Original Article
ISSN (Online): 2582-7472

ShodhKosh: Journal of Visual and Performing Arts
June 2024 5(6), 1622–1630

AN EMPIRICAL STUDY OF THE GLASS INDUSTRY'S CORE VALUES AND ITS IMPACT ON THE SAFETY OF WORKERS WITH SPECIAL REFERENCE OF SAFETY TOOLS

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DOI
10.29121/shodhkosh.v5.i6.2024.2483

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ABSTRACT

This research paper explored the need for safety measures and safety tools for worker's life balance from the perspective of glass industries core values. Safety plays a significant part in the balancing of workers' lives & safety tools are the weapons to win the hassle-free journey of production. The hassle-free workable area is the right of every worker, which enhances their life span and empowers them to be a part of qualitative products and services. Working people's worth and values represent industrial core values. These core values are the base of industrial goodwill, growth, and mouth-to-mouth brand promotion. Satisfied workers are themselves the conveyors of their industry's goodwill. They play that critical part that the poster, banner, brochure, or any other mode of brand promotion never played. As per the Cambridge Dictionary, "a core value is a value or belief that is more important than any other." Industrial work with core values gives a sensible approach in terms of long-term success goals. The better the core values, the more chances you have to get success in the long term.

1. INTRODUCTION

The culture of safety is the emerging issue in all kind of production industry. According to Hale and Hovden, "We live nowadays in the "third age of safety". Wherein the focus is no longer only on technology (the first age) or organizational measures (the second age).

Chapter (III) of the Factory Act discloses that no workers are allowed to lubricate the machinery when it is in motion, and young people and women should not be allowed to do the lubricating task or make any adjustment in part of a prime mover of any machinery.

Figure: 1.1 P.P.E. or Safety kit is essential for manufacturing units.

Industrial hazards cause many diseases, such as noise hazards, direct exposure to dust, and heat, which create airborne respiratory diseases like tuberculosis and pneumonia, decreased function in pulmonary areas, heat strokes, and skin cancer.

Safety kit use during working hours decreases the percentage of industrial hazards. Employees should wear safety goggles to protect them from dust, fumes, and foreign bodies, as well as protect their eyes from harmful chemicals. Earplugs help reduce excess noise of more than 85 decibels of machinery, which causes hearing issues. If the employer ignores this safety tool, it may cause permanent deafness in workers. Gloves are other protective tools that cover the hand, and these gloves are heat resistant, support full palm till elbow, protect from hand diseases, and are made of cotton. Safety shoes protect them from nailing complex metallic substances in feet and give protection if suddenly the foot is put on the melted hot glass. These shoes are slip-resistant and prevent entering dust directly into the feet.

2. CONSISTENCY

Consistency creation in an industry helps take it to the next level by enabling everyone to work in a harmonious environment towards common goals. This is especially important in the Firozabad Glass Industrial sector as today's these companies employ thousands of people, and they typically suffer from a lack of internal coordination and contradictions from within. The Firozabad Glass Industries has a below-level score and needs to improve consistency. Integration and coordination between workers can be improved by setting goals and performance metrics that improve collaboration. This is especially true given that many workers are skillful, but the companies do not reinforce them to up the level of the job. If these companies and workers are effectively co-harmonized, the workers would have a positive experience and optimum satisfaction. A classic example is the transformation programs that Other Glass Industries execute for workers involving many service lines to collaborate and deliver a single project for the workers. If the units are incentivized to work together to ensure they will be rewarded for collective success, then execution improves considerably.

Large teams of workers have frequent disagreements, and in such cases, employers need to ensure that things are amicably and quickly settled. However, to do so, the workers must have a sense of shared respect and common values around which the agreement can be driven.

3. OBJECTIVES OF THE STUDY

To assess core values in the industry and identify their impact on workers' safety.

4. VARIABLES SELECTED FOR THE STUDY

The industry's core values are considered the independent variable, and the safety of workers is treated as a dependent variable.

