

An Analysis Of The Impact Of Occupational Health And Safety Related Measures With The Administrators Of The Mining Industries

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ABSTRACT

The objective of the present study is to analyze the impact of Occupational health and safety in various organizations of southern Rajasthan. It investigates the opinion of the administrative about the practices to measure and monitor Occupational Health Safety (OHS) performance and also relationship between independent variables and exceed of health and safety performance target practices in the organizations. Furthermore an attempt has been made to study the applicability of Occupational Health which is a disciplinary matter concerned with health and safety of administrative at their place of employment. The Occupational Health and Safety (OHS) is a prominent operational research. The findings suggest that the implementation of OHS in the mining industries will give positive aspect to the administrative as well as the mining organizations.

This study is intended to examine the applicability of Occupational Health which is a disciplinary matter concerned with health and safety of administrative in various organizations of southern Rajasthan. This part of Research describes about the composition of the process, tools, methodology adapted to carrying out the objectives of the study undertaken.

Keywords:- Occupational Health and Safety (OHS), Health and Safety Performance, Measure and Monitor OHS Performance, Mining Industries and Administrative.

A research is a systematic examination of certain issues under observation which is governed to discuss and share the generated outcome for the purpose of social, economic, technological and political benefits or developments. This particular research is intended to examine occupational health is highly neglected in the developing countries due to competing for social, economic and political challenges. Due to its natural resources, India is one of the most important developing

countries in the world. The current burden of accumulated occupational diseases in India is estimated to be at around 18 million cases. The major occupational diseases/ morbidity of concern in India is silicosis, musculoskeletal injuries, coal workers' pneumoconiosis, chronic obstructive lung diseases, asbestosis, byssinosis, pesticide poisoning, and noise-induced hearing loss. However more than 90% of Indian labours are employed in the unorganized sector, this informal workforce suffers the most in India from the above diseases.

A healthy work environment is the most important assets of individuals, communities, and countries. Due to the rapid economic growth and industrial progress in our country, it becomes important to provide imperative safety and health in the workplace.

Occupational Health and Safety plays an important role in the working of organizational goals. Though the organizations have been found more productive where good health and safety mechanism exists. OHSAS 18001 is the sound solution of day-to-day increasing challenges facing by the organizations due to high injury and illness, lost work days, increasing occupational health and safety regulations, large penalties, rising workers compensation costs, costly medical claims, worker retention, and employee satisfaction.

The proposed research paper is focused on the applicability of Occupational Health and Safety, which is a disciplinary matter concerned with health and safety of workers at their place of employment. The Occupational Health and Safety (OHS) is a prominent operational research.

OBJECTIVES OF THE PROPOSED STUDY

Occupational Health and Safety plays an important role in the working of organizational goals. In order that this study will be directed towards its objectives and claim on the impact of health and safety, there is a need to underline the problems which are significant. Hence, this study seeks to answer the problem statements raised in here.

Objectives for proposed research works are as follows:-

- To study the prevalent practices of occupational health and safety in selected mining companies of southern Rajasthan.

- To analyze the impact of various age groups and the extent of occupational health and safety related practices being implemented.

REVIEW OF RELATED LITERATURE

It has been studied that HEDCON (Health, Environment and Development Consortium) has taken the responsibility to the cause of mineworkers who working in mines and don't get the basic facilities such as toilets, first-aid boxes, safety provisions, weekly offs. Most importantly **Sharma (2007)** analyzed that mine-workers have to work there everyday where dangerous mineral dust-laden air occurs which cause many lung diseases such as silicosis, tuberculosis (TB), Silicotuberculosis and asthma. The prominent places where mining is carried out for sandstone, marble, and slate are Jodhpur, Makrana, Udaipur, and Karauli.

