



## A STUDY OF HEALTH AND SAFETY MEASURES AMONG EMPLOYEES AT SOUTH GUJARAT REGION

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### ABSTRACT

Health and Safety is the science that deals with the anticipation, evaluation and management of risks that arise in the workplace posing danger to the physical, mental and social wellbeing of employees in all occupations. Health and safety is possible only with the cooperation and participation of both employees and employers. Employees Safety and Health measures look upon prevention of accidents basically as an engineering problem to be tackled through proper designing of mechanical safety devices. The present study aim to this research is to review factors affecting the health and safety measures given to employees at work. Total of 100 employees were investigated by structured questionnaires. The data was analyzed using SPSS software. A Likert type scale was used to evaluate answers varying from strongly agree to strongly disagree. Normality test were applied to ensure the suitability of data & authenticity of responses. Non- Parametric & Parametric was used such as Kruskal-Wallis test & Mann-Whitney test. The study factors were such as Health & Safety, Employees Participation, Workplace Hygiene, Accident & Hazard Prevention and Medical Facility.

**Keywords:** - Health & Safety, Employees Participation, Workplace Hygiene, Accident & Hazard Prevention & Medical Facility

### 1. INTRODUCTION

Occupational safety and health (OSH), also commonly referred to as occupational health and safety (OHS), occupational health, or occupational safety that is provided to employees and workers working in industry.

Occupational health and safety refers to programs, policies, and procedures that safeguard the safety, well-being, and health of everyone who works or works in a job. Any health and safety program's purpose is to establish the safest possible working environment and to reduce the risk of workplace accidents, injuries, and fatalities. Customers, the general public, and anybody else who might be affected by the work environment are all protected under occupational health and safety. When health and safety measures are implemented correctly, they can aid in the prevention of accidents and the reduction of the risk of employee injury and disease.

### 2. LITERATURE REVIEW

**(Kumar, Amit(2016))** – “A study of industrial health and safety climate in automobile sector” objective of this research project was to examine the employees' satisfaction regarding industrial health and safety measures of the organization. To examine the health and safety provisions followed by the organizations in case of emergencies. The present study is an attempt to know the relationship between Health and safety and employees' satisfaction in the automobile sector in Haryana.

**(Naik Yagneshkumar Sureshchandra 2017)** – A study of Multidisciplinary Approach towards Occupational Safety and Health with Special Emphasis to Behavior Based Safety in Large Scale Steel Manufacturing Unit. The objective of research is to conduct behavioral safety training & implement BBS in steel industries, to train workforce to create BBS leaders for proper implementation of BBS at site.

**(Singh, Ajay Kumar 2013)** - Study of Safety System for Unsafe Acts Conditions at Construction Workplace. The objective of study is to study the workplace safety system and, to ascertain the challenges that the present status of the safety. The unsafe acts and unsafe conditions in construction industry is comparatively high as most of the organized factory.

**(Manavalani2013)** - Study on The Occupational Health and Safety Awareness Among the Unorganized Sector Workers. Objective-To measure the level of OH&S awareness among the unorganized workers of various sectors and to devise the measures to improve the prevailing OH&S conditions. . Sample size a sample of 100 workers in each sector was inquired. There was a mixed response from both genders of workers in each industry.

**(Rani, Anita 2014)** - In the article “A study of health and safety standards in small and medium enterprises in Haryana” objective -To study the implementation of health and safety standards in small and medium enterprises in Haryana. It has been found in the study that most of the respondents were agreed to the implementation status of Health and Safety standards in small scale and medium enterprises in Haryana.

**RESEARCH OBJECTIVES**

The aim of the research is to study the following objectives:

- Health and Safety measures provided to each and every employee.
- To identify and analyze the health and safety hazards at the work site.
- To understand the awareness of safety & health, among the employees provided by the organization.

**RESEARCH METHODOLOGY**

This study is based on primary data as the secondary information is not suitable for quantitative scale measurement. A detailed structured survey questionnaire was used to collect data from the participants' convenience sampling method from major big companies. At the end data of 100 respondents were received. The survey was conducted during 17<sup>th</sup> January 2022 to 31<sup>st</sup> January 2022 which was filled through Google forms (online mode). Statistical methods were used to analyze the data that we collected from the respondents is statistical software SPSS for the statistical analysis. During this study, the responses and information collected from the survey were tested using statistical techniques like Kolmogorov-Smirnov & Shapiro-Wilk were used to test normality. The data collected from 100 respondents were analyzed using descriptive statistics.

**HYPOTHESIS DEVELOPMENT**

Based on factors affecting Health and Safety measures among employees, the following hypothesis is developed:

**Ho1:** There is no statistical significant difference in the opinion of respondents belonging to different genders for different questions regarding health and safety measures.

**Ho2:** There is statistical significant difference in the opinion of respondents belonging to different genders for different questions regarding health and safety measures.

