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# EPRA INTERNATIONAL JOURNAL OF ECONOMIC GROWTH AND ENVIRONMENTAL ISSUES (EGEI)

Peer-Reviewed Journal

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## MANAGING RISKS OF HAZARDOUS CHEMICAL INDUCED OCCUPATIONAL STRESS AND THEIR IMPACT ON WORK PERFORMANCE: AN EMPIRICAL STUDY ON SELECTED CHEMICAL COMPANIES IN TUTICORIN

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### ABSTRACT

*Work stress has become a common problem being faced by employees in many organizations regardless of any industry that they work today particularly workload, role conflict, resource management, maintenance problem, health problem due to working environment and inadequate monetary rewards are the prime reasons of causing stress in employees that leads to reduced employee efficiency. Different aspects of employee job performance that are likely to be affected by stress include Productivity, Job Satisfaction / Morale, Absenteeism, Decision Making Abilities, Accuracy, Creativity, Attention to Personal Appearance, Organizational Skills, Courtesy Cooperation, Initiative, Reliability, Alertness, Perseverance and Tardiness. KEYWORDS: Work stress, Productivity, Job Satisfaction, Morale, Absenteeism, Decision Making Abilities, Accuracy, Creativity, Attention to Personal Appearance, Organizational Skills*

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### INTRODUCTION

The study can be significant particularly for employers who after knowing the occupational stress inducers (OSI), can adopt appropriate strategies to reduce the occupational stress thereby enhancing the employees' job performance; and the employees, who after being aware can take appropriate steps to reduce their own stress, saving themselves from variety of health issues and also help management to implement the stress management strategies. Workers who are stressed are also more likely to be unhealthy, poorly motivated, less productive and less safe at work. Their organizations are less likely to be successful in a competitive market. Stress can be brought about by pressures at home and at work. Employers can protect employees from stress that arises through work. Stress at work can be a real problem to the organization as well as for its workers. Good management and good work organization are the best forms of stress prevention and managing health problems by managing issues in chemical hazards. This study is helpful in assessing the extent of stress and health issues experienced by the employees. So this study helps the organization to take necessary steps by the employer to protect employees against any risk from exposure. Precautions to be taken by an employee to protect himself against the health risks associated exposure, Correct use, maintenance of safety equipment, facilities and engineering

controls, Importance of good housekeeping at the workplace and personal hygiene, Safe working procedures. Correct stress management should start from improved health and good intrapersonal relationships. The prevention and management of workplace stress requires organizational level interventions and healthy management of occupational chemical hazard, because it is the organization that creates the stress. Success in managing and preventing stress will depend on the culture in the organization. A culture of openness and understanding, rather than of criticism, is essential.

### PURPOSE AND OBJECTIVES

To analyze the risks of hazardous chemicals and the effect of occupational stress on workforce performance: an Empirical study on selected chemical companies in Tuticorin. To find out the occupational hazards in selected chemical companies of Tuticorin. To study the impact of workplace practices for Managing risks of hazardous chemical. To find out the occupational stress experienced by workers in companies under study. To examine the relationship between Managing risks of hazardous chemical and workforce stress in Chemical Companies of Tuticorin. To analyze the relationship between chemical induced occupational stress and occupational performance. To offer suggestion to overcome occupational induced stress and to improve work

performance. Sampling design is to clearly define set of objects, technically called the universe and the sampling design used in the study is probability sampling. The sampling technique is “Simple random sampling” of probability sampling method. All data were analysed using the Statistical Package for the Social Sciences (SPSS 11). In order to normalize the Likert scale on 1-5 scales for each domain of risk of chemical hazard induced to occupational stress and its impact on work performance questionnaire, the sum of raw scores of items in each domain was divided by the numbers of items in

each domain (4) and for overall, sum of raw scores of items were divided by 36 respectively. The possible justified scores were varied between 1 and 5.

**CONTROLLING EXPOSURES AND FINDING ALTERNATIVES**

Based on the available information regarding the toxicity of substances used in the chemical industry and our knowledge of workers’ exposures, it is clear that more effective measures must be put in chemical interviews and review of government inspections reveal, women working in the chemical industry experienced serious symptoms and illnesses

**Table 1: Means and Standard Deviations on risk of chemical hazard induced to occupational stress and its impact on work performance**

S.N	VARIABLES	M	SD
	A site map that indicates locations of the hazardous chemicals, personnel, equipment and emergency control rooms at the workplace	2.56	0.640
	My job is safe and secure in this organization	2.65	0.591
	It promotes safe and Healthy Work Place	1.96	0.694
	Stored chemicals inside a closeable cabinet or on a study shelf with a front-edge lip to prevent accidents and chemical spills	1.87	0.783
	Store flammables in an approved flammable liquid storage cabinet and Kept chemical storage areas off limits to any unauthorized personnel	2.41	0.753
	Management Provide protective clothing and equipment to employees	2.15	0.822
	Properly dispose of empty containers.	2.22	0.713
	Management Provide and maintain a safe plant and equipment	2.40	0.666
	Management takes care of safety problems in my workplace	1.76	0.692
	Anti-static safety footwear	2.55	0.671
	protective chemical-resistant clothing (type/code specified	1.83	0.755
	Respiratory Protective Equipment (RPE) for use	1.84	0.750
	Management Appointing a competent person as the organization’s Safety Officer	2.32	0.698
	Management Identify potential health hazards in Assessment of levels of physical and chemical health hazards	1.83	0.755
	Regular medical check-ups are given to the employees	1.84	0.750

It is inferred from the table that the mean values intimate the overall opinion of the employees in the chemical company

**Table No: 2 Correlations between the Variables**

PARTICULARS	CORRELATION VALUE
Managing risk of chemical hazardous	-0.157307295
Grievance handling,	-0.19196706
Performance and its stress	0.201098545
Impact on work performance	0.075792438
Stress level that affect the quality of work life	0.390825294

It is understood from the above table that there is a negative correlation between the Managing risk of chemical hazardous & Grievance handling, It shows the interpersonal relationship between the employees are lacking in an organization and companies has to give more importance in providing health and safety environment to the employees and they should have an ear to hear the worker’s problem and take steps to rectify the worker’s problem.

**CONCLUSION**

This review raises major issues about health risks to women working in the Chemical industry that have important implications for regulatory reform. First, we found through worker interviews and a review of hygiene reports that labor under very poor working conditions marked by inadequate to non-existent exposure controls and law enforcement. Governments can take measures to protect the public from some of the EDCs in consumer products, surely we should expect similar action to protect workers who are more severely

and directly exposed. Required actions must include eliminating workers’ exposure to hazardous chemicals used in the chemical industry. This can be accomplished most effectively by using substitutes and additives shown to be endocrine - disrupting chemicals. In addition, a comprehensive regulatory review of chemical hazards is needed. It is our contention that there is sufficient evidence that women working in the chemical industry face serious risks to their health as a result of preventable exposures. It is our hope that this review will generate increased discussion and action on the part of risk of chemical hazard induced to occupational stress and its impact on work performance. The study concluded that job-stress dimensions such as lack of infrastructure, work load, overseeing the conduct of examination, time pressure, compilation of results and students indiscipline are major predictors of low performance among academic staff. The implication of this finding is that, if and unless something is done to arrest the situation, there will be serious problems. The present study clearly found that there is a significant

relationship between gender, age, education, job role, interpersonal relationships and impact of occupational stress. So the Chemical sector employees should adopt new coping strategies for maintaining good physical and mental condition which will improve productivity level of the Chemical Company.

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