According to the **Chopra, Prakash, Bhansali, Mathur, Gupta (2012)**, Silicosis is a form of pneumoconiosis and causes from the inhalation of crystalline silica particles (size 0.5- 5 microns in diameter). Tuberculosis is also a common infection of the lung associated with silicosis and together it is known as Silicotuberculosis.

Sishodiya, Guha (2013), stated that the main reason of failure to identify cases of occupational diseases in general and pneumoconiosis, specifically, is the poor quality of health surveillance program. The mining companies and the government organizations are provided with the resources in the form of manpower and inadequate equipment. However, there is increasing awareness among workers, unions, mine management and the government about the level of occupational safety and health and prevention of accidents and occupational diseases in mines.

Muthuviknesh & Kumar (2014) stated that workplace safety is a priority. The goals of occupational safety and health programs include fostering a safe and healthy work environment. Occupational health and safety are important due to moral, legal and financial reasons. It must be the duty of the organization to take care of the employees and the persons who may be affected by the company undertaking that their life shall remain safe for example industry shall an initiative for taking care of workers working in the field by designing and providing the proper

meal according to workload shared by the forces, so that they may not be left under-nourished due to extreme workloads.

RESEARCH METHODOLOGY

The present research study is confined to study the prevalent practices of occupational health and safety as well as administrative perceptions about the effectiveness of occupational health and safety related practices being implemented. For the data collection purpose through questionnaire respondent (administrative) were selected from selected mining companies of Southern Rajasthan State of India.

In this section of a questionnaire given the five-point Likert scale from strongly agree to strongly disagree; to find out the satisfaction level of administrative to measure and monitor Occupational Health and Safety performance in mining within the mining industries of Rajasthan.

This section of the questionnaire based on parameters related to the health and safety performance targets practices for which ten questions have given on five point Likert scales. These questions are:- for the efforts to meet/exceed the health and safety performance targets practices by the organizations like competing priorities, sufficient resources, abundance in accountability, trust on the efforts to exceed, access funding, good leadership, sufficient training and experience, good safety culture and adequate maintenance and work standards.

Table-1

Research Methodology		
1.	Scope of the Study	Mining Industries
2.	Area of the Study	The Southern Rajasthan
3.	Secondary Data Used	The use of internet was also of great help to the researcher as various search engines namely, ask.com, google.com, yahoo.com, exp.com, respond.com, www.eiconsortium.org, eq.org altavista.com and others. Websites like bnet.com and ssm.com also proved very helpful where researcher found a good repository of international research papers.

4.	Primary Data Collection Tool	Self administered questionnaires- Administration of Mining Industries
5.	Research Design	Exploratory and Causal research Design
6.	Sample Size	120 Administration of Mining Industries
7.	Sampling Method	Convenient sampling, a non random techniques
8.	Techniques Used for Data Analysis	Cronbach's Alpha, T- Test and Chi-Square Test

A list of selected mining industries is given in **table 2**.

Table 2: Names of Mining Industries Chosen for the Study Purpose

S. No.	Name of the Mining Industries
1.	RSMM (Rajasthan State Mines and Minerals)
2.	Hindustan Zinc
3.	R.K Marbles
4.	Golcha Mines
5.	Jindal Saw Limited
6.	S.K Khetan Group of Industries
7.	Charbhuj Minerals

RELIABILITY FOR DATA COLLECTED

The reliability coefficient tested by using Cronbach's alpha (α) analysis in order to measure the reliability for a set of two or more constructs, Cronbach's alpha is a commonly used method where alpha coefficient values range between 0 and 1 with higher values indicating higher reliability among the indicators.

RELIABILITY ANALYSIS- SCALE (ALPHA)

For Administrative in Mining Industries

Number of Cases – 120

Cronbach Alpha - .728

Table 3:- Evaluation is to find out the opinion of the administrative about the practices to measure and monitor Occupational Health Safety (OHS) performance in the Organizations.

