

Employees' Job Involvement in Iron and Steel Manufacturing Sector in The District of Coimbatore, Tamilnadu

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ABSTRACT - Iron and steel sector is the backbone of an economy. It is one of the primary vehicles of economic development of a country. The per capita production and consumption of steel is the index of the depth of a country's economic infrastructure. According to Pandit Jawaharlal Nehru, "Steel is a symbol of strength of the economy and a portent of the glory of India of the future". Iron and steel are basic requirements for all types of construction and manufacturing activities. It is used as a basic material of manufacturing all types of machinery, electrical and metal products, transport equipment, agricultural equipment, capital goods, house building etc. So all industries have to depend on iron and steel.

Keywords:

Iron and steel sector, Health Safety and Welfare Measures, Job Involvement

I. INTRODUCTION

The concept of health as a balance between a person and the environment, the unity of soul and body, and the natural origin of disease, was the backbone of the perception of health in ancient Greece. Similar concepts existed in ancient Indian and Chinese medicine (4,5). An example of such a definition of health is: "a state characterized by anatomic, physiologic, and psychological integrity; ability to perform personally valued family, work, and community roles; ability to deal for the perception with physical, biological, psychological, and social stress"

CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

Health is generally being defined as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or illness".

Safety refers to the absence of accidents. Safety refers to the protection of workers from the danger of accidents. Industrial safety or employee safety refers to the protection of the employees from the danger of industrial accidents.

Welfare includes anything that is done for the comfort and improvement of employees and is provided over and above the wages. Welfare helps in keeping the morale and motivation of the employees high. The welfare measures need not be in monetary terms only but in any kind/forms.

Therefore, Employee welfare necessitates all those activities of employer which are directed towards providing

the employees with certain facilities and services in addition to wages or salaries as a concern towards safety, health, efficiency and wellbeing of the employees at the work place.

SAMPLE SIZE

Data were collected on the basis of judgmental sampling. 125 respondents working in iron and steel manufacturing units were given questionnaire and 100 were found to be fully usable for analysis. The sample size for questionnaire was 100. Questionnaire was pilot-tested on a sample of 15 to ensure the validity of the survey instrument. However, post elimination of incomplete responses, unreturned questionnaire and invalid answers, the final sample size used for analysis was 100.

The sample for questionnaire was collected from respondents in Coimbatore District.

II. ANALYSIS AND DISCUSSION

FACTOR ANALYSIS:

Table-1

KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806		
Bartlett's Test of Sphericity	Approx. Chi-Square	1.5533		
	Df	210		
	Sig.	.000		



INFERENCE:

KMO test is to analyze the appropriateness of factor analysis. Values between 0.5 and 1.0 show that the factor analysis is appropriate and value obtained was 0.806 which shows that the Kaiser – Meyer – Olkin measure of sampling adequacy is appropriate. Bartlett's Test of Sphericity is to examine the hypothesis by correlation of variables in Chi-Square and correlation matrix of determinants. Value obtained in Bartlett's Test of Sphericity Chi-Square is 1.5533. This shows that all the statements were correlated and factor analysis is appropriate for the study.

Table-2Rotated C	Component Matrix(a)
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Rotated Component Matrix				
	Component			
	1	2	3	4
My employer usually informs me to take precautions to protect myself when I perform my duties		.767		
Employer trained me about the correct use of Personal Protective Equipment (PPE) at the timing of joining.				
My employer regularly informs me about Standard Operating Procedure (SOP) when it comes to performing my task.				
My employer provides regular refresher training on health and safety.				
I have sufficient knowledge of the Occupational Health and Safety Act.	.877			
We have a health and safety representative in my workplace.				
Safety awareness campaigns are held on a regular basis.				
My supervisor takes employees health and safety very seriously.				
Supervisors encourage employees to adhere with the situation.				
Supervisor listens to employee's safety concerns in the organization.				
There is a formal health and safety reporting mechanism in the company.				
Reported health and safety issues are attended to promptly.				
Employees are encouraged to report accidents that occur at work.				
Safety inspections take place regularly at work.			.852	
Inspectors impose fines and penalties when the employer is non-compliant.				
Labour inspectors are allowed access in the workplace.				
Safety signs are visible for everyone to see.				
Intervals/breaks given in the workplace are sufficient.				
There is sufficient lighting at my work place				.732
I am satisfied with the level of hygiene at my workplace				
My company sends me for medical checkup in every 2 or 3 years.				
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		1	1	1
a. Rotation converged in 9 iterations.				

INFERENCE:

25 factors were included in the study on customer satisfaction and 04 factors contributed more on the customer satisfaction towards online shopping. These 04 factors were interpreted by the large values. Statements are identified by the large loadings in same factor.

The factors are:

- 1. I have sufficient knowledge of the Occupational Health and Safety Act
- 2. My employer usually informs me to take precautions to protect myself when I perform my duties
- 3. Safety inspections take place regularly at work.



