

A STUDY ON EFFECTIVES OF OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT WITH EMPLOYEE IN BHEL COMPANY PVT LTD, TRICHY

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Abstract

This paper analyses the Effective of employees regarding the Occupational Health and Safety Management with Employee in BHEL Company Private Limited, Trichy. In this case of anticipation, recognition, evaluation and control of hazards arising from the workplace that could impair the wellbeing to Employees. It is against this background that the research project was carried out to find the effect of selected Occupational health and Safety management training on satisfaction of employees in BHEL Company Private Limited, Trichy. This study covers both primary and secondary data. The primary data were collected from the 100 sample respondents with the help of questionnaire. Secondary data were collected through various journals, magazines report and website. This study statistically tools used for t -test, ANOVA, Chi-square test. Research data have been collected from various available sources and systematically analyzed with suitable tools.

This study finds out the Effective of employees regarding the Occupational Health and Safety Management of workplace on safe and healthful to the employees, Maintaining and Establishing on safe and healthful, Ensuring workers are trained or certified, as required, medical and first aid facilities, ensuring personal protective equipment is available, worker with health and safety information, supporting supervisors, knowledge regarding, policies adequate in the factory, administrators and supervisors are really concern about, employees following rules. The analysis clearly shows that the practice of occupational health and safety management practices leads to improved satisfaction among employees.

Keywords- Occupational Health and Safety management, Effective of employees Satisfaction, BHEL Company P.Ltd

Introduction

The realization of Human Resource as the very important of all the property, in contemporary management, may be based on its inevitable role in the manipulation of all other organizational assets or resources for productivity. Management perception of Human Resource importance in the organizational setting has been exhibited through deliberate strategic decisions directed at the attraction of desired labor, to the verge of exit. One of such strategic decisions can be epitomized by effort to provide safe work environment. Therefore, this paper intends to determine the correlation between effective occupational health & safety management and employees satisfaction in BHEL.

Current process show that management have started giving attention to Organizational Health and Safety management effective on Employees satisfaction particularly the function of health and safety management. Formal organizations are consciously directed toward attainment of set achievement. The target accomplishment is a function of the co-ordinate and interactive effort of management resources (human, material, financial, informational, etc). Occupational health and safety is a cross-disciplinary area concerned with protecting the safety, health and welfare of public engaged in work or employment. The goal of all occupational health and safety management is to foster a safe work place. As a secondary effect, it may also protect co-workers, family members, employers, customers, suppliers, nearby communities, and other members of the public who are impacted by the workplace environment.

Management is the system of creating safety guidelines for your organization based on the act and on company necessity, and then implementing those programs. In order for a safety management process to offer benefits to the company, every level of the management and executive team needs to be involved, according to the Occupational Health and Safety Management. Safety Management Systems (SMS) is a term used to refer to comprehensive systems designed to manage the safety, health, environmental and general risk aspects of industry. Certain regulatory and enforcement frameworks apply.

Need of the Study

The need of the study is to examine the occupational health and safety management practices with employee satisfaction. Employees get through health and safety practices if the know how to conduct and finished this work and live safety within the employees' every day in this environment and in case of an emergency happen in their workplace. The safety management practices also help the employees and employers to reduce the chances of an Effective of employees Satisfaction in the workplace.

Review of Literature

Mariusz Kapusta , Marta Sukiennik , & Patrycja Bąk (2018) The article presents the results of a survey study on the level of organizational culture in the area of occupational health and safety. Culture defined in the area of occupational health and safety is one of the components of an organizational culture; consequently, it must be appraised and responded to in order to improve the quality of the culture. The results of the study enabled the authors to draw the occupational health and safety culture net that assists in direct management of this problem and contributes to rising of the OHS level in companies.