S.No.	Parameters	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
	Our organization uses the following to measure and monitor OHS performance in mining.	5	4	3	2	1
1	Incidence reports					
2	Audits (OHS, Safety, Compliance)					
3	Lag and/ or Lead indicators					
4	Measuring progress with plans and objectives					
5	Injury costs					
6	Measuring the health and safety culture					
7	Health and safety index					
8	Measuring hazard burden					

Above **table 3** describes the opinion of the administrative about the practices to measure and monitor OHS performance in mining by the mining companies on the following five points likert scale for Occupational Health Safety (OHS) related practices in the Organizations on various parameters.

To analyze the parameters related to OHS performance in mining organizations. These questions are designed to find out the opinion of the administrative about the practices to measure and monitor OHS performance in mining by the mining companies. For this purpose following hypothesis has been formulated on the basis of;

H_0D_1 : There is no significant use of OHS performance in mining organizations.

H_1D_1 : There is a significant use of OHS performance in mining organizations.

Table 4 :- One-Sample Test

	Test Value = 0					
					95% Confidence Interval of The Difference	
	T	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Incidence reports	95.142	119	.000	4.633	4.54	4.73
Audits (OHS, Safety, Compliance)	81.206	119	.000	4.575	4.46	4.69
Lag and/or Lead indicators	54.112	119	.000	4.167	4.01	4.32
Measuring progress with plans and objectives	72.147	119	.000	4.517	4.39	4.64
Injury costs	77.066	119	.000	4.458	4.34	4.57
Measuring the health and safety culture	74.197	119	.000	4.550	4.43	4.67
Health and Safety index	70.082	119	.000	4.458	4.33	4.58
Measuring hazard burden	71.038	119	.000	4.408	4.29	4.53

Source:- Primary Data

Table 4, shows that the mean difference in the population means for D1 to D8 is 4.633, 4.575, 4.167, 4.517, 4.458, 4.550, 4.458 and 4.408 ("Mean Difference" column) and the 95% confidence intervals (95% CI) of the difference are 4.73 to 4.54, 4.69 to 4.46, 4.32 to 4.01, 4.64 to 4.39, 4.57 to 4.34, 4.67 to 4.43, 4.58 to 4.33, 4.53 to 4.29, ("Upper" to "Lower" columns). For the measures used, it will be sufficient to report the values to 2 decimal places.

The significant value of parameters such as, Incidence reports Audits (OHS, Safety, Compliance), Lag and Lead indicators, Measuring progress with plans and objectives, Injury Costs, Measuring the health and safety culture, Health and Safety index, Measuring hazard burden, for all these parameters in **table 4** shows that all significance values are 0.000, which is less than 0.05 (p-value). This means we have to accept the null hypothesis and reject the alternative hypothesis that there is no significant use to measure and monitor OHS performance in mining organizations.

Status of Hypothesis established for analyze the opinion of the administrative about the practices to measure and monitor OHS performance in mining by the mining companies.

Table 5

S.NO.	HYPOTHESIS	DIFFERENCE	STATUS
1.	H_0D_1	Non- Significant	Accepted

Table 6:- Evaluation of the relationship between independent variables and Exceed of health and safety performance target practices in the organizations.

S. No.	Parameters	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
	Our organization's put efforts to meet or exceed its health and safety performance targets through					
1	Competing priorities					
2	Sufficient resources					

3	Abandancy in accountability/apathy/co mplacency					
4	I believe my organisation exceeds its efforts					
5	Access funding					
6	Good leadership					
7	Sufficient training					
8	Sufficient experience					
9	Good safety culture					
10	Adequate maintenance and work standards					

Above **table 6** describes that correlation between various demographic profiles and exceed the health and safety performance targets related practices by the organizations on the following five points likert scale on various parameters.

To examine the level of the extent to which the efforts to meet/exceed the health and safety performance targets practices by the organizations and the finding support the results to what extent administrative are satisfied with the parameters.