4. There is sufficient lighting at my work place.

MULTIPLE REGRESSIONS:

Table-3Model Summary(b)

$\frac{1}{1} \qquad \frac{784^{a}}{784^{a}} \qquad \frac{615}{615} \qquad \frac{511}{511} \qquad \frac{911}{611}$	Model	R	R Square	Adjusted R Square	Std Error of the Estimate
	1	.784 ^a	.615	.511	.911

a. **Predictors:** (Constant), My company send me for medical checkup in every 2 or 3 years., Labour inspectors are allowed access in the workplace., There is a formal health and safety reporting mechanism in the company., Intervals/breaks given in the workplace are sufficient., Employees are encouraged to report accidents that occur at work., My employer provides regular refresher training on health and safety., Supervisors encourage employees to adhere with the OHSA., My employer usually informs me to take precautions to protect myself when I perform my duties, My supervisor takes employees health and safety very seriously., I am satisfied with the level of hygiene at my workplace, Reported health and safety issues are attended to promptly., Supervisor listens to employee's safety concerns in the organization., I have sufficient knowledge of the Occupational Health and Safety Act., Inspectors impose fines and penalties when the employer is non-compliant., Safety signs are visible for everyone to see., Safety awareness campaigns are held on a regular basis. , Safety inspections take place regularly at work., There is sufficient lighting at my work place, We have a health and safety representative in my workplace., My employer regularly informs me about Standard Operating Procedure (SOP) when it comes to performing my task., Employer trained me about the correct use of Personal Protective Equipment (PPE) at the timing of joining.

b. Dependent variable: Overall perceptions with health and safety measures

INFERENCE:

The model summary shows the R value as .615 and this is the percentage variation in Overall perceptions with health and safety measures can be given with 04 independent variables.

Table-4 ANOVA(b)

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Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	103.389	21	4.923	5.929	$.000^{a}$
	Residual	64.771	78	.830		
	Total	168.160	99			

a. **Predictors:** (Constant), My company send me for medical checkup in every 2 or 3 years., Labour inspectors are allowed access in the workplace., There is a formal health and safety reporting mechanism in the company., Intervals/breaks given in the workplace are sufficient., Employees are encouraged to report accidents that occur at work., My employer provides regular refresher training on health and safety., Supervisors encourage employees to adhere with the OHSA., My employer usually informs me to take precautions to protect myself when I perform my duties, My supervisor takes employees health and safety very seriously., I am satisfied with the level of hygiene at my workplace, Reported health and safety issues are attended to promptly., Supervisor listens to employee's safety concerns in the organization., I have sufficient knowledge of the Occupational Health and Safety Act., Inspectors impose fines and penalties when the employer is non-compliant., Safety signs are visible for everyone to see., Safety awareness campaigns are held on a regular basis. , Safety inspections take place regularly at work., There is sufficient lighting at my work place, We have a health and safety representative in my workplace., My employer regularly informs me about the correct use of Personal Protective Equipment (PPE) at the timing of joining.

b. Dependent Variable: Overall perceptions with health and safety measures

INFERENCE:

The above ANOVA table gives the F value to find the dependent variables associated with the Independent variables, larger the F value more the variances. The F-ratio given under column F is 5.929and p-value, 0.000 is given under sig.column. Since p-value is less than 0.01, it implies that the calculated regression coefficient is significant and the variance in independent variable contributes to the change in dependent variable. Therefore, it is inferred that the variance in predictors (Constant variable), really contribute to change in overall Overall perceptions with health and safety measures (Dependent Variable).



Table-5

Coefficients(a)

	Coefficients							
		Unstandardized Coefficients		Standardized Coefficients	_			
Mode	1	В	Std. Error	Beta	Т	Sig.		
1	(Constant)	1.694	.500		3.388	.001		
	We have a health and safety representative in my workplace.	.442	.142	.486	3.119	.003		
	Safety awareness campaigns are held on a regular basis.	500	.129	505	-3.872	.000		
	My supervisor takes employees health and safety very seriously.	.493	.114	.506	4.310	.000		
	Inspectors impose fines and penalties when the employer is non-compliant.	.295	.121	.288	2.451	.016		
	Labour inspectors are allowed access in the workplace.	501	.132	466	-3.797	.000		
	My company sends me for medical checkup in every 2 or 3 years.	.366	.112	.313	3.272	.002		

INFERENCE

To determine if one or more of the independent variables are significant predictors of Overall perceptions with health and safety measures, we examine the information provided in the coefficient table. Out of ten independent statements one statement are statistically significant.

The following six variables explain significantly the variations in the dependent variables.

- 1. We have a health and safety representative in my workplace has a beta coefficient (.486) which is significant at 0.003.
- 2. Safety awareness campaigns are held on a regular basis has a beta coefficient (-.505) which is significant at 0.000.
- 3. My supervisor takes employees health and safety very seriously has a beta coefficient (.506) which is significant at 0.000.
- 4. Inspectors impose fines and penalties when the employer is non-compliant have a beta coefficient (.288) which is significant at 0.016.
- 5. Labour inspectors are allowed access in the workplacehas a beta coefficient (-.466) which is significant at 0.000.
- 6. My company sends me for medical checkup in every 2 or 3 yearshas a beta coefficient (.313) which is significant at 0.002

III. CONCLUSION

It is revealed from the study that, the health and safety measures adopted in Iron And Steel Manufacturing Sector ofCoimbatore Districtare provided to the satisfaction of the workers. Most importantly, they are in accordance with the provisions of the Factories Act. It is also found that the awareness of the workers about health and safety in the workplace is adequate. The role of management in institutionalizing, implementing and making health and safety a part of organizational culture cannot be overemphasized. Most of the workers were satisfied with the health and safety measures adopted in the workplace.

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