their jobs but also various facilities given by the firms. The labours extend their maximum support for the improvement of the company. The personal department takes care of the total human resources in the company. The management provides all the health safety and welfares to the employees that will help to produce better performance in the work and working environment.

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