**Ho3:** There is no statistical significant difference in the opinion of respondents belonging to different age groups

**Ho4:** There is statistical significant difference in the opinion of respondents belonging to different age groups.

**FINDINGS OF THE STUDY**

Variable	Frequency	Percent (%)
<b>Gender (n=101)</b>		
Male	100	100.0
Female	58	58.0
	42	42.0
<b>Age (n=100)</b>		
21-30		
31-40	44	44.0
41-50	29	29.0
Above 50	15	15.0
	12	12.0

<b>Qualification (n=100)</b>		
<b>HSC</b>		
<b>Graduate</b>	<b>17</b>	<b>17.0</b>
<b>PG</b>	<b>49</b>	<b>49.0</b>
<b>Above P.G</b>	<b>26</b>	<b>26.0</b>
	<b>8</b>	<b>8.0</b>
<b>Marital Status (n=100)</b>		
<b>Unmarried</b>		
<b>Married</b>	<b>52</b>	<b>52.0</b>
	<b>48</b>	<b>48.0</b>
<b>Work Experience (n=100)</b>		
<b>Less than 1 year</b>		
<b>1-3 years</b>		
<b>3-5 years</b>	<b>22</b>	<b>22.0</b>
<b>More than 5 years</b>	<b>30</b>	<b>30.0</b>
	<b>25</b>	<b>25.0</b>
	<b>23</b>	<b>23.0</b>

From the above table respectively, it is found that 58% of respondents are male and 42% of respondents are female. So here we can interpret that the majority of the respondents are male. From the above table respectively, it is found that 44% of respondents are from the age group of 21-30, 29% respondents are from the age group of 31-40, 15% of respondents are from the age group of 41-50 and 12% of respondents are from the age group of 50 above respectively. So it can be interpreted that majority of the respondent belong from the age group of 21-30 which consists a group of youth. From the above table respectively, it is found that 17% of respondents are selected on HSC basis, 49% of respondents did graduate, 26% of respondents did Post Graduate and 8% of respondents have done above Post-Graduate. So, it can be interpreted that majority of the employees are Graduated and highly literate. From the above table respectively, it is found that 58% of respondents are unmarried and 48% of respondents are married. So, it can be interpreted that majority of the employees are unmarried. From the above table respectively, it is found that 22% of respondents are having less than 1 year of work experience, 30% of respondents are having 1-3 years of work experience, 25% of respondents are having 3-5 years of work experience, 23% of respondents are having more than 5 years of work experience. It is clear that the majority of employees are having 1-3 years of work experience.

#### **MANN WHITNEY TEST**

Mann Whitney test has been applied in the present study to find the responses of respondents of different genders.

**H<sub>0</sub>:** There is no statistical significant difference in the opinion of respondents belonging to different genders for different questions regarding health and safety measures.

**H<sub>1</sub>:** There is statistical significant difference in the opinion of respondents belonging to different genders for different questions regarding health and safety measures.

<b>Ranks</b>				
	Gender	N	Mean Rank	Sum of Ranks
Q12.1 How do you rate the Health measures that are followed by your company from (1-5), 1 being lowest and 5 being highest ? [Cleanliness]	<b>Male</b>	<b>58</b>	<b>52.84</b>	<b>3065.00</b>
	<b>Female</b>	<b>42</b>	<b>47.26</b>	<b>1985.00</b>
	<b>Total</b>	<b>100</b>		
Q12.2 How do you rate the Health measures that are followed by your company from (1-5), 1 being lowest and 5 being highest ? [Drinking water]	<b>Male</b>	<b>58</b>	<b>55.66</b>	<b>3228.50</b>
	<b>Female</b>	<b>42</b>	<b>43.37</b>	<b>1821.50</b>
	<b>Total</b>	<b>100</b>		
Q12.3 How do you rate the Health measures that are followed by your company from (1-5), 1 being lowest and 5 being highest? [Washroom]	<b>Male</b>	<b>58</b>	<b>53.67</b>	<b>3113.00</b>
	<b>Female</b>	<b>42</b>	<b>46.12</b>	<b>1937.00</b>
	<b>Total</b>	<b>100</b>		
Q13.1 Please Mark on answer based on your perceptions towards following statements? [Has your company been accident / incident free for the last six months?]	<b>Male</b>	<b>58</b>	<b>46.96</b>	<b>2723.50</b>
	<b>Female</b>	<b>42</b>	<b>55.39</b>	<b>2326.50</b>
	<b>Total</b>	<b>100</b>		
Q13.2 Please Mark on answer based on your perceptions towards following statements? [Does your company ensure good Health of the employees?]	<b>Male</b>	<b>58</b>	<b>47.44</b>	<b>2751.50</b>
	<b>Female</b>	<b>42</b>	<b>54.73</b>	<b>2298.50</b>
	<b>Total</b>	<b>100</b>		
13. Please Mark on answer based on your perceptions towards following statements? [Do you have suitable and sufficient fire warning and evacuation system?]	<b>Male</b>	<b>58</b>	<b>48.48</b>	<b>2812.00</b>
	<b>Female</b>	<b>42</b>	<b>53.29</b>	<b>2238.00</b>
	<b>Total</b>	<b>100</b>		
j13. Please Mark on answer based on your perceptions towards following statements? [Do you have a proper Health and safety at workplace?]	<b>Male</b>	<b>58</b>	<b>47.92</b>	<b>2779.50</b>
	<b>Female</b>	<b>42</b>	<b>54.06</b>	<b>2270.50</b>
	<b>Total</b>	<b>100</b>		

