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COMPARATIVE STUDY OF HEALTH AND SAFETY AWARENESS PROCESS WITH REFERENCE TO THE LARGE, MIDDLE AND SMALL SCALE INDUSTRY

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ABSTRACT

A health and safety procedure is one of the imperative processes for the protections of industrial workers from health hazards and accidents because the impact of these actions amplifies attentiveness and zeal that is the most important qualification for any workers to boost the output.

As we know that if any one into the industry, he has to take a precaution to avoid the possibility of accident or any type of damage regarding health. There are numerous reasons for that like working with risky machinery, exposing in various toxic and chemical substances moreover different psychological hazards, which resulting the insomnia, stress and irritate behavior

So, in this research paper, we are trying to find out .that how much priority are being given for safety awareness and training program by Large, Middle and Small scale industry.

KEY WORDS: health, safety procedure, precaution.

Introduction:

Health and safety measures have been considered as one of the most vital activities for industrial labourer's or workers because the impact of these activities increase the physical and mental alertness, moral strength and overall efficiency that is the most important prerequisite for any labour to enhance the productivity.

It has already been understood by everyone, who is working in the industry that safe and healthy work environment is one of the basic rights of each and every worker, despite knowing that still many workers are victimized of unfair practice of health and safety in different industries in India. It has become a regular phenomenon even in the 20th century also. To be very precise, the International Labour Organization (ILO) has partially failed in that regard, because75% of the overall workforce resides and works in the third world countries, where health and safety status is very low.

Objective of the study:

The main objective of the study is to do a comparative analysis of the several health and safety curriculum practiced in three types of organizations like Large, Middle and small organizations.

- Health& safety awareness programs conducted in an organization
- Degree of priority of safety and health
- Employees are trained for the safety purpose correctly or not.

Review of Literature

Jeremy Stranks in his book said that this is the duty of each and every employer to ensure health, safety and work for all employees (HASAWA section 2(1). There are lot of provisions have been made, that are required to be maintained by employers as well as employees, both. There have been numbers of criminal cases in recent years involving the offence of 'corporate manslaughter'. The author's has also discussed various types of corporate manslaughter and how to reduce those corporate criminal activities. He also briefed in his **book 'The Manager's Guide to Health & Safety at work',** practical guide that relaxes the legal complexities and explains how to establish systems and procedures for effective health and safety management in any type of organization. It includes important information on new areas including risk management, record keeping standards, HSE management standards and disability discrimination act 1995.

Encyclopedia of occupational health & safety of Jeanne Mager Stellman has been designed to offer anextensive knowledge on occupational health and safety in an comprehensible method, which shall generally be considered rigorously by different professionals in associated area (Medicine, Physics, Chemistry, Engineering, Psychology, Law, Management and Communication)

'The Encyclopedia has been developed with a pragmatic approach in parts and chapters which correspond to the various disciplines that comprise OSH. In addition, the Encyclopedia is also connected to a wide variety of ILO and third party health and safety information resources such as standards and regulations databases.

Enhancing Occupational Safety and Health by Geoff Taylor, Kellie Easterand Roy Hegney is one of the important books for professionals and employers. The authors have taken an endeavor to describe this wide-ranging guide to occupational safety and health in the international and holistic, foregoing regional models for a self-regulatory, risk management-based approach viewpoint. It is considered in all areas in technical as well as human factors of health and safety management - from hazardous substances and radiation, noise and vibration, to ergonomics, stress, substance abuse, and violence. The book is also summarized concerning to the strategies for assessing the requirements of training and the evaluating of courses, furthermore managing the claims of workers' compensation for their rehabilitation. It also explained the process of practice, largely the occupational health and safety management system in a company by incorporating this into existing quality management programs.

Handbook of Osha construction Safety and Health by Charlse D Reese, James V Edison is a significant book and noteworthy guide for reducing safety and health hazards for the workers working in the construction site. The book provides wide range of information concerning to the issues of program development, safety and health program implementation, intervention and prevention of construction incidents, regulatory interpretations, understanding, and compliance, OSHA's expectations, health and safety hazards faced by those working in the construction industry, and sources of information. There are few important issues have been taken into consideration in the second edition of this book, which has revised and updated relating to the constructional regulations, record keeping guidelines, construction job audit and need of training.

The book has also briefed few issues relating to safety and health disciplines such as the analyzing of incidents and accident prevention techniques. The book puts the foundation to design building stronger safety and health initiatives, while intervening and preventing jobsite deaths, injuries, and illnesses with more than 200 illustrations.

With the introduction of ultra modern machinery, many a number of health and safety programs have been introduced now-a-days because few unusual issues such as stress, RSI and Backache are cropping up amongst the employee. According to **Alan JP Dalton, in his book 'Safety, Health and Environmental Hazards at the workplace'** he briefed that those issues are recognized and, in part understood. However it has also been observed that in many other areas, progress is slow. Examining workplace safety, this book suggests that the key to future progress lies in the drive of the environmental movement.

Hypothesis:

H1Health and Safety awareness is independent of the type of industry
H2 Training Level of safe work procedure is independent of industry type
H3Safety priority is independent of industry type

Research Methodology

RESEARCH DESIGN:

Research Design is the range of conditions for collection and analysis of data in a way that plans to merge with the purpose of research as well as appropriate economic procedures. Precisely, it refers to the "framework or plan for a study that guides the collection and analysis of data". A typical research design of a company basically tries to resolve the following issues:

a) Determining Data Collection Design
b) Determining Data Methods
c) Determining Data Sources
d) Determining Primary Data Collection Methods
e) Developing Questionnaires
f) Determining Sampling Plan

The total sample size of our study is comprised of 300 industrial employees working in the various non-executive positions in the technical area in Small, Middle and Large scale Industry. Samples were stratified into three parts equally i.e. 100 samples were interviewed in each type of industry.

Total Sample Size of employee (n = 300)		
Small Scale Industry (n=100)	Middle scale Industry (n=100)	Large Scale Industry (n=100)

Explorative Research Design or Conclusive Research Design: These studies can be either Descriptive or Experimental. We have used a mix of both the tools of Research Design, i.e. Explorative as well as Conclusive.

DATA COLLECTION:

Data Sources:

i. Primary Data collection through Questionnaire.
ii. Secondary Data through Internet, books and magazines.

To clarify those research queries, primary and secondary data are to be taken into consideration.

To collect this secondary data, following weapons shall be used

1. Published summarized articles
2. Books
3. Newspaper
4. Magazine
5. CD &DVD

After collection of secondary data, the data will be evaluated by the process of set variables i.e. setting the data in a systematic manner that will make it easier for researcher to define and explain each variable. Furthermore all data will be compiled and will be arranged in a tabular and graphical form by which it will make the researcher comply to proceed for comparison. Comparative representation of data will also make the findings in a more general framework.

Analysis

To analyze the data obtained by the study, a comparative study is made by using Chi square test. For the purpose of analysis of data, the Statistical Package of Social Science 21.0 was utilized.

Analysis: a] For Hypothesis H1

Awareness about Safety issue as stated in the Company's policy

Category		Frequency	Percent
Small Scale	1.00	10	10.0
	2.00	35	35.0
	3.00	55	55.0
	Total	100	100.0
Middle Scale	1.00	34	34.0
	2.00	61	61.0
	3.00	5	5.0
	Total	100	100.0
Large Scale	1.00	82	82.0
	2.00	12	12.0
	3.00	06	6.0
	Total	100	100.0

1.00: We are always made aware of health & safety issue as stated in the Company
2.00: Mostly someone makes us aware of health & safety issue in the Company
3.00: Not at all aware about health and safety issue of the company

SSI (Small Scale Industry)

10%respondents are told "We are always made aware of health & safety issue as stated in the Company'' ; 35% respondents told that "Mostly someone makes us aware of health & safety issue as stated in the Company"; and 55% are not at all aware about health and safety issue of the company.

MSI (Middle Scale Industry)

35%respondents are told "We are always made aware of health & safety issue as stated in the Company'; 60% respondents told that "Mostly someone makes us aware of health & safety issue as stated in the Company", and only 5% have chosen the category 3.

LSI (Large Scale Industry)

82%chose category 1, 12% respondents chose category 2, while only 6% have chosen category 3.

Crosstab

			Q1			Total
			1.00	2.00	3.00	
Category	Small	Count	10	35	55	100
		Expected Count	42	36	22	100.0
	Medium	Count	34	61	5	100
		Expected Count	42	36	22	100.0
	Large	Count	82	12	6	100
		Expected Count	42	36	22	100.0
Total		Count	126	108	66	300
		Expected Count	126.0	108.0	66.0	300.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	171.662[a]	4	.000
Likelihood Ratio	173.037	4	.000
Linear-by-Linear Association	121.602	1	.000
N of Valid Cases	300		

a. 0 cells (0.0%) have expected count less than 5.
b. The minimum expected count is 19.67.

Interpretation

The Pearsons Chi Square value is 171.662. Since the two sided significance reported in the last column and the first row is less than the significance level of 0.05, we reject the null hypothesis. In our example, p value of 0.000 is less than 0.05, so we reject H_0. In other words, there is a significant relation between the type of industry and safety awareness of the people in those industries. Thus a high level of awareness is visible in large scale industries as compared to small and middle scale industries.

b] For Hypothesis H2

Training on safe work procedure

Category			Frequency	Percent
Small	Valid	1.00	9	9.0
		2.00	21	21.0
		3.00	70	70.0
		Total	100	100.0
Medium	Valid	1.00	35	35.0
		2.00	19	19.0
		3.00	46	46.0
		Total	100	100.0
Large	Valid	1.00	84	88.0
		2.00	10	12.0
		3.00	06	
		Total	100	100.0

1.00: Workers who get formal training for safe work procedure
2.00: Workers who miss out the training of safe work procedure
3.00: Workers who do not get any training for safe work procedure

SSI

Here 9% respondents told that they get formal training for safe work procedure., 21% respondent's said casually that they miss out the training of safe work procedure for their jobs. Rest of the 70% respondents do not get training for safe work procedure,

MSI

Here, only 35% respondents told that they get formal training for safe work procedure.19%respondent's said casually that they miss out the training of safe work procedure for their jobs. Rest of the 46% respondents do not get training for safe work procedure

LSI

84 %respondents told that they get formal training for safe work procedure. 10% said casually that they miss out the training of safe work procedure for their jobs and the rest (6%) do not get any training for safe work procedure

Crosstab

			Q2			Total
			1.00	2.00	3.00	
Category	Small	Count	9	21	70	100
		Expected Count	42.7	16.7	40.7	100.0
	Medium	Count	35	19	46	100
		Expected Count	42.7	16.7	40.7	100.0
	Large	Count	84	10	6	100
		Expected Count	42.7	16.7	40.7	100.0
Total		Count	128	50	122	300
		Expected Count	128	50.0	122.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	123.514[a]	4	.000
Likelihood Ratio	140.802	4	.000
Linear-by-Linear Association	115.595	1	.000
N of Valid Cases	300		

a. 0 cells (0.0%) have expected count less than 5.

b. The minimum expected count is 16.7.

Interpretation

The Pearson's Chi Square value is 123.514. Since the 2 sided significance as reported in the last column and first row (0.000) is smaller than the significance level of 0.05, we tend to reject the null hypothesis. In other words, there is a significant relation between the kind of industry and the training of safe work procedure of the people in

those industries, i.e. the level of training of safe work procedure in large industry is visible in massive scale as compared to small and medium scale industries.

c] For Hypothesis H3

Degree of priority of safety and health

Category			Frequency	Percent
Small	Valid	1.00	5	5.0
		2.00	15	15.0
		3.00	80	80.0
		Total	100	100.0
Medium	Valid	1.00	10	10.0
		2.00	40	40.0
		3.00	50	50.0
		Total	100	100.0
Large	Valid	1.00	83	89.0
		2.00	10	11.0
		300	07	
		Total	100	100.0

1.00: Safety and health has been considered to be given high priority
2.00: Safety and health is sometimes given high priority
3.00: Safety and health is not given high priority

SSI5 % told that safety and health has been considered to be given high priority; 15% told that safety is sometimes a high priority of our company, and 80 % told that safety is not the high priority of the company

MSI 10 % belongs to category 1, 40% to category 2 and 50% to category 3

LSI83 % belongs to category 1, 10% to category 2 and 7% to category 3.

Crosstab

			Q9			Total
			1.00	2.00	3.00	
Category	Small	Count	5	15	80	100
		Expected Count	32.7	21.7	45.7	100.0
	Medium	Count	10	40	50	100
		Expected Count	32.7	21.7	45.7	100.0
	Large	Count	83	10	7	100
		Expected Count	32.7	21.7	45.7	100.0
Total		Count	98	65	137	300
		Expected Count	98.0	65.0	137.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	199.524[a]	4	.000
Likelihood Ratio	207.415	4	.000
Linear-by-Linear Association	148.252	1	.000
N of Valid Cases	300		

a. 0 cells (0.0%) have expected count less than 5.
b. The minimum expected count is21.67.

Interpretation

The Pearson's Chi -Square is 199.524. Since the two sided value of significance (P value) in the last column and first row is smaller the prescribed significance level of 0.05, we should reject the null hypothesis. Thus we can conclude that there is a significant relation between the various types of industry and the priority of safety & health of the individuals given in those industries i.e. the priority of safety and health in a large scale industry is visible in amassive scale as compared to small and medium scale industries.

Conclusion

The paper studies the impact of three major hypotheses on safety awareness, safety training and priority given to safety and health workers in large, medium and small scale industries. By virtue of the statistical study on the data using Chi-Square analysis, we have a tendency to ascertain the conclusion that the safety awareness, safety training and priority given to safety and health work in a large scale industry is far better than the middle and small scale industry. All the results are found significant at the 5% level of significance.

Suggestion

Each and every individual needs to work on the elemental set of safety laws of anticipation and act in accordance with them. These rules emphasize and absolute our method for recognizing risk and be in command of risks.These indispensable rules recognized by suggests that of proceedings of mishaps occurred in our various works need to be obligated. Everybody is needed to intervene as quickly as a variation is observed and discontinue the work if the peril is uncontrolled.

Follow the division of commonplace operational technique and safety astray rules. The correct communication is to be conveyed by the staff to their seniors regarding all or any risky acts, dangerous conditions, accidents, dangerous occurrences and mishap accidents. Similarly, seniors should pay their attention towards the suggestion or any vital communication concerning the protection and health of their subordinates. Regardless of the scale of the business, the management should perceive the importance of safety awareness and training.

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