Andrei Nikulin and Anni Yulievna Nikulina (2017), new requirements for occupational health and safety organisation and management in the Russian Federation are attributable to economic and social challenges. Systems-based approach to occupational health and safety coupled with the implementation of new equipment and new technologies, as well as safety culture promotion is a viable method of reducing industrial injuries and occupational morbidity. Improved technologies with efficient management systems support a significant reduction of the industrial accident rate. The article addresses organisational arrangements required to improve industrial safety through efficient assessment of the safety management system at a plant. The article presents case studies of organisational solutions aimed at minimising industrial injuries. Criteria have been developed to evaluate current effectiveness of the safety management system in place. The condition of the coal industry in the Rostov Region has been reviewed. The case of DTEK company, Obukhovskaya mine of MM Obukhovskaya, is used to consider ways to improve the workplace inspection procedure. The article presents a statistical review of industrial injuries and key safety parameters at the plant. Priority measures of proactive response to any identified safety violations are proposed.

Florence Sembe, Amos Ayuo. (2017), Occupational Health and Safety (OSH) is defined as the science of anticipation, recognition, evaluation and control of hazards arising from the workplace that could impair the wellbeing of workers. It is against this background that the research project was carried out to find the effect of selected Occupational health and Safety management practices on job satisfaction of employees in University Campuses in Nakuru Town, Kenya. The study was guided by the following objectives: to determine the effect of selected welfare management practices on job satisfaction, to determine the effect of emergency management practices on job satisfaction, to determine the effect of workplace environment practices on employee job satisfaction and to determine the combined effect of welfare management practices. The target population comprised of 258 samples of non-teaching staff, in all the University Campuses situated in Nakuru. Census was conducted to select data. Data was collected using questionnaires; Data analysis for all the objectives was done using multiple regression analysis, and descriptive statistics such as frequencies, tables, charts, and graphs. Hypothesis testing in all the objectives was done using Pearson's correlation and regression analysis. The study is of importance to the management of university campuses in establishing the effect of selected occupational health and safety management practices on job satisfaction of employees in University campuses in Nakuru Town, Kenya. The findings revealed that the practice of occupational health and safety management practices leads to improved job satisfaction among employees. The study recommends that Universities should invest in occupational health and safety issues that concern employees. Areas for further study identified include challenges in the implementation of occupational health and safety management practices on organizational work environment.

Seok J. Yoon , Hsing K. Lin , & Zhenhua Rui (2013), The study was conducted to investigate the current status of the occupational health and safety management system in the construction industry and the effect of OHSMS on accident rates. The questionnaire was created to analyze the differences of OHSMS awareness between site general managers and OHS managers of construction companies. The survey in this study shows different

effectiveness OHSMS awareness levels between site general managers and OHS managers. The differences were motivation for developing OHSMS, external support needed for implementing OHSMS, effectiveness of implementing OHSMS. Conclusion: Both work-related accident and fatal accident rates were found to be significantly reduced by implementing OHSMS in this study. The differences of OHSMS awareness between site general managers and OHS managers were identified through a survey.

Zanko, M. & Dawson, P. (2012), In examining the research literature on occupational health and safety (OHS), this paper argues that the growth in the number of specialists in OHS has resulted in an emphasis on policy and practice away from more scholastic concerns previously addressed by academics in the disciplines of psychology and sociology. In this review, the contributions of psychology, sociology, industrial relations and management studies are assessed, and five categories of specialist OHS literature are analysed, namely: prescriptive; systematic OHS management; success based; error and disaster based; and culture, climate and high-reliability studies. The conceptual and methodological limitations of this specialist focus are discussed, and future research opportunities are highlighted, for which the authors argue that management scholars embrace a range of methodological approaches. The authors advocate the value of extended case studies which examine OHS in context and over time in particular workplace settings. There remains considerable scope to develop this field further and, in conclusion, particular attention is drawn to the value of process oriented contextual approaches for understanding OHS management in organizations.

