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A Study On Effectiveness Of Employee's Health And Safety Measures At Pcbl (Tn) Limited.

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ABSTRACT:

This study investigates the impact of health and safety measures on employee well-being, satisfaction, and productivity in a manufacturing organization where workers face various occupational risks. Using structured questionnaires, interviews, and company records, the research explores employees' awareness, understanding, and adherence to existing safety practices. While significant progress has been made in implementing health and safety protocols, gaps remain in training frequency, employee involvement, and communication. The study provides actionable recommendations to strengthen the safety culture, aiming to enhance compliance, reduce workplace incidents, and support sustainable organizational growth through improved employee welfare.

Keywords: Health and Safety Measures, Safety Practices and Employee Welfare.

1.INTRODUCTION

This study explores the effectiveness of employee health and safety measures in an industrial setting, focusing on how well these initiatives protect workers from occupational hazards and promote their physical and mental well-being. It examines key components such as safety training, use of personal protective equipment, hazard communication, and employee involvement in safety practices. By evaluating current measures and identifying gaps, the study aims to offer insights that can enhance workplace safety, reduce incidents, and improve overall employee performance and organizational efficiency.

2. OBJECTIVES OF THE STUDY

1. To assess the existing health and safety policies and practices and to find workplace hazards and risks affecting employee well- being.
2. To evaluate the effectiveness of current safety training programs and awareness initiatives.
3. To examine the role of management in enforcing health and safety regulations including fire safety first aid, and evacuation plan.
4. To explore the impact of workplace safety on employee productivity and overall organizational efficiency.

3.SCOPE OF THE STUDY

The goal of this study is to learn more about and improve workplace health and safety measures. It covers key aspects such as risk assessment, hazard prevention, employee training, and compliance with occupational health and safety (OHS) regulations. The study also examines the role of technology, such as AI monitoring and protective equipment, in enhancing workplace safety. Additionally, it explores the impact of wellness programs, ergonomic practices, and mental health support on employee well-being. The study provides insights into the best practices for creating a safe and productive work environment and can be applied to a variety of industries, including manufacturing, corporate offices, healthcare, and construction.

4.REVIEW OF LITERATURE

Ngoc Thang Nguyen, Van Huong Vu (2024). In study on the adopting occupational health and safety

This explores the impact of adopting occupational health and safety management practices on employee outcomes in Vietnamese SMEs, highlighting that investment in worker health and environmental standards leads to higher wages, non-monetary benefits like paid sick leave, and better employee contracts. Additionally, it shows that certified SMEs experience increased profitability, labor productivity, and government financial support.

Marta Niciejewska¹, Olga Kiriliuk (2024). A study on the Occupational health and safety management in "small size" enterprises, with particular emphasis on hazards identification.

These concentrate on hazard identification and management of occupational health and safety in small businesses. It identifies physical and mental hazards as the main concerns, with findings aligning with trends observed in the EU. The study emphasizes the importance of accurately identifying hazards to implement effective corrective actions, such as using personal protective equipment and enhancing training.

5.RESEARCH METHODOLOGY

To study employee health and safety measures, this study employs a descriptive research design that places an emphasis on the systematic collection and analysis of data from both primary and secondary sources. Primary data was gathered using a structured questionnaire, incorporating both open and closed-ended questions, while secondary data was sourced from journals and magazines. The research follows a non-probability sampling method, specifically convenience sampling, and collects data from 217 respondents out of a target population of 500, determined based on Morgan's sample size table. The study aims to describe and provide insights into the health and safety measures, using systematic procedures to understand and present the findings.

6.DATA ANALYSIS AND INTERPRETATION

CHI SQUARE TEST:

Chi-square Test: The existing health and safety policies to find workplace hazards are well-being.

Null hypothesis Ho: There is no significant relationship between the effectiveness of safety measures, well – informed about health and safety policies, emergency preparedness in workplace and noise and air pollution are well managed.

Alternative hypothesis H1: There some significant relationship between the effectiveness of safety measures, well – informed about health and safety policies, emergency preparedness in workplace and noise and air pollution are well managed.

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
EFFECTIVENESS OF THE RESPONDENTS	217	4.12	1.148	1	5
WELL-INFORMED HEALTH AND SAFETY OF THE RESPONDENTS	217	4.18	1.133	1	5
EMERGENCY PREPAREDNESS OF THE RESPONDENTS	217	4.18	1.155	1	5
NOISE AND AIR POLLUTION OF THE RESPONDENTS	217	4.15	1.130	1	5

Test Statistics

	EFFECTIVENESS OF THE RESPONDENTS	WELL-INFORMED HEALTH AND SAFETY OF THE RESPONDENTS	EMERGENCY PREPAREDNESS OF THE RESPONDENTS	NOISE AND AIR POLLUTION OF THE RESPONDENTS
Chi-Square	163.253 ^a	187.770 ^a	194.544 ^a	175.005 ^a
df	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000
Monte Carlo Sig. Sig.	.000 ^b	.000 ^b	.000 ^b	.000 ^b
95% Confidence Interval Lower Bound	.000	.000	.000	.000
Upper Bound	.014	.014	.014	.014

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 43.4.

b. Based on 217 sampled tables with starting seed 624387341.

INFERENCE: Since the null hypothesis is rejected. Hence there some significant relationship between the effectiveness of safety measures, well – informed about health and safety policies, emergency preparedness in workplace and noise and air pollution are well managed.

