

OCCUPATIONAL HEALTH HAZARDS IN DYEING INDUSTRIES (A CASE STUDY OF LUDHIANA CITY)

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ABSTRACT

The number of textile and dyeing industries in India are increasing more rapidly due to major demand of the clothes and textile goods. The dyeing cloths are used in the various fields like homes, farming, hospitals, transportation, buildings and some other uses. A large number of skilled and unskilled workers employed in these industries are suffering from various diseases due to physical, chemical and environmental hazards. The present research work deals with the investigations of occupational health hazards in the dyeing industries of Ludhiana city and the impact of these hazards on the health of their workers. There are total 16 dyeing industries in the city which are registered in the District Industrial Center. A qualitative and quantitative study has been done on 20 workers of four dyeing industries taking 05 workers from each. The working conditions and working environment of these workers are compared with the agriculture farm workers (control group) who are working at about 28 km away from these industries. The ambient air temperature, suspended particulate matter (SPM), relative humidity, sound level, light intensity and the effect of the chemicals on the workers health has been recorded at the respective workplace. The result regarding the environmental conditions reveals 35.53%, 97.7%, 77.23% and 8.26% higher values of the Ambient Air Temperature, SPM, Relative Humidity and Sound Level from their standard limits prescribed by CPCB and NAAQS. The intensity of the light in these industries found to be 11.84% lower from their permissive limits. The results regarding the chemical conditions of these industries indicates that wastewater contains 30%, 117%, 65% and 15.8% higher values of the Arsenic, Lead, Chromium and Zinc respectively from their permissive limits and ambient air possesses 17.5% and 30% higher values of Arsenic and Lead respectively. The SO₂ and NO₂ in the ambient air are within permissible limits. The physical health checkup of the industrial workers disclosed that 15% suffering with Hearing problem, 20% suffering with Skin problem, 15% suffering with the Nasal problem, 35% suffering with breathing problem and remaining 15% suffering with Eye infections which are significantly higher than the control group at 95% confidence level under t-test. It is found that not a single industrial worker use proper Personal Protective Equipment (PPE) at the work place. It is recommended to install pollution monitoring equipments and caution boards. The PPE kits must be provided to the industrial workers. The health checkup camps and safety awareness programs should also be organized periodically in these industries