Pablo Arocena, Imanol Núñez (2010), this article analyses the effectiveness of occupational health and safety management in small and medium-sized enterprises. In particular, we provide an overview of the implementation of occupational risk preventive activities in a sample of SMEs; assess the effectiveness of the identified OHS systems in occupational safety outcomes; and analyse the factors affecting the adoption of such OHS systems. The study is based on primary data obtained by means of a survey on OHS management in 193 Spanish manufacturing SMEs. The analysis disentangles differences between the OHS activity of small-sized enterprises— those under 50 employees — and medium-sized enterprises — 50—250 employees. We find evidence that the effort and type of OHS management system does significantly affect the injury rate. More specifically, firms that complement traditional technical preventive activities with people and organization-oriented procedures are the most effective in reducing occupational accidents. Such advanced OHS systems are significantly less developed in SSEs. Our results also reveal that the choice of OHS system is determined by the quality of industrial relations, rate of unionization, intensity of price-based competition, access to public aid and training activities provided by the OHS public agencies, technology intensity, and the manual nature of workers' tasks.

Research Objectives

- ❖ To identify the causes of Occupational Health and Safety management in BHEL Company Private Limited

- ❖ To study the practices of Occupational Health and Safety management in BHEL Company Private Limited
- ❖ To analyze the effect of health and safety practices on employee satisfaction
- ❖ To analyze the effect of workplace environment management practices on employees
- ❖ To determine the level of compliance of occupational health and safety practices by employers and employees.

Research Methodology

This study covers both primary and secondary data. The gather to primary data questionnaires are prepared and presented personally to 100 members of employees. Secondary data were collected through various Journals, magazines report and website was also referred for the purpose. The sample members are selected from 25 employees from 4 departments (Production, Finance, Marketing, Human Resources) of BHEL Company Private Limited. The sample sizes of 100 SHG members. These studies prepare to primary data select from the simple types in sample random method. A proper and suitable statistical tools has been used to analyses the date. The following are the statistical tools used in this study. (t – test ANOVA Chi-square test)

Research and Discussion

Table-5.1

Mean and Standard deviation between Gender on the factors of Occupational Health and Safety Management in employees

S.No	Factors	Gender	N	Mean	S.D	S.E	t value	P value
1.	Workplace on safe and healthful to the employees.	Male	55	2.56	0.898	0.121	0.709	0.026*
		Female	45	2.42	1.097	0.164		
2.	Medical and first aid facilities on safe and healthful to the employees.	Male	55	1.65	1.158	0.156	0.617	0.063
		Female	45	1.53	0.694	0.103		
3.	Ensuring personal protective equipment is available on safe and healthful to the employees	Male	55	1.82	1.203	0.162	0.961	0.040*
		Female	45	1.62	0.716	0.107		
4.	Worker with health and safety information on safe and healthful to the employees.	Male	55	1.80	1.268	0.171	1.300	0.001**
		Female	45	1.53	0.588	0.088		
5.	Administrators and supervisors are really concern about health and safety to employees	Male	55	1.96	1.217	0.103	0.967	0.028*
		Female	45	1.76	0.857	0.216		

Note: 1. **Denotes significant at 1% level

2. *Denotes significant at 5% level

**Since P value is less than 0.01, the null hypothesis is rejected at 1% percent level of significant with regards in Factors levels in Occupational Health and Safety Management in employees. Hence there is significant different between Types of Gender with regards to

Occupational Health and Safety Management in employees. Based on mean source the Development more Male is higher than value with reason to Worker with health and safety information on safe and healthful to the employees (1.80%), in Occupational Health and Safety Management in employees of gender.

*Since P value is less than 0.05, the null hypothesis is rejected at 5% percent level of significant with regards in Factors levels in Occupational Health and Safety Management in employees. Hence there is significant different between Types of Gender with regards to Occupational Health and Safety Management in employees. Based on mean source the Development more Male is higher than value with reason to Workplace on safe and healthful to the employees (2.56%), Ensuring personal protective equipment is available on safe and healthful to the employees (1.82%), Administrators and supervisors are really concern about health and safety to employees (1.96%) in Occupational Health and Safety Management in employees of gender.

Since P value is grater than 0.05, the null hypothesis is accepted at 5 % percent levels with records to all the type of Gender factors Occupational Health and Safety Management in employees. Hence there is no significant difference between Male and female in Occupational Health and Safety Management in employees. Based on mean some Occupational Health and Safety Management in employees in male gender is higher than from Medical and first aid facilities on safe and healthful to the employees in (1.65%) but not significant at 5% level.

