

PREFACE

The Laboratory of Physiology, Department of Zoology, Shivaji University, Kolhapur (Maharashtra) India has been engaged in extensive work in toxicology, occupational physiology and some applied problems in textile industry. In many occupations, the workers were exposed to various types of health hazards and environmental stress factors. The textile industry is one of the largest sector employing large number of labours at Ichalkaranji in Kolhapur district. There are various types of operatives at Ichalkaranji.

The textile industry at Ichalkaranji constitutes the spinning, sizing, weaving and processing of many types of natural and artificial fibres. The hazards in textile industry may occur due to heat, humidity, inadequate illumination, high level of noise, high concentration of dust, chemicals, fumes, flying particles, smells, cuts, falls and slips etc. so, if, adequate care is taken regarding provision of satisfactory working conditions, then workers do their work accurately, effectively, safely and with minimum fatigue.

Textile industry is one among the various occupations where high level of noise, high concentration of dust, inadequate illumination, humidity and heat stress directly concern with the health and safety of textile

workers, so it is essential to know the phenomenon of noise generation, formation of dust, intensity of light etc. their various effects on body and various measures for their control of these occupational hazards.

Using standard techniques of Ergonomics and occupational physiology the level of noise, concentration of dust, intensity of light, humidity and environmental heat have been studied. For studying ill effect of environmental conditions on health status of workers, physiological responses and lung function tests were carried out in some selected workers. Physical fitness of workers have been studied by modified Harward step test and Grip Dynamometer. Ill effects of cotton dust on lungs have been studied in selected workers by spirometry and chest X-ray P.A.

Regarding protection of health from various hazardous factors like noise and cotton dust; protective devices i.e. face masks, ear plugs and ear muffs provided to workers and changes in physiological responses have been studied during work with protective equipments.

This thesis contain collective information about health status of workers, which is helpful to society, educators, researchers and other workers working in adverse environmental conditions.

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