**Mann-Whitney test** is a nonparametric test of the null hypothesis that, for randomly selected values  $X$  and  $Y$  from two populations, the probability of  $X$  being greater than  $Y$  is equal to the probability of  $Y$  being greater than  $X$ . The test compares two populations. The null hypothesis for the test is that the probability is 50% that a randomly drawn member of the first population will exceed a member of the second population. From the above table respectively, it is found that the overall responses of respondents belonging to different genders are quite mixed. Hence, a clear-cut 1st or 2nd rank could not be given to respondents belonging to different genders for influencing factors of health measures followed by the company.

The  $\chi^2$  is not significant in case all of the questions at 5% level of significance indicating that our null hypothesis is accepted. **This indicates that difference in the opinion of respondents belonging to different genders is not significant, but it's by chance.**

#### **KRUSKAL-WALLIS TEST**

Kruskal Wallis test has been applied in the present study to find the responses of respondents belonging to different age groups.

**H<sub>0</sub>**: There is no statistical significant difference in the opinion of respondents belonging to different age groups

**H<sub>1</sub>**: There is statistical significant difference in the opinion of respondents belonging to different age groups.

<b>Ranks</b>			
	<b>Age Group</b>	<b>N</b>	<b>Mean Rank</b>
12. How do you rate the Health measures that are followed by your company from (1- 5) , 1 being lowest and 5 being highest ? [Cleanliness]	21-30	44	47.43
	31-40	29	53.86
	41-50	15	53.60
	50 above	12	49.75
	Total	100	
12. How do you rate the Health measures that are followed by your company from (1- 5) , 1 being lowest and 5 being highest ? [Drinking water]	21-30	44	49.85
	31-40	29	51.60
	41-50	15	54.63
	50 above	12	45.04
	Total	100	
12. How do you rate the Health measures that are followed by your company from (1- 5) , 1 being lowest and 5 being highest ? [Washroom]	21-30	44	49.11
	31-40	29	50.57
	41-50	15	52.00
	50 above	12	53.54
	Total	100	
13. Please Mark on answer based on your perceptions towards following statements? [Has your company been accident / incident free for the last six months?]	21-30	44	44.83
	31-40	29	52.90
	41-50	15	54.70
	50 above	12	60.25

	Total	100	
13. Please Mark on answer based on your perceptions towards following statements? [Does your company ensure good Health of the employees?]	21-30	44	47.76
	31-40	29	49.55
	41-50	15	51.63
	50 above	12	61.42
	Total	100	
13. Please Mark on answer based on your perceptions towards following statements? [Do you have suitable and sufficient fire warning and evacuation system?]	21-30	44	46.07
	31-40	29	48.47
	41-50	15	62.17
	50 above	12	57.08
	Total	100	
		44	44.48
13. Please Mark on answer based on your perceptions towards following statements? [Do you have a proper Health and safety at workplace?]	21-30		
	31-40	29	46.34
	41-50	15	60.03
	50 above	12	70.71
	Total	100	

**Kruskal-Wallis test** is used to determine whether or not there is a statistically significant difference between the medians of three or more independent groups.

This test is the nonparametric equivalent of the one-way ANOVA and is typically used when the normality assumption is violated. This test that can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. **From the above table respectively, it is found that  $\chi^2$  is not significant in case of all the above questions at 5% level of significance indicting that our null hypothesis is accepted. This indicates that difference in the opinion of respondents belonging to different age groups is not significant, but it is by chance.**

#### **LIMITATION OF THE STUDY**

The study was limited to, the several selected components of health and safety measures provided to the employees. Therefore the scope of this study was limited to only few factors in one particular environment and particular company. An environment study or comparative analysis taking more variables between two or more cultural bases and considering several companies might have provided different and wider conclusions.

- Employees may not have given the right answers for the questionnaire because he/she does not want to be unfavorable to the organization.
- The employees may have got influenced from their peers and may have answered as same as them.

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### 3. CONCLUSION

Based on the above analysis and results it is revealed that, the employee's health & safety measures are adopted in the company and are provided to the employees according to the requirements of the factories act. The above result highlights that the awareness of employee's health safety and welfare in the work place is adequate and only a few of them are unaware about the activity. The role of management in implementing health safety and in the organization is very effective. From the last conclusion study we get to know that how much time, money and effort is put by the company for protecting the lives of employees as well as ensuring the success of the company.

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