5. METHODS AND RESEARCH DESIGN

The research design in the thesis is the blueprint for conducting the research work, and it explores the detailed procedure essential for obtaining the vital information needed to make the framework of research and solve the research problem. A good research design that ascertains the research will conduct efficiently and effectively.

6. THE SAMPLE SIZE

As to the survey, the population size of this study is 4000 workers, including supervisors, so 10% of 4000 =400 will be the study's sample size.

All glass industry employees are the population for this study, and the total no. of labor/workers and supervisors in are sample size that will be surveyed for the study is 400.

- ❖ No. of Organizations –10
- 5 Organizations from Firozabad Glassware Industry
- 5 Organizations from Other Glassware Industry of India.

7. SAMPLE TECHNIQUE USED FOR COLLECTING DATA

Random & convenience sampling is used to collect data for the study. This study data is collected from secondary and primary sources. Two types of questionnaires are used to collect primary data- a corporate culture-based questionnaire and a labor welfare-based questionnaire. Questionnaire No.1 is based on trait consistency with three sub-traits core values, related questions.

Questionnaire 2s' As per the labor welfare provision of factories act 1948 in Firozabad and Other Glass Industries for the welfare of labor like health provision, statutory welfare provision, holiday/leave provision, working hours/overtime provision, the safety of workers provision. Part (C) shows social responsibility facilities like social security provision.

The components of secondary data having information about the social environment of glass industries, Human Resource Management, CSR, Corporate Culture In Industries, Ethical Organization, Cluster Diagnostic Report, and Action Plan Glass Cluster, Firozabad Employee motivational programs, journals, books, Google, articles, previous surveys, and CDGI reports of different glass industries. The sample size was 400 of 10 glass industries approached for this study. For collecting the primary data, a direct survey method was used in which the factory workers and supervisors filled out their questionnaires themselves, and many of them provided their addresses and signatures. They take the survey seriously for their future benefit and encourage to do their welfare. This study questionnaire was distributed in areas of glass industries, between 160 workers and 80 supervisors each.

8. QUESTIONNAIRE DESIGN AND SCALING PATTERN

Two questionnaires with four-part were designed to collect information from the glass industries of India. Questions were asked to the respondents based on the trait of corporate culture and, demographic profile & labor welfare provisions. Rate each statement respondent as per their level of satisfaction using '5 points Likert scale (1: Strongly Dissatisfied, 2: Dissatisfied, 3: Neutral, 4: Satisfied, 5: Strongly Satisfied).

9. STATISTICAL TOOL USED FOR THE STUDY

A brief discussion on the data analysis procedure has been presented for this study. This procedure is operated through survey measures, such as mean, percentile, percentage, etc. Respondents' Responses will be coded and entered into the data, and then the data will be analyzed through (SPSS). The following method will be performed on data with Statistical analysis. Descriptive statistics will describe the sample, show the numbers and percentages of items that fall into categories, and measure the central tendency.

ANOVA tool is used to know the difference between variables, and correlation analysis will determine the relationship between dependent and independent variables. Regression analysis will be applied to know the influences of core values (Independent variable) on safety of workers (dependent variable).

10. LIMITATION OF THE STUDY

- There are differences in the personal perspective of each employee, due to which they may be biased to some extent and affect the accuracy and dependability of the data.

- All levels of employees and supervisors are included in this study may; be that their family culture and background impacted the approach of answers.
- More industries can be considered for the study/research in-depth that may be used for the welfare of labor and employee mental and economic development. This aspect may be able to provide new parameters of success for Firozabad Glass Industries.
- For qualitative improvement of feedback from illiterate workers and suppliers, support from the literate workers & supervisors can be sought, and their positive attitude may be shown in the entire feedback. Timely and appropriate feedback helps in better results.

11. SAMPLE AREA

For the aim of the study, the Firozabad Glass Industry and the Other Glass Industry have been taken as the field of study.

