

Multifaceted intervention package for textile industry --- A research project by Department of Community Health Sciences, Aga Khan University

Project summary

Aims of the Project/Study:

Occupational safety and health training has been identified as an important factor for promotion of appropriate behavior in an organization or industry. Multi-faceted intervention strategies are required to bring about significant changes in the occupational setting of textile mills in order to reduce the associated risks and hazards and align working conditions as close as possible to the Good International Industrial Practices.

This study is planned to evaluate the effectiveness of a multifaceted intervention package for improvement in knowledge, attitude and practices relating to cotton dust exposure in textile industries of Karachi. In addition, we will also evaluate the effectiveness of this intervention for control of pollution sources, such as decreasing cotton dust levels and improvement of occupational health.

Methods:

This would be a pre-post intervention study where we will assess the effectiveness of multifaceted intervention package over a period of one year (total duration of project), however, industry would be visited once in a quarter (after 3 months). The intervention will comprise of administration and workers' training regarding preventive measures. Workers will be provided Personal Protective Equipment (PPEs) to wear during duty hours. Cotton dust levels at the textile mill will be measured to assess trends in dust levels. The study would then evaluate the effect of this intervention package by assessing change in knowledge level after the intervention, and also any change in occupational health through an indicator test (spirometry).

Approximately 150-200 workers from each of the selected mills will be enrolled in the study. During the study the data collection activity will be done only on four occasions/visits. In each industrial visit the whole process of data collection is expected to be completed in 5-7 days, however, each worker enrolled in the study would be engaged only for about 10 minutes to complete spirometry and. Moreover, workers would not be called altogether; rather timings of workers engagement would be logically organized in consultation with concerned section head to eliminate any delay or stoppage of production process. Separate occupational health and safety training sessions will be arranged for workers, mid-management and senior management. These sessions will be conducted by experts from the Aga Khan University and session duration will be approximately 2-3 hours. Scheduling of sessions will be according to convenience of industry administration. Refresher sessions will also be arranged as required.

Outcomes of the project:

- Evaluation of the workplace ambient air status in the textile sector
- Evaluation of the occupational health status of textile sector workers
- A tested Work Plan for the textile sector to improve its occupational performance
- Enhanced understanding and capacity of the EHS managers to manage occupational aspects of the industry

Benefits for textile industry:

Following are the benefits which textile industries will avail through participating in this research project:

Activity	Benefit
Measurement of dust level	In house dust measurements (PM _{2.5}) will be done free of cost in different sections of the textile industry. The measurements will be done according to international guidelines and the mill administration will have access to this data. All the required instruments and related technical support will be provided through the project free of cost. Through this activity the Manager Compliance will be able to fulfill requirements of forthcoming audits as well as local and international guidelines. This activity will thus lead to improved profile of the industry and better business prospects in the longer run.
Occupational Health evaluation	Occupational health evaluation test will be conducted free of charge. All technical assistance and instruments for this purpose will be provided through the project. Spirometry at the Aga Khan University Hospital costs approximately Rs. 4.500; this will be done free of cost for all the study participants. This activity will also help fulfill international guidelines for occupational health and safety at the textile industries.
Training of workers	All workers will be provided free of cost occupational health and safety training. Refresher sessions will be arranged according to the requirements at each mill. This will lead to capacity building of the staff at textile mills and will be extremely helpful in the longer run for improving occupational health and productivity of mills.
Capacity building of management	Separate occupational health and safety training sessions will be arranged for the mill managers and senior personnel. These sessions will be conducted by experts from the Aga Khan University. Certificate of Training Participation will be provided after successful completion of each session. Besides training sessions, free of cost consultation will also be provided for developing or improving any previous occupational health and safety program at the mill. Health and Safety representatives (HSE) at the mills will be provided specific training to improve capacity building for occupational health and safety at each mill.
Provision of PPEs	Workers will be provided PPEs during the duty hours free of cost
Additional benefits (EOH short course)	The Aga Khan University organizes regular short courses on 'Environmental and Occupational Health' (EOH). These are recognized 6-day courses offering in-depth understanding regarding environmental health and safety issues as well as update on the local and international standards or guidelines for occupational health and safety. Please see the following link for further information regarding this short course: http://www.aku.edu/mc-pk/departmentsprofiles/communityhealthsciences/educationalprogrammes/continuingeducationprogramme/Pages/EOH.aspx Although the course fee for each participant is approximately Rs 21000; there will be provision for participating mills to get their HSE staff enrolled into these courses at a subsidized rate. Group participation will also be encouraged.
Long term collaboration and benefits	Through participating in this research project it is expected that long term relationship would develop between the Aga Khan University and the textile mills. This will go a long way in strengthening occupational health and safety record of these mills as well as capacity building of their human resource.