

## ABSTRACT

**Introduction:** Chemical usage and related accidents now has become a global issue through industrialization. A free trade zone is a key area where multiple chemical manufacturing plants and industries are functioning with an increased risk of chemical accidents.

**Objective:** To assess knowledge and attitudes among workers and individual and organizational level preparedness on chemical accident prevention in medium and small-scale paint manufacturing industries in Ekala free trade zone area.

**Methodology:** A descriptive cross-sectional study was conducted in small and medium scale paint manufacturing industries in the Ekala Free Trade Zone. A pre-tested self-administered questionnaire was used as the study instrument which was distributed among all workers of the said industries.

**Results:** The total participants for this study were 175 (included both workers and supervisors) of all the paint manufacturing factories in Ekala FTZ. Most of the respondents were in the age group of 20-30 (42.1%) years and most of the workers (45.4%, n=69) were only qualified up to O/L. However, nearly 60% (n=69) had 1-10 years' work experience. Nearly 90% respondents answered correctly on the knowledge-based questions. The attitudes towards on chemical accident prevention were considerably satisfactory. More than 90% respondents demonstrated satisfactory level practices of individual preparedness. In terms of checklist on organizational preparedness over 85% agreed on satisfactory level of preparedness in preventing chemical accidents.

**Conclusions and Recommendations:** It is evident by the results of this study that the employees of these industries have a basic knowledge in preventing chemical accidents. However, the capacity of the workers need to be developed in the areas of handling fire extinguishers, carrying out basic first aid in case of an emergency and usage of Personal Protective Equipment.

**Key words:** Free Trade Zone, Chemical accident prevention, paint manufacturing industries