

PREFACE

Every problem has solution, but science sometimes fails to do so, this is not a drawback but it is its plus point in the sense that the problem remains widely open for future investigation giving a full scope for a research work. Recently, our Laboratory of Physiology, Department of Zoology, Shivaji University, Kolhapur, (Maharashtra), India; introduced a new and most promising, branch of Physiology that is 'Occupational Physiology'. Under this branch the studies are carried out on various aspects of physiology. Our Laboratory of Physiology, has been engaged in extensive work in Toxicology and some applied problems in Textile Industry. If we knock the door of any industry including the textile industry, we could sight that the workers are exposed to various types of health hazards and stress factors, that arise due to workplace environment.

The textile industry at Ichalkaranji in Kolhapur district is one of the largest employer of labours. It includes spinning, weaving, sizing and finishing of all kinds of fibers that is natural, artificial and synthetic fibers. Very little attention have been paid on health and safety of the workers. Workers themselves do not care their health. Not only the workers but also the management donot know the worker's health standard. Aiming the production, management runs the workers. Thus, it remains for the workers to face the hazards posed by their source of income. These hazards

may arise due to high concentration of cotton dust, poor illumination, vibration, light suspended cotton dust particles, humidity, heat high level of noise etc. All these stresses might be extremely harmful. Unfortunately no much attention has been paid on harmfulness of these factors.

Although some information have been reported regarding the physiological consequences of the prolonged exposure to cotton dust. The work available on the effect of inhaled cotton dust on the non-pulmonary organs is negligible. A very few elucidate the histophysiological alterations due to textile environment. However, there is still need of information regarding suitable interpretation of these changes. To get a clear insight about the mechanism of action of the cotton dust and other stress factors in textile environment and the response of various organs to them, a detailed investigation of the histophysiological alterations during exposure to cotton dust and other stress factors in powerloom sector induced toxicity is felt ineluctable and hence desirable.

The main aim of the present work is to find out histophysiological changes in response to exposure to cotton dust and other stresses in textile environment. To achieve this histological and biochemical techniques were employed.

The present dissertation includes four chapters. The First Chapter consists of information of powerloom sector, including the workplace environment and the occupational stresses, associated

with the powerloom sector, review of literature and the aim and objectives of the present work. The Second Chapter deals with the materials and methods used during the present work. The Third Chapter gives an elaborate account of the observations made. The Fourth Chapter deals with a general discussion regarding the observations made where it is sought to elucidate the possible mechanism for the observed alterations.

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