

**A STUDY OF RESPIRATORY DISORDERS
IN WORKERS IN A COTTON MILL**

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178 workers from production and 50 workers from non production areas were interviewed on respiratory symptoms and clinically examined. A sample of 70 exposed and 50 non exposed workers were subjected to ventilatory function measurements before the shift and on exposure to 4 hours at work on the first working day of the week. Dust levels were measured in the work environment.

Mean age and service of cotton workers were 28.31 ± 6.57 years and 5.06 ± 3.75 years respectively while 59.89% were smokers. Prevalence of respiratory symptoms (cough, phlegm, dyspnoea, wheezing, chest tightness) were significantly higher among the exposed workers than the non exposed controls ($P < 0.001$). Symptoms in 10 cotton workers (5.6%) were compatible with "byssinosis" while 59 workers (33.5%) were suggestive of chronic bronchitis.

A significant reduction was observed in the forced expiratory volume in one second ($FEV_{1.0}$) in the cotton workers on exposure to 4 hours of work when compared with the controls. A significant mean "monday fall" in $FEV_{1.0}$ was observed in the byssinotics compared to their matched controls ($t = 2.3981, p < 0.05$).

Mean total dust levels in the production areas ranged from 0.33 to 0.697 mg/m³. On exposure to a dust level categorized as "low" to "moderate" workers have developed respiratory symptoms with a reduction in $FEV_{1.0}$.

Financial assistance from the WHO is acknowledged.

References: 1. Glover, J.R. et al (1972) Hygiene Standard for Cotton Dust, Annals of Occupational Hygiene, 15: 165-192.