12. DATA ANALYSIS

A general analysis of the study indicates that using core values of industry enable workers to be more professional and technically strong to reduce the loss and increases the productivity of goods. The findings show a significant relationship between the core values and safety of workers. The below score represents the analysis findings based on the sub-trait of dimensions of corporate culture-core values under consistency). ANOVA tool is used to know the difference between variables, and correlation analysis will determine the relationship between dependent and independent variables. Regression analysis will be applied to know the influences of core values (Independent variable) on safety of workers (dependent variable).

13. HYPOTHESIS

H_0 : The core values of industry do not influence the safety of workers

H_1 : The core values of industry influence the safety of workers

- **INDEPENDENT VARIABLE**- CORE VALUES
- **DEPENDENT VARIABLE -** SAFETY OF WORKERS

Respondents Response on the trait Core Values													
FGI							OGI						
1	2	3	4	5	Mean	Percentile	1	2	3	4	5	Mean	Percentile
95	38	29	20	18	2.14	42.8	1	4	7	18	170	4.75	95.2

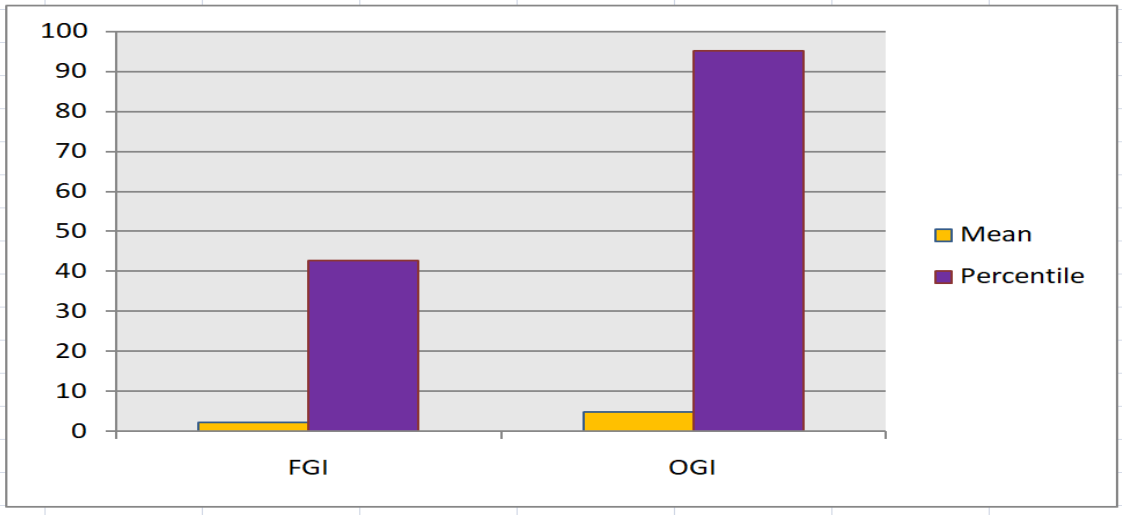

Fig.1. Represent mean score and percentile score of core values with the special reference of safety of works specifically safety tools in Firozabad Glass Industry & Other Glass Industry

Description	Likert Scale Level of Satisfaction					
	1	2	3	4	5	
Adaptability Sub Trait Creating Change	36 48 50 31 35 = 200 ×1 × 2 × 3 × 4 × 5 38 + 96 + 150 + 124 + 175 = 583 Total Scores Mean scores = Total Scores/ Total Number of Sample = 583/200 = 2.915 Percentile = Mean scores × 100 /Highest Possible Mean scores = 2.915 × 100/5 = 58.3 % Highest Possible Mean scores 5.00 = 100% Thus 2.915 = 58.3%					

Fig.2. Example of Calculation

Respondents' Response to Safety of Workers in FGI & OGI

Sr. No.	Statement	Degree of Opinion (FGI) Workers & Supervisors- 200							Degree of Opinion (OGI) Workers & Supervisors-200						
		1	2	3	4	5	Mean	Percentile	1	2	3	4	5	Mean	Percentile
1.	Uniform and Protective Clothing are Provided	180	0	0	0	20	**1.4**	**28**	0	0	0	0	200	**5**	**100**
2.	Proper safety tools are provided	175	0	0	0	25	**1.5**	**30**	0	0	0	0	200	**5**	**100**
3.	Fencing outside the dangerous machine available	160	3	12	5	20	**1.61**	**32.2**	0	0	0	0	200	**5**	**100**
4.	Proper working training is provided to run dangerous machinery	150	5	10	15	20	**1.75**	**35**	0	0	0	0	200	**5**	**100**