Table-5.2

ANOVA for significant difference between Age with respect to factors of Evaluating occupational health and safety management performance of supervisors to the employees.

Age	N	Mean	S. D	S. E	F Value	Sig
Below 25 years	32	2.31	1.512	0.267	4.646	0.004**
26-35 years	41	1.51	0.746	0.116		
36-45 years	13	1.38	0.506	0.140		
Above 46 years	14	1.50	0.760	0.203		
Total	100	1.75	1.095	0.110		

The above table shows that, the ANOVA significance value is less than 0.01 (0.004*). Hence Hypothesis is accepted. It is found that there is a difference of opinion that exists between Age to Evaluating occupational health and safety management performance of supervisors to the employees.

Table-5.3

ANOVA for significant difference between Positions with respect to factors of supporting supervisors in their health and safety activities to the employees.

Positions	N	Mean	S. D	S. E	F Value	Sig
Upper Level	23	2.52	1.648	0.344	5.714	0.001**
Middle level	60	1.68	0.701	0.090		
Lower Level	11	1.45	0.522	0.157		
Others	6	1.17	0.408	0.167		
Total	100	1.82	1.048	0.105		

The above table shows that, the ANOVA significance value is less than 0.01 (0.001**). Hence Hypothesis is accepted. It is found that there is a difference of opinion that exists between Positions to supporting supervisors in their health and safety activities to the employees.

Table-5.4

ANOVA for significant difference between Experience with respect to factors of knowledge regarding occupational safety and health management in workplace to the employees.

Experience	N	Mean	S. D	S. E	F Value	Sig
Less than 3 years	41	1.41	0.805	0.126	3.638	0.016*
4 -7 years	40	1.65	1.001	0.158		
8 -10 years	12	1.58	0.900	0.260		
More than 11 years	7	2.71	1.604	0.606		
Total	100	1.62	1.003	0.100		

The above table shows that, the ANOVA significance value is less than 0.5 (0.0016*). Hence Hypothesis is accepted. It is found that there is a difference of opinion that exists between Experience to knowledge regarding occupational safety and health management in workplace to the employees.

Table-5.5

Chi-square test for association between current occupational health and safety management policies adequate in the factory to Monthly Income of employees

Monthly Income	N	%	Chi-square Value	P Value
Below Rs.10000	60	60	26.928	0.042*
Rs.10, 001 – Rs.15, 000	29	29		
Rs.15, 001 – Rs.20, 000	2	2		
Rs.20, 000 – Rs.25000	7	7		
Above Rs.25000	2	2		
Total	100	100		

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence concluded that there is association between current occupational health

and safety management policies adequate in the factory to Monthly Income of employees. The above table shows that, the significance value is less than 0.05 (0.042). Hence Hypothesis is accepted. It is found that there is an association between current occupational health and safety management policies adequate in the factory to Monthly Income of employees.

Table-5.6

Chi-square test for association between administrators and supervisors are really concern about health and safety to Education of employees

Education	N	%	Chi-square Value	P Value
Master Degree	47	47	27.667	0.035*
Bachelor Degree	35	35		
Diploma	4	4		
Scholl	9	9		
Others	5	5		
Total	100	100		

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence concluded that there is association between administrators and supervisors are really concern about health and safety to Education of employees. The above table shows that, the significance value is less than 0.05 (0.035). Hence Hypothesis is accepted. It is found that there is an association between administrators and supervisors are really concern about health and safety to Education of employees.

Table-5.7

Chi-square test for association between medical and first aid facilities on safe and healthful to Education of employees

Education	N	%	Chi-square Value	P Value
Master Degree	47	47	32.046	0.010**
Bachelor Degree	35	35		
Diploma	4	4		
Scholl	9	9		
Others	5	5		
Total	100	100		

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence concluded that there is association between medical and first aid facilities on safe and healthful to Education of employees. The above table shows that, the significance value is less than 0.01 (0.010). Hence Hypothesis is accepted. It is found that there is an association between medical and first aid facilities on safe and healthful to Education of employees.

