



A Study of Workplace Hazards Faced by Workers in Textile Industry as a Part of Occupational Health and Safety

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ABSTRACT

This study examines the perspective of Occupational Health and Safety (OHS) in textile industries in Gujarat state of India. The concept of occupational Health and Safety in developing countries is limited and diseases and accidents at work remain one of the most appalling tragedies of the modern industrial age therefore the incidence of occupational diseases and injuries is high. No sufficient data about OHS are available in India because the majority of accidents are not reported to the Labour Department. India also has poor occupational safety and health legislation and infrastructure. The health and safety measures prescribed in most of the laws have not kept pace with the rapidly changing the biggest enterprises with the largest employed rate in India. Keeping in view the present study has been undertaken. The sample was consisted of six randomly selected textile units from the of the Gujarat State, India.

There are different hazards which faced by the workers in textile industry. These hazards are explained as;

Keywords :

BIOLOGICAL HAZARDS (COTTON DUST):

Salnaggio (1986) described the word Byssinosis is derived from the Greek word "Bussus" meaning fine Linen or flax. Byssinosis is a respiratory disease of workers of cotton, flax, soft hemp and is classically characterized as shortness of breath; cough and tightness of chest on Monday or the first day of return to work after a time off.

Huter (1978) explained that byssinosis is also known as stripers asthma, grinders asthma or card room asthma.

Crofton (1981) explained that in 1831 Dr. JP Kay a physician in Manchester, first drew attention to this disease by suggesting that cotton workers suffered from a respiratory disease, probably as a result of exposure to dust at work also mentioned by Gren how in a report to the Privy Counsel, London. In 1963 Jesse Leach, a factory surgeon described the disease in detail and found it in the mills of Heywood. Oliver in 1908 suggested that the manufacturing of cotton was not a healthy occupation. In 1955 Werner reported that in early stages the disease is characterized by tightness of chest.

Before this it was supposed that the disease was recognized to the collective effect of dust and general atmospheric pollution.

Elwod et al. (1986) explained that a great number of textile workers managing cotton and flax suffer from various respiratory symptoms and show a failure in lung function. Schachter et al. (1986) discovered in different epidemiological studies, it had been shown that cotton textile workers had an increased occurrence of both disruptive and restraining lung function.

West India Employees (Occupational Disease) Regulation (1967) in India social security scheme and occupational disease regulations were introduced in 1966 and 1967 respectively. Since then not a single textile worker has been declared as suffering from byssinosis and received any disablement pension (Social Security Institution Annual Report, 1997).

• BIOLOGICAL HAZARDS IN DIFFERENT WORKING UNITS:

Saleema et al (2007) conducted a study in a textile mill situated in Gujarat. Their selection of mill was based upon the

facts that the mill had 6500 workers at the same time and it was working around the clock. A sampling frame was chosen covering only male workers of age 19- 60 years with at least 2 years of service but emphasized was on more than 10 years of work experience in the textile mill. First two shifts were selected. All workers were interviewed using a standard questionnaire. They concluded that Byssinosis usually begins to appear after several years of exposure. The results showed that 14.42% (29) workers had started showing the symptoms of Byssinosis.

There were 16 (8%) workers in declutching department. In blow room there were 6 (3%) diseased workers. five (2.48%) diseased workers were observed in card room and two (1%) were observed in spinning room. Out of these 29 workers, 16 belong to ages 41-50. This is the period of age when social responsibilities are at peak and also on decline of his age. Certainly in the absence of health and safety act at work, no compensation is awarded to such sick workers suffering from Byssinosis purely to the occupational reasons.

Akthar (1998) discovered byssinotic symptoms in thirty workers. He conducted his research on Byssinosis and other Respiratory symptoms in the workers of a large textile mill of Gujarat. The textile mill having seven independent units. The study population was 1000 textile workers working in carding, weaving and finishing sections.