Table.1. Respondent's Response On Safety Of Workers

Correlations

		Safety of Workers	Core Values under Consistency (FGI)
Pearson Correlation	Safety of Workers	1.000	.954
	Core Values under Consistency (FGI)	.954	1.000
Sig. (1-tailed)	Safety of Workers	.	<.001
	Core Values under Consistency (FGI)	.000	.
N	Safety of Workers	200	200
	Core Values under Consistency (FGI)	200	200

Descriptive Statistics

	A mean	Std. Deviation	N
Safety of Workers	1.90	1.105	200
Core Values under Consistency (FGI)	2.14	1.349	200

This correlation table exhibits the direction and strength of the dependent and independent variables. A high positive correlation was found between the core values and safety of workers' provision (part of labor welfare) to 95.4% (.954**). **The null hypothesis that core values do not influence safety of workers is rejected** because there is a significant relationship between the core value of corporate culture and safety of workers at a 1% confidence level.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.954[a]	.911	.910	.331	.911	2017.637	1	198	<.001

a. Predictors: (Constant), Core Values under Consistency (FGI)

b. Dependent Variable: Safety of Workers

Anova

Model		Sum of Squares	df	A mean Square	F	Sig.
1.	Regression	221.098	1	221.098	2017.637	<.001[b]
	Residual	21.697	198	.110		
	Total	242.795	199			

a. Dependent Variable: Safety of Workers

b. Predictors: (Constant), Core Values under Consistency (FGI)

The regression result interprets the Coefficient .954, which indicates that a 1% change in the independent variable (core values) can result in a 95.4% change in the dependent variable (safety of workers). Thus, if the safety of workers provision is given appropriate importance in an organization and increased by 1%, this will result in a 95.4% increase in the provision of worker safety as part of the core values of the industry. The Coefficient of determination (R2) is 5.065, which lies under the rejection region of the normal distribution curve @1% confidence level, and on this basis, hypothesis 1: core values do not influence the safety of workers has been rejected and the alternate hypothesis; core values influence the safety of workers has been accepted.

Residuals Statistics

	Minimum	Maximum	A mean	Std. Deviation	N
Predicted Value	1.00	4.13	1.89	1.054	200
Residual	-1.130	.870	.000	.330	200
Std. Predicted Value	-.845	2.120	.000	1.000	200
Std. Residual	-3.413	2.628	.000	.997	200

Interpretation: In the below graphical presentation, we can see the output of the dependent variable safety of workers. It shows that data is skewed and not equally distributed under the normal distribution curve, but some points are under the normal distribution curve.