Following hypothesis has been formulated to find the relationship between various age groups and exceed of health and safety performance targets practices;

H₀E₁:- There is no significant relationship between various age groups and exceed of health and safety performance targets in the organizations.

H₁E₁:- There is a significant relationship between various age groups and exceed of health and safety performance targets in the organizations.

Table 7:- Age * Eavg Crosstabulation

Crosth						
Count						
		Eavg				Total
		Agree	Neutral	Disagree	Strongly Disagree	
A2 (age)	20-30	0	4	11	19	34
	31-45	0	3	8	36	47
	46-55	0	2	7	16	25
	55 and above	1	1	2	10	14
Total		1	10	28	81	120

Source:- Primary Data

From the above **table 7**, it could be interpreted that majority of respondents awarded the good degree of agreement to the relationship between ages and exceed of health and safety performance targets in the organizations. Out of 120 respondents (11+8+7+2=28), respondents disagreed and (19+36+16+10=81) respondents strongly disagreed with the exceed of health and safety performance targets practices are useful for all age groups in mining companies. From this, we can say that irrespective of the age factor most of the people strongly disagree with the positive efforts in health and safety performance practices as an integral part of mining companies.

Table 8:- Age: Chi-Square Tests

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.339 ^a	9	.195
Likelihood Ratio	9.070	9	.431
Linear-by-Linear Association	.083	1	.774
N of Valid Cases	120		
a. 9 cells (56.3%) have expected count less than 5. The minimum expected count is .12.			

Source:- Primary Data

From the above **table 8**, it could be interpreted that Asymp. Sig. (2- Sided) column values are greater than .05 (0.774) which shows that no significant difference between age and their perception of the exceed of health and safety performance target practices in the organizations is positive. So it could be decoded that positive efforts in health and safety performance practices are perceived in the same manner by all administrative irrespective of their age group.

Status of Hypothesis established for analyzing the relationship between Age variable and Exceed of health and safety performance targets practices in the organizations.

Table 9

S.NO.	HYPOTHESIS	DIFFERENCE	STATUS
1.	H_0E_1	Non- Significant	Accepted

CONCLUSION

Now on the basis of the above research and findings, we can say that Occupational Health and Safety plays an important role in the working of organizational goals. Though the organizations have been found more productive where good health and safety mechanism exists. OHSAS 18001 is the sound solution of day-to-day increasing challenges faced by the organizations due to high injury and illness, lost work days, increasing occupational health and safety regulations, large penalties, rising workers compensation costs, costly medical claims, worker retention, and employee satisfaction. A healthy work environment is the most important assets of individuals, communities, and countries. Due to the rapid economic growth and industrial progress in our country, it becomes important to provide imperative safety and health in the workplace.

Furthermore it can now conclude that the study deals with the analysis and interpretation of the collected data for Administrative, this study clearly implies that there is no significant difference between the various age groups, and the Occupational Health and Safety in Mining Industries.

SUGGESTIONS FOR THE ADMINISTRATIVE

1. The organization should have a proper team management and communication committee between administrative and workers.

2. Administrative should check regularly the medium of communication; it is their duty to remain connected with workers in each and every situation.
3. Administrative should generate a friendly atmosphere so that morale's of workers should remain high and enthusiastic. Administrative should motivate them and encourage them in their workplace.
4. Administrative should maintain health chart of each and every worker so that the medical condition of workers would be under surveillance.
5. Administrative should take and give regular breaks so that the mental stress can be avoided.
6. Administrative should take charge of workers food security during work time. Administrative should ensure about food liability.
7. Administrative should accept the latest technology to remain in the business world.
8. Administrative should encourage the use of technology among workers to keep in touch or to keep in connect; they must have new technology like walky talky, etc.
9. Administrative should remain concern about workers health which can be evolved by using technology methods to remain regularly updated.
10. Administrative must have a security system to ensure the workers as well as the organization. They must have a system for workers so that no other person permitted to the premises'.

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