



Employee Health and Safety Measures in the Manufacturing Industry: Insights from a Diversified Workforce

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Abstract

Employee Health and Safety Measures is one of the major importance that helps in the good working of the organization. Employers frequently set up an occupational and safety management system to handle problems, guarantee a safe working environment, and ensure that the employees are in the best possible health. The manufacturing industry has received relatively little attention thus far compared to other working categories, and this study aims to address the need for increased research on safety hazards and worker wellness in this industry. This study is to understand the Satisfaction on health and safety measures for diversified workforce during the pandemic in a sizing mill. This study also done to analyze factors that influence employee satisfaction. A descriptive

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study has been conducted through a structured questionnaire method. The primary data is collected from the 239 respondents. The data collected were analyzed using Statistical Package for Social Sciences (SPSS) Software using different statistical tools such as Percentage Analysis, Correlation, Regression, Chi-Square, and Independent T-test Analysis. The study says that the independent variables like Employee Awareness and Employee Measures have a positive relationship with the dependent variables Employee Satisfaction. From the findings we suggested that these sizing mills should provide more training on the use of PPE Equipment and the company should educate the diversified workforce on the health and safety measures of the pandemic. Further research can be done with more factors deeply. It can also increase the respondent size to have clear cut results.

Keywords: Employee health safety measures, employee satisfaction, Diversified Workforce

1. Introduction

The pandemic has caused a standstill in business and organizations are more concerned about the safety of their employees, that too for the diversified employees, who have made all their life depending on the work from other states. This diversified workforce is mainly made to have a coordination among the people. Workplace enhancements have been introduced to protect their health and safety, but adjusting to them is stressful for everyone involved. This study aims to address the need for increased research on pandemic especially safety hazards and worker wellness in the manufacturing industry. It emphasizes the importance of job re-attachment to job engagement and the need for industries to ensure the safety and well-being of their diversified

employees. Workforce diversity should have serious concern for the prosperity and well-being of their laborers both on and off the job to guarantee employment happiness and boost employee productivity. This research looks at diversified employee satisfaction with health and safety measures during the pandemic in sizing mills.

2. Review of Literature

A study by **Iqbal et al. (2017)** investigated perceptions of safety culture in a diverse manufacturing workforce. The study found that employees with different backgrounds have different perceptions of safety culture, which can affect safety compliance. The research highlighted the need to develop a comprehensive strategy to address the unique needs of a diverse workforce.

Li, K., & Griffin, M. A. (2022). The experience of Covid-19, workers' safety practices, and thus the well-being results of job satisfaction are all investigated during this study. Thus, a significant element of corporate safety programs is also a managerial commitment to safety. A strong safety culture inside an organization, which successively encourages safety results, is indicated by a high level of managerial commitment to safety. Therefore, Job satisfaction could also be a positive spirit exhibited by folks that positively evaluate their work experience and will be a key determinant of employee well-being. Thanks to COVID-19 workers encounter psychological uncertainty as a result of changes in their working conditions, methods, and environment, and this psychological uncertainty hurts their attitudes, feelings, and experiences at work.

Guzman, J., Recoco, G. A. (2022). The analysis anticipates that the oil and gas industry's workplace will be safe during the pandemic. They use the Partial method of structural equation modeling in this. This model might consist of a few non-parametric techniques that don't consider distributional assumptions and can evaluate small sample sizes. Their primary goal is to identify any potential markers

of the security and welfare of the workplace. They primarily focus on addressing the gaps in exposure to workplace hazards, workplace policies and procedures, perception of a culture of health and safety, self-awareness of health and safety procedures and responsibilities, and preventative measures for preventing the transmission of pandemic in the workplace. In order to collect the data, they use email and web-based entertainment approaches. Males made up the majority of the responders, and most of them worked on technician sites. This study involves knowing that the risks posed by pandemic have no effect on worker health and safety in the oil and gas sector.

Sørengaard, T. A., & Saksvik-Lehouillier, I. (2022) This study looks into sleeplessness among workers in vocations that were critical to society's operation during the COVID-19 pandemic. Many of these employees have increased work stress and a higher risk of infection as a result of their jobs. Whereas, **Vu, T. V., Vo-Thanh, T.(2022) and Bajrami, D. D., Terzic, A. (2021)** This study focuses on organisational citizenship behaviour, workplace safety practises, and job insecurity among employees during COVID-19. WSPs are strategies, policies, measures, processes, and other actions that are taken to ensure the health and safety of the organization's personnel.

Novak, H., Tadic, I.(2021) This study attempted to demonstrate how pharmacists implemented safety precautions, altered their work schedules and workloads, and catered to particular patient needs. **Brown, C. E., Schwatka, N.(2021)** This study looks at how workers in a sample of small businesses perceive the settings of safety and health for their overall well-being during the COVID-19 outbreak. They looked into how COVID-19 affected employees' personal and professional lives as well as how they felt about the environment's health and safety.

Orzeł, B., & Wolniak, R. (2021). The article examines the quality assurance of protective measures for healthcare workers during the pandemic. Otherwise, the pandemic may not only fail to be contained

but may spread due to insufficient organization. **Salem, I. E., Elbaz, A. M(2021)** Through the moderating effects of perceived overall organisational justice and ethical climate, we looked at the effects of government support of hotels on employees' support (specifically, health support, staff retention, 13 and staff training) and, as a result, on employee job satisfaction and organisational commitment during the COVID-19 pandemic.

3. Research Gap

This study, “ A study on the satisfaction of health and safety measures in sizing mills for diversified workforce,”. It has provided helpful insights into the organizational environment, including the working conditions, safety, and welfare of employees during pandemic. There are several studies conducted on the health and safety of frontline workers, health care workers, and construction site workers, and mostly on the healthcare industries the survey conducted but there are very few studies on employee health and safety and their satisfaction in the textile industry. This is based on the Diversified Workforce particularly in sizing mills.