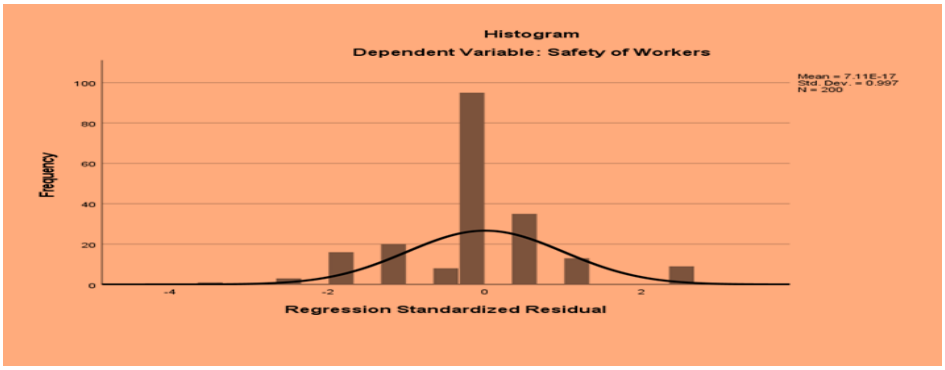

Figure 3: Histogram shows the condition of dependent variable safety of worker

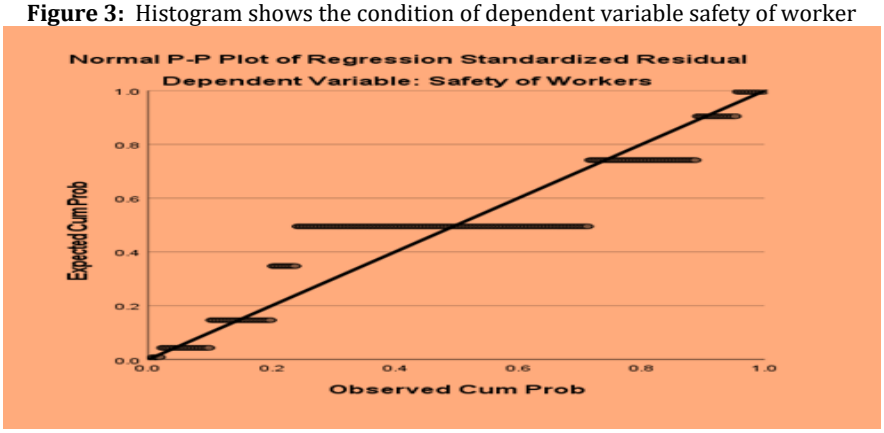

Figure 4: P-P Plot of dependent variable safety of workers

Interpretation: In the above graphical presentation, we can see the output of the dependent variable of workers' safety. It shows that data shows the distance from the normal line; only a single point lies on the normal line. Thus, the data is not normally distributed and shows the distance from the normal line.

14. CONCLUSION

It is concluded that Firozabad Glass Industries secured very low mean and percentile scores for providing uniform and protective clothing to the workers, and these industries still need to maintain the provision as per the standards. In

contrast, the Other Glass Industries' high mean and percentile mean scores reveal that these industries properly provided the workers' uniforms and protective clothing. That is why it is concluded that the workers are injured frequently in FGI, and their efficiency is reduced due to these safety hazards.

It is concluded that Firozabad Glass Industries secured very low mean and percentile scores for providing proper safety tools during working hours, and these industries have not maintained the provision as per the standards. In contrast, the Other Glass Industries secured high mean and percentile means scores revealing that these industries properly provided the safety tools to secure the workers' life.

It is concluded that Firozabad Glass Industries secured a very low mean and percentile score for the provision of fencing outside the dangerous machinery. These industries have not maintained the provision but not entirely as per the standards. In contrast, the Other Glass Industries' high mean and percentile mean scores reveal that these industries properly arranged fencing outside the dangerous machinery for safety.

It is concluded that Firozabad Glass Industries secured very low mean and percentile scores for providing proper working training to run dangerous machinery, and these industries have not maintained the provision as per the standards. In contrast, the Other Glass Industries' high mean and percentile mean scores reveal that these industries properly provided the training facility to the workers for running the dangerous machinery.

15. SOCIAL BENEFIT OF THE CURRENT STUDY

If all glass industries pursue core values for the safety of workers, especially safety tools, creating a pressure-free working environment and enhancing their work-life balance. The use of safety tools attracts more workers to join the industries and also protects them from plant hazards. The workers' family also ensures that their family persons' are working in a safe place and no sudden casualty happens to them due to the use of safety tools. This happiness expand their life span and standard of living.

16. SUGGESTION FOR FUTURE RESEARCH

This paper is based on the importance of industrial core values towards the safety of workers for their work-life balance, which opens up new research on worker's life balance:

1. To undertake the empirical study on the impact of the industrial core values on society with special reference to Workers' Family
2. To assess the relationship of industrial core values with the workers' mental health and health assessment
3. To explore the impact of industrial core values with special reference to vendor management

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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