MANN-WHITNEY U TEST

Mann-Whitney U Test : Management reviews promotes a strong safety culture in workplace safety policies.

Null hypothesis Ho: There is no difference between the management promotes a strong safety culture in workplace, workplace safety policies are consistently enforced and management review or update safety protocols.

Alternative hypothesis H1: There is no difference between the management promotes a strong safety culture in workplace, workplace safety policies are consistently enforced and management review or update safety protocols.

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
MANAGEMENT PROMOTES A STRONG SAFETY CULTURE IN	217	4.16	1.157	1	5
WORKPLACE SAFETY POLICIES ARE CONSISTENTLY ENFORCED	217	4.19	1.134	1	5
MANAGEMENT REVIEW OR UPDATE SAFETY PROTOCOLS	217	4.17	1.144	1	5

Test Statistics

	MANAGEMENT PROMOTES A STRONG SAFETY CULTURE IN WORKPLACE	WORKPLACE SAFETY POLICIES ARE CONSISTENTLY ENFORCED
Mann-Whitney U	29.500	8.000
Wilcoxon W	74.500	53.000
Z	-3.002	-4.409
Asymp. Sig. (2-tailed)	.003	.000
Exact Sig. [2*(1-tailed Sig.)]	.006 ^a	.000 ^a
Monte Carlo Sig. (2tailed)	.005 ^b	.000 ^b
95% Lower Confidence Interval	.000	.000
Upper Bound	.014	.014
Monte Carlo Sig. (1tailed)	.000 ^b	.000 ^b
95% Lower Confidence Interval	.000	.000
Upper Bound	.014	.014
Sig.		

a. Grouping Variable: Management review or update safety protocols

INFERENCE: Since the significant value is less than 0.5 null hypothesis is rejected. Hence there is no difference between the management promotes a strong safety culture in workplace, workplace safety policies are consistently enforced and management review or update safety protocols.

CORRELATION

Correlation: Effectiveness of current safety training sessions.

Null hypothesis Ho: There is no difference between the current safety training programs, overall quality of safety training and provides regular safety training sessions.

Alternative hypothesis H1: There is difference between the current safety training programs, overall quality of safety training and provides regular safety training sessions.

Correlation

		CURRENT SAFETY TRAINING PROGRAMS	OVERALL QUALITY OF SAFETY TRAINING	PROVIDES REGULAR SAFETY TRAINING SESSIONS
CURRENT SAFETY TRAINING PROGRAMS	Pearson Correlation	1	.792**	.891**
	Sig. (2-tailed)		0	0
	N	217	217	217
OVERALL QUALITY OF SAFETY TRAINING	Pearson Correlation	.792**	1	.831**
	Sig. (2-tailed)		0	0
	N	217	217	217
PROVIDES REGULAR SAFETY TRAINING SESSIONS	Pearson Correlation	.891**	.831**	1
	Sig. (2-tailed)	0	0	
	N	217	217	217

Correlation is significant at the 0.01 level

INFERENCE: Since the null hypothesis is rejected. Hence there is difference between the current safety training programs, overall quality of safety training and provides regular safety training sessions.

7. SUMMARY OF FINDINGS

- 51.6 per cent of the respondents Very good in effectiveness of safety measures.
- 53.5 per cent of the respondents Strongly agree that well – informed about health and safety policies.
- 53.9 per cent of the respondents Strongly agree that management promotes a strong safety culture in workplace.
- 55.3 per cent of the respondents Strongly agree that workplace safety policies are consistently enforced by management without exceptions.
- 53.5 per cent of the respondents Very effective in the current safety training programs in preparing for potential workplace hazards.
- 58.1 per cent of the respondents Excellent in the overall quality of the safety training received.
- Since the null hypothesis is rejected. Hence there some significant relationship between the effectiveness of safety measures, well – informed about health and safety policies, emergency preparedness in workplace and noise and air pollution are well managed.
- Since the significant value is less than 0.5 null hypothesis is rejected. Hence there is no difference between the management promotes a strong safety culture in workplace, workplace safety policies are consistently enforced and management review or update safety protocols.
- Since the null hypothesis is rejected. Hence there is difference between the current safety training programs, overall quality of safety training and provides regular safety training sessions.

8.SUGGESTIONS

- Workshops and campaigns to raise safety awareness at all levels should be organized in addition to regular, practical, and department-specific safety training sessions. Safety posters in multiple languages, warning signs, and clear safety instructions should be displayed throughout the workplace.
- Employee participation in safety committees should be encouraged to identify risks and suggest improvements, while a secure and user-friendly reporting system should allow employees to report hazards or near-misses without fear of retaliation.
- Routine safety audits, hazard risk assessments, and regular checks on personal protective equipment (PPE) should be conducted, with digital safety management tools tracking incidents and compliance. Employee feedback on safety measures should be gathered, and health and safety policies should be updated regularly.

9.CONCLUSION

To enhance workplace safety and ensure employees are well-prepared for potential risks, it is essential to regularly conduct department-specific safety training and communicate protocols through visual aids like digital displays and signboards. Encouraging employee participation in risk assessments and safety committees fosters ownership and accountability, while a confidential hazard reporting system promotes proactive safety behavior. In addition to wellness initiatives like fitness programs and mental health support, providing high-quality PPE that is regularly inspected further safeguards employee well-being. Leveraging digital tools for incident tracking, conducting internal and external audits, recognizing safe behavior, and continuously updating safety policies help build a strong, adaptable safety culture.