4. Objectives

To determine and measure the level of employee satisfaction towards the health and safety measures in a diversified environment that are implemented during the pandemic and help the business perform at a higher level and how far the workforce diversity is satisfied with the covid safety measures among employees.

5. Research Design

Descriptive research is the method used in this study. The descriptive strategy was chosen because it focuses on outlining the current state of the situation

The respondents for this study were chosen using a systematic random sampling method and using the questionnaire information was gathered

from 239 respondents. Tools used for the study are simple percentage method, Chi-square test, Mann-Whitney-U test

Limitation of the study is the respondents have replied to the queries from their memory, therefore recall bias and personal bias are possible and the respondents were unable to provide an exact response to a particular question.

6. Data Analysis and Interpretation

6.1 Percentage Analysis

| Demographics | Categories | Frequency | Percent |
|--------------------------------|--------------|-----------|---------|
| From which part of the Country | North Indian | 103 | 43 |
| | South Indian | 136 | 56.9 |
| Age (in years) | 20 – 35 | 70 | 29.2 |
| | 36 – 45 | 74 | 30.9 |
| | 45 – 55 | 95 | 39.7 |
| Gender | Male | 192 | 80.3 |
| | Female | 47 | 19.6 |
| Booster Vaccine | Yes | 97 | 40.5 |
| | No | 142 | 59.4 |

Interpretation:

From the above table, we could see all the demographic variables are calculated such as the region, age, gender and vaccination. We could see that the 43% of employees are from the North India, 56.9% employees are from the South India. Likewise in Age

factor, almost 29.2% of the employees are with the age group between 20 – 35 years, 30.9% of the employees are with the age group of 36-45 years, almost 39.7 of the employees are with the age group of 45-55 years. In gender we could see out of 239 employees, 192 employees are male and 47 employees

are female. Out of all these 239 employees half of them were vaccinated with booster dose and half of them were dint get their booster vaccination.

6.2 CHI-SQUARE

H0: There is no significant association between diversified location of employees and the financial compensation for the diversified workers

H1: There is significant association between diversified location of employees and the financial compensation for the diversified worker

| Diversified Location of Employees | Financial Compensation For The Diversified Workers | | | | |
|-----------------------------------|--|------------------|---------|-----------|-----------------------------------|
| | Dissatisfied | Highly Satisfied | Neutral | Satisfied | Total |
| North India | 25 | 10 | 13 | 61 | 109 |
| South India | 19 | 24 | 19 | 68 | 130 |
| Total | 44 | 34 | 32 | 129 | 239 |
| | Value | | Df | | Asymptotic Significance (2-Sided) |
| Pearson Chi-Square | 6.291 | | 3 | | 0.98 |
| Likelihood Ratio | 6.425 | | 3 | | 0.093 |

Interpretation

From the above table, Pearson chi-square value is 6.291 and significance value is 0.98 which is less than the critical value of 0.05. Therefore H0 is rejected. So there is significant association between diversified location of the employees and the financial compensation for the diversified workers.

6.3 Mann Whitney-U Test

H0: There is no significant difference between overall satisfaction of the Employees with the health and Employees in all the mills are from which part of the country

H1: There is significant difference overall satisfaction of the Employees with the health and Employees in all the mills are from which part of the country

| | Overall satisfaction of the Employees with the health and wealth measures | N | Mean Rank | Asymp.sig (2-tailed) |
|---|---|-----|-----------|----------------------|
| Employees in all the mills are from which part of the country | Satisfied | 148 | 121.21 | 0.689 |
| | Unsatisfied | 91 | 118.03 | |

Interpretation

From the above table, we could see that the significant value is 0.689 which means the relationship between the overall satisfaction of the employees with the health and health measures taken in all mills and also the part of the country from which there were from. Here we accept the null hypothesis stating that there is no significant between overall satisfaction of the Employees with the health and Employees in all the mills are from which part of the country

7. Findings

- The regression study revealed that employee measures significantly affect employee satisfaction.
- The regression analysis reveals that employee awareness significantly affects employee satisfaction.
- According to an independent T Test analysis, there is no discernible relationship between employee satisfaction and marital status.

- The independent T Test analysis reveals that there is no discernible relationship between gender and employee satisfaction and so on
- The analysis revealed that 95.8% of respondents were familiar with the vaccine camp.
- The data reveals that the majority (60%) of respondents were aware that wearing a mask in a factory
- According to the analysis, most respondents (64.2%) were aware that training on the usage of PPE equipment was available.
- The analysis reveals that the majority of respondents (60.2%) are satisfied with the overall satisfaction of health and safety measures.
- The analysis reveals that the majority of respondents (56.7%) are aware of the first aid measures at the factory
- The data reveals that most respondents (60.0%) are aware that workers should maintain a social distance.

8. Suggestions

- The company should provide more awareness of employee safety and health measures.
- More training should provide to employees for the usage of PPE Equipment.
- The company should educate the employee on the health and safety measures of the covid-19.

9. Conclusion

The study demonstrates that the respondents' opinions on the health and safety precautions taken during the covid in the company are valid. According to the report, most respondents are pleased with the health and safety policies currently in place at the business. While some of the health and safety measures that the respondents found unsatisfactory included worrying about how their family, themselves, or their co-

workers might be affected by COVID, COVID risk management by the company, and the physical safety conditions of the workplace, the management may take steps to convert those into highly satisfactory. To raise the degree of employee satisfaction with these health and safety measures, management may concentrate on these areas

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