Table-5.8

Chi-square test for association between employees following rules occupational health and safety management in the factory to Gender of employees

Gender	N	%	Chi-square Value	P Value
Male	55	55	10.220	0.037*
Female	45	45		
Total	100	100		

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence concluded that there is association between employees following rules occupational health and safety management in the factory to Gender. The above table shows that, the significance value is less than 0.05 (0.037). Hence Hypothesis is accepted. It is found that there is an association between employees following rules occupational health and safety management in the factory to Gender.

Table-5.9

Chi-square test for association between Maintaining and Establishing on safe and healthful to Age of employees

Age	N	%	Chi-square Value	P Value
Below 25 years	32	32	25.328	0.013*
26-35 years	41	41		
36-45 years	13	13		
Above 46 years	14	14		
Total	100	100		

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence concluded that there is association between Maintaining and Establishing on safe and healthful to Age of employees. The above table shows that, the significance value is less than 0.05 (0.013). Hence Hypothesis is accepted. It is found that there is an association between Maintaining and Establishing on safe and healthful to Age of employees.

Table-5.10

Chi-square test for association between Ensuring workers are trained or certified, as required on safe and healthful to Experience of employees

Experience	N	%	Chi-square Value	P Value
Less than 3 years	41	41	21.865	0.039*
4-7 years	40	40		
8-10 years	12	12		
More than 11 years	7	7		
Total	100	100		

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence concluded that there is association between Ensuring workers are trained

or certified, as required on safe and healthful to Experience of employees. The above table shows that, the significance value is less than 0.05 (0.039). Hence Hypothesis is accepted. It is found that there is an association between Ensuring workers are trained or certified, as required on safe and healthful to Experience of employees.

Recommendations

The findings of this study revealed that the practice of occupational health and safety management practices leads to Worker with health and safety information, supporting & performance of supervisors, medical and first aid facilities satisfaction levels among employees in a Company.

The study therefore recommends the following:

The creation and implementation of a policy that sensitizes and allows for provision of sufficient welfare services such as Workplace, Ensuring personal protective equipment is available, Administrators and supervisors, knowledge, policies adequate, following rules in the work environment so as to improve health and safety satisfaction levels of the employees in their work places. The study further recommends to organizations in emphasize and investment on the activities of elaborate, emergency management practices. The provision of written emergency plan, first aid facilities in their work places, Worker with health and safety information, Ensuring personal protective equipment is available, policies adequate, Administrators and supervisors, employees training on the use of emergency equipment in their work places will positively influence workers satisfaction levels and will in turn improve institution's image.

Conclusions

The aim of the study was to determine the effect of selected Occupational Health and Safety Management practices on employee satisfaction in BHEL Company Private Limited, Trichy. The study was guided by five objectives. Based on results from data analysis and findings in relation to the study objectives, the following conclusions were made;

First, the study concluded that that identify the causes and practices of Occupational Health and Safety management had statistically significant positive effect on employee's satisfaction. The provision of welfare services such as basics facilities (drinking water facilities, toilet facilities, canteen services and parking spaces) in the work environment are likely to improve on the satisfaction levels on the employees.

Secondly it was concluded that workplace environment management practices have statistically insignificant positive effect on employee's satisfaction. Therefore the provision of, medical and first aid facilities, worker with health and safety information, supporting supervisors, employees training on the use of emergency will positively influence workers satisfaction levels.

Thirdly, the study concluded that work place environment had statistically significant positive effect on job satisfaction. Provision of ensuring personal protective equipment is available, Maintaining and Establishing, policies adequate in the factory, administrators and

supervisors are really concern about, management performance of supervisors employees following rules will improve on the job satisfaction levels.

Lastly, the study concluded that the combined effect of occupational, health and safety management practices significantly influence employee work satisfaction levels. This means that and company that strategically employee's occupational, health and safety management practices is mostly to improve its employee satisfaction levels.

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