It was a cross sectional study and selection was based on simple random sampling technique. Out of these twenty-two were carders working in the section, which is having high concentration of cotton dust as compare to other sections. The reason for this may be less duration of the exposure. The oldest persons in carding section were 48 years. Where as the oldest persons in weaving and finishing sections were fifty-five years each. Mean age for carder was 31 years. Whereas, for weaver and finisher it was 33.5 and 35 years respectively. To reduce the effect of cotton dust Zafar (2000) explained that in some mills 1.0% of mineral oil is sprayed on cotton in the hopper bale breaker. This helps to reduce the dust and does not interfere with the quality of the yarn since most of the oil is absorbed before this stage is reached. On the other hand washing the cotton appears to eliminate the biological activ-

ity. Unfortunately the washed cotton does not process well. Steaming the cotton can reduce both the dust level and the biological activity of the dust, without altering the quality.

• PHYSICAL HAZARDS:

The noise is a cause, which created hazard in the work place. Noise exposure at work can cause critical hearing damage. It is one of the most occurring health problems which can be difficult to identify because the effects build up slowly with time.

According to the textile statistics of United Kingdom, industrial hearing loss is the occupational disease with the largest number of civil claims accounting for about 75% of all occupational disease claims.

Metgud et al (2008) conducted an observational cross-sectional study based on a sample of 100 women workers. These workers were volunteered, outlined their cardio- respiratory and musculo-skeletal profile before, during and at end of work. Furthermore, the information on their health status was collected in advance. It was surprisingly different to expectations; there was no significant change in respiratory function.

Anyhow, the musculo-skeletal problems were found to be richly present with pain in 91% of the women workers. In the region wise mapping of pain showed that postural pain in low back was present in 47% while in neck was 19%. There was no gap since the wheel continued to spin the thread continuously, unless a worker wanted to stop the work. In this study it was concluded that pain and tiredness were the main problems for women in the spinning section of the small-scale industry. Women had to take up double liability of a full-time job as well as the family work. It was measured that ergonomic factors such as provision of a backrest and regular rest periods could remediate the musculo-skeletal symptoms.

Fritsch et al (2004) investigated the risk of mortality in a group of textile workers and observe whether specific occupational exposure was connected with mortality. These workers may be affected to textile dusts, a broad series of chemicals and electromagnetic radiation. The statistics of present and previous members of a textile industry union were take out from membership cards and coordinated with the National Death Index for obtaining date and reason of death. The 113 deaths were occurred in the cohort of 7684 textile workers. The both male and female textile workers had same risk of death from any reason, cancer or cardiovascular disease to the general population. As compared to women, male workers had greater risk of death from injury. There were no significant data which reveals considerable increase in risk with particular occupational exposures.

Maichaire (2000) proposed a technique that could be used by the workers and management themselves to overcome exposures to noise as much as possible in the first stage. In later stages, when required, increasingly call in the assistance of professionals and experts to recognize more complex solutions and arrange individual protection and medical supervision. This approach comprises of three stages. Stage # 1 is observation; simple and easy to use by the workers to identify the problems, recognize clear-cut solutions, and call for support when desired. Stage# 2 is analysis, which is complex but more costly. It is performed with the help of occupational health professionals to classify more scientific control measures and to set up a programme to protect hearing. Stage#3 is expertise, performed with the help of audio experts for special measurements and control measures. The recommended approach enhances the measurement procedure that was usually suggested, by providing for one beginning stage used by the people directly concerned. It clearly recognizes (a) the capability of the workers and management about their working conditions and (b) that information and dimensions of acoustics are not a complete prerequisite for solving at least partially noise problems. It attempts to categorize in series and optimize the collaboration among the workers, the occupational health specialists, and the acoustics experts.

There are different factors, which are responsible to create the hazards in the working environment. In textile these are Physical, Biological, Chemical and Ergonomic (personal factors). There are some other aspects, which are responsible to create hazards in the work place environment i.e. shift work, smoking at work place, job strained. In the It was concluded in the light of the research that intensity of hazards in textile industry were more in under developed country like India and Bangladesh in relation to biological, physical, chemical and ergonomic factors are compared to develop countries like United Kingdom and Australia.

• CONCLUSION:

The key objectives of the research were to observe the work-place hazards faced by workers in textile sector. For this purpose a framework prepared which was based on the literature reviewed. The occupational health and safety deal as a dependent variable. The study found that there were different issues, which create hurdle to achieve an effective OHS system in textile industry. The study was conducted in State Gujarat. There was the shortage of technical facilities such as air checking and biological monitoring.

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