

OCCUPATIONAL DISEASES: THE MAIN PROBLEMS THAT OCCUR IN SEWING AND TEXTILE ENTERPRISES**Dehkanov Oyatillo**

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Abstract

Musculoskeletal disorders (MSDs) represent the most prevalent work-related health problem in the textiles sector, with significant proportions of workers reporting backache and muscular pain. Manual handling activities—such as lifting, carrying, pushing, and pulling—are the primary cause of occupational injuries, leading to both cumulative disorders (e.g., lower back pain) and acute trauma. Contributing risk factors include awkward postures, repetitive movements, and fatigue associated with spinning, cutting, packaging, storage, and shipping tasks. In addition to ergonomic hazards, textile workers are exposed to a wide range of chemical substances, including dyes, solvents, formaldehyde, flame retardants, and heavy metals, some of which are respiratory and skin sensitizers and have been linked to increased carcinogenic risks, particularly nasal, laryngeal, and bladder cancers among women.

Keywords

health problems, textile and fashion workers, psychological stressors, musculoskeletal disorders, respiratory problems, textile and fashion industry.

Introduction. The textiles sector contains many hazards and risks to workers, ranging from exposure to noise and dangerous substances, to manual handling and working with dangerous machinery. Each processing stage — from the production of materials to the manufacturing, finishing, colouring and Occupational safety and health in the textiles sector packaging —poses risks for workers, and some of these are particularly dangerous for women's health. This short document cannot cover all the hazards and risks in all the parts of the textiles sector, but highlights some of the key issues, particularly to women workers, and how worker safety and health can be managed.

Main part. Musculoskeletal disorders (MSDs) are the most common work-related health problem with almost one in four workers reporting backache and one in five complaining of muscular pains. Manual handling, the lifting, holding, putting down, pushing, pulling, carrying or movement of a load, is the largest cause of injury in the textiles sector.



Manual handling can cause either cumulative disorders from the gradual deterioration of the musculoskeletal system, such as lower back pain, or acute trauma such as cuts or fractures due to accidents.

In the textiles sector, risk factors for MSDs include:

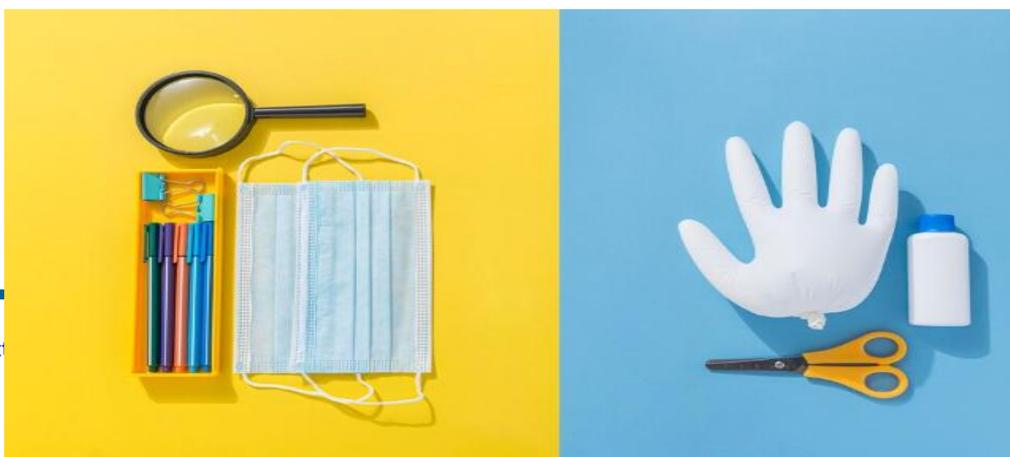
- Working in awkward postures, such as during spinning, cutting, product control, and packaging,
- Repetitive movements, such as during spinning, cutting, product control, and packaging,
- Fatigue from manual handling, during the storage, inspection, treatment, shipping, finishing, and cutting of textiles.

Many different groups of chemical substances are used in the textiles sector, including dyes, solvents, optical brighteners, crease-resistance agents, flame retardants, heavy metals, pesticides, and antimicrobial agents. They are used in dyeing, printing, finishing, bleaching, washing, dry cleaning, weaving slashing/sizing, and spinning. Respiratory and skin sensitizers can be found in the textiles industry, for example textiles fibres, reactive dyes, synthetic fibres, and formaldehyde. The textile industry has been evaluated as a sector with an increased carcinogenic risk. Several studies have showed an increased risk of nasal, laