

Behavioural Based Safety Practices at Small Manufacturing Units at Chennai



J.Krithika, K.R.Sowmya, P.Prabadevi

Abstract: *This research is aimed to study the Behavioural Based Safety Management Practices in small manufacturing units of Chennai. The research focuses to understand the perception of employees on the Behavioural Based Safety Management Practices of their work place. The research instrument Questionnaire was used to collect the primary data. The data got collected from 124 respondents and the collected data was analysed by using Independent 'Z' test and One way ANOVA. The work place safety is very essential systematic procedure to be followed in any organisation. By adopting a strict procedure and regulations the safe work atmosphere can get created in any manufacturing unit. This research is focuses on behavioural based safety, which will help to reduce accidents in manufacturing units. The role of safety trainers is very significant in enhancing the behavioural based safety practices in any organization. The trainers who are instructing and providing training to their employees is any organisation, need a chance to communicate with employees before he or she is drafting a content of any training and development activity. By this conversation, the existing skill set of the employees and their nature of work can be understood and an effective training program can be planned.*

Keywords: *Safety Management practices, Instruments, Safety training, atmosphere, Training and development.*

I. INTRODUCTION

Behavioural based safety is also known as emotional avoidance behaviours. It is the process through which the management and employees of an organisation learn about the overall safety of the workplace. The major goal of Behavioural based safety is creating workers attention and awareness on their own and their peers daily safety behaviour at workplace. Behavioural based safety is an established method of using positive reinforcement to change unsafe individual behaviours in to a safe behaviour. It is related to safe and unsafe behaviour of employees act in the work place. From Underlying recognizable work processes which has

negative feedback and consequence for the employees are focused and the potential expected consequence need to be rectified. Behavioural based safety is by the people of the people for the people. Behavioural based safety is a process of repeatedly going to an employee and making random observation till he reaches the safe behaviour. Behavioural based safety trained observers collect these data on regular basis..

I. REVIEW CRITERIA

David D. Woods, Leila Johannesen, Sidney Dekker, (2010), found that human error is a prime reason for any work related accidents. The human error is unspecific in general and may be the major cause for any accidents at workplace. The researcher provides few recommendations like top management commitment on safety programs and its implementation, proactive management skill development for all level of managers, motivation for foremen and employee participation in safety activities.

Debra L. Truitt (2011) conducted the study to know the association between training experience and attitudes on perceived job proficiency among 237 employees. The respondents were from three different states namely Maryland, Delaware and Arizona. Findings show that half of the employees are showing positive result remaining of them showing negative result towards T&D program, which develops their job proficiency.

Dr.H.L.Kaila, (2011) explored that the behavioural based safety as the only major contributors for safe work place in any of the manufacturing units such as petroleum, cement, automobiles, pharmaceutical etc. The researcher rates behavioural based safety as a superior need than the engineering and administrative controls.

Amir Riaz, et al., (2013) identified the relationship between the employee perception of training benefits and employee organizational commitment in banking sector of Pakistan with sample size of 250 and focuses on identifying the exact nature of employee's opinion on safety training advantages and organization's support. Findings show that the attachment of individual employee is committed on his organisation for 'instrumental interests' such as pay and benefit provided by the employee than the safety aspects of their workplace.

Shah Rollah et al., (2014) examined the motivation and perception of employees towards health department and employees opinion on the effectiveness of training and development. Interviews and questionnaire were used to collect qualitative data.

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Behavioural Based Safety Practices at Small Manufacturing Units at Chennai

The findings of the study shows that majority of the employees felt that training should equip them with the basic knowledge and necessary competencies to perform their work assignment effectively and it should support them to fulfil their job requirements.

They felt that training and development is very essential for technical staff than the administrative staff in any organisation.

Chaitra V H (2015) studied employee perception and opinion about safety training programs using a sample of 100 from the employees at Steel authority of India limited and found that training program should essentially reach all level of employees. Then only the skills learned during the training session will get applied in their work which will enhance the productivity.

Abdiaziz Ahmed Ibrahim and AbdulkadirMohamudDahie (2016) conducted a study on influence of Training on employee performance at Mogadishu-Somalia with 63 respondents. The questionnaire was utilised to collect the primary data. Findings of the study found that the employee training and their performance are highly related.

Mohammed S. Alamril and Thamir I. Al-Duhaim (2017), conducted a study on Perception of employees on training at Saudi International development fund with a sample size of 200. The primary data got collected through questionnaire and appropriate statistical tools like correlation and regression were utilised. The major findings of this study express the relationship between Training and employee satisfaction.

II. RESEARCH DESIGN:

Development of any Industry is depends on the satisfaction of employees. For organizational productivity, safety and Training assumes holds a great significance. The researcher focuses to understand the perception of employees on the Behaviour Based Safety Management Practices of their work place. This research is descriptive research by nature. Here the researcher observes a single event or characteristics or they may involve relating the interaction of two or more variables. Simple Random Technique was adopted and the data got collected from 124 employees who are working in small manufacturing units of Chennai. Primary data were collected through survey from the employees using the questionnaire which supported to recognize the employee's perception regarding their jobs and to find out the job performance in their organisation as well as the job. Secondary data were

collected from journals, magazines, newsletters and websites. Appropriate statistical tools were utilized for this study.

III. RESULTS

Descriptive analysis : The gender wise classification of respondents shows that 102 respondents are male and 22 of them are female and 87 of the employees are unmarried and 37 of them are married. 7.26% of the respondent's experience is less than 1 year.

Table I- Respondents opinion on "management interest in the safety and health "and "Personal protective equipment's availability" and "safety training meets employee's needs".

s.no	Management Interest on safety and health	percentage	Personal protective equipment's availability	percentage	Safety training meets needs	Percentage
1	Moderate	9.7	Moderate	18.5	Moderate	13.7
2	Good	37.9	Good	46.0	Good	45.2
3	Excellent	52.4	Excellent	35.5	Excellent	41.1
	Total	100		100		100

Inference : The above tables shows that only 52.4 percentage of the respondents are expressing their opinion as excellent on management interest in the safety and health and 35.5 percentages of them marked excellent for personal protective equipment's availability and 41.1 percentage of the respondents mentioned as excellent for the safety training which meets their expectations.

4.1 EMPLOYEE PERCEPTION ON SAFETY ASPECTS BASED ON AGE

Table II- One way ANOVA showing significant difference between Employee Perception based on Age

H0: There is no significant difference between employee's age and perception on safety awareness.

H1: There is a significant difference between employee's age and perception on safety awareness.

Employee perception on Safety awareness	Age of the employees	N	Mean	Std. Deviation	F	SIG
The safety and health policy of my organization is understood by me clearly	Below 25	18	4.33	.686		
	26-30	42	4.31	.715		
	31-35	22	4.05	.899		
					.726	.539

	36 & Above	42	4.21	.717		
	Total	124	4.23	.745		
I know whom to report in case of health and safety problems	Below 25	18	4.33	.594		
	26-30	42	4.50	.595		
	31-35	22	4.36	.790	.395	.757
	36 & Above	42	4.38	.697		
	Total	124	4.41	.663		
The supervisors are approachable by any employee in my organisation	Below 25	18	4.17	.618		
	26-30	42	4.38	.697		
	31-35	22	4.32	.716	.884	.452
	36 & Above	42	4.14	.814		
	Total	124	4.26	.731		
I approach safety committee team when there is a need of an action	Below 25	18	4.22	.548		
	26-30	42	4.24	.656		
	31-35	22	4.14	.710	.266	.850
	36 & Above	42	4.12	.739		
	Total	124	4.18	.675		
The type, cause and recommendations of possible accident zones are known to all.	Below 25	18	4.22	.647		
	26-30	42	4.33	.721		
	31-35	22	3.86	.834	2.029	.113
	36 & Above	42	4.19	.707		
	Total	124	4.19	.737		
I know about all the possible hazards and safety precautions	Below 25	18	4.22	.647		
	26-30	42	4.50	.634		
	31-35	22	4.36	.790		
	36 & Above	42	4.36	.759	.712	.547
	Total	124	4.39	.707		
Training is focused when any accidents are occurring	Below 25	18	4.22	.428		
	26-30	42	4.43	.590		
	31-35	22	4.36	.727	.911	.438
	36 & Above	42	4.21	.750		
	Total	124	4.31	.655		
I know what to do in case of emergencies	Below 25	18	4.61	.502		
	26-30	42	4.48	.671		
	31-35	22	4.32	.780	1.440	.234
	36 & Above	42	4.24	.821		
	Total	124	4.39	.729		
All new employees are properly trained in safety operating procedure.	Below 25	18	4.28	.752		
	26-30	42	4.24	.692		
	31-35	22	3.95	.844		
	36 & Above	42	4.17	.730	.864	.462
	Total	124	4.17	.740		
The visitors are given clear instruction before entering our work premises	Below 25	18	4.67	.594		
	26-30	42	4.71	.554		
	31-35	22	4.45	.800	.981	.404
	36 & Above	42	4.52	.740		
	Total	124	4.60	.674		

Inference:

From the above table we can infer that there is no difference in employee perception based on age and safety awareness. All

124 respondents felt that safety awareness is an essential aspect for any manufacturing unit.

Behavioural Based Safety Practices at Small Manufacturing Units at Chennai

4.2.EMPLOYEE PERCEPTION ON SAFETY ASPECTS BASED ON DEPENDENTS

Table III One way ANOVA showing significant difference between Employee perception on safety behaviour and number of Dependents of employees.

H0: No difference between number of dependents of employees and employee perception on safety behavior.
 H1: Difference is existing between number of dependents of employees and employee perception on safety behavior.

Employees perception on safety behavior	No of your dependent	N	Mean	Std. Deviation	F	SIG
Safety and health issues are identified and corrected in my organisation	Nil	46	4.24	0.565		0.265
	1 to 2	52	4.23	0.614		
	3 to 4	22	4	35	1.339	
	5 or More	4	4.5	0.577		
	Total	124	4.2	0.584		
I consider safety and health issues as priority out of my job responsibilities	Nil	46	4.09	0.839		0.354
	1 to 2	52	4.17	0.785		
	3 to 4	22	3.86	0.774	1.095	
	5 or More	4	4.5	1		
	Total	124	4.1	0.811		
The safety awareness level can be enhanced through rewards	Nil	46	4	0.699		0.429
	1 to 2	52	4.12	0.676		
	3 to 4	22	3.86	0.56	0.929	
	5 or More	4	4.25	0.5		
	Total	124	4.03	0.662		
Safety incentives will motivate the employee to be safer.	Nil	46	4.46	0.721		0.714
	1 to 2	52	4.5	0.642	0.455	
	3 to 4	22	4.36	0.658		
	5 or More	4	4.75	0.5		
	Total	124	4.47	0.668		
Penalties can be introduced to reduce the accidents	Nil	46	4.24	0.565		0.265
	1 to 2	52	4.23	0.614		
	3 to 4	22	4	0.535		
	5 or More	4	4.5	0.577	1.339	
	Total	124	4.2	0.584		

Safe and unsafe behaviors are observed and feedback is been given	Nil	46	4.48	0.623	0.072
	1 to 2	52	4.35	0.653	
	3 to 4	22	4.09	0.61	2.387
	5 or More	4	4.75	0.5	
	Total	124	4.36	0.642	

Inference: From the above table it is clear that there is no difference is existing in the perception of employees on safety behavior. Both the employees having no dependents and more than 5 dependents got a same kind of opinion on this aspect.

4.3 Z-TEST-EMPLOYEE PERCEPTION BASED ON THEIR EXPERIENCE

Group Statistics

Team work	no of years of experience	N	Mean	Std. Deviation	F	SIG
Safety and health issues are identified and corrected in my organisation	Less than 1 year	9	4.00	.707	0.058	.810
	1 to 10 years	78	4.26	.495		
I consider safety and health issues as priority out of my job responsibilities	Less than 1 year	9	4.00	.707	2.187	2.187
	1 to 10 years	78	4.09	.809		
The safety awareness level can be enhanced through rewards	Less than 1 year	9	4.00	.707	.059	.059
	1 to 10 years	78	4.12	.581		
Safety incentives will motivate the employee to be safer	Less than 1 year	9	4.22	.833	14.569	.000
	1 to 10 years	78	4.62	.490		
Penalties can be introduced to reduce the accidents	Less than 1 year	9	4.00	.707	.058	.810
	1 to 10 years	78	4.26	.495		
Safe and unsafe behaviors are observed and feedback is been given	Less than 1 year	9	4.11	.782	.836	.363
	1 to 10 years	78	4.50	.552		

Inference:

The above table indicates that a safety incentive program would cause employees to work more safety is the only statement for which significant difference is existing between the employee’s experience and their opinion on safety team work. It shows that the experienced people are differing in their opinion than the less experienced people.

II. RESULT AND DISCUSSION

There is no difference in employee’s perception on safety awareness irrespective of their age. The data collected from the different age group shows that all got the same perception on safety awareness. All the respondents felt that safety awareness is essential for any employee in any industry. When the employees were categorised based on number of dependents and checked about their perception on safety behaviour, they expressed same opinion as safety behaviour is essential for every individual in an organisation. Even the

Table IV Table showing significant difference between Employee perception on team work based on their experience.

H0: There is no difference between employee’s experience and their perception on team work.

H1: There is a difference between employee’s experience and their perception on team work.

respondent with no dependents to respondents with 5 dependents expressed a same perception on safety behaviour. Only 35% of the respondents felt as Excellent about the personal protective equipment’s availability, which need a special attention. 41% of them found happy and rated as excellent about their Safety training programs. They found their training programs are meeting their need. The experienced respondents were having a different opinion than the young employees of this industry in terms of perception on team work. The experienced employees of this industry are not ready to accept that a safety incentive program would cause employees more safely. They felt that safety is in high priority and reward for safety behaviour is good and they got the same of opinion of youngsters about imposing penalties for safety violation. But they felt that monetary benefits would not develop the right attitude on safety aspects.

III. CONCLUSION

A work place injury not only affects the employee who is hurt but also affects the entire organisation. The compensation need to be paid for these accidents are mandatory and these accidents will demotivate the employees of any organisation. To enhance the fundamental positive attitude and belief among the employees there is a need of behavioural based safety initiatives in any organisation. Behavioural based safety can enhance the employee health and welfare and employee job satisfaction. It also facilitates to reduce the worker's compensation claims.

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Dr. J. Krithika, is an Associate Professor in Department of Management Studies, Rajalakshmi Engineering College, Chennai, Tamilnadu, India. Having 20 years of experience in Teaching, Research, Industry, and consultancy. she published more than 30 Papers in National , International Journals and Proceedings. She has Participated and presented papers in several conferences, workshops and seminars in India and Srilanka. She has addressed as Resource Person, organized and co-organized several developmental Programmes like Conferences, Seminars, Training Programs, Industrial Visits, Guest Lectures, Students Competitions, Symposiums, Workshops, Institutional functions, Celebrations, etc. She specializes in, and presently teaches subjects in Markeing and HR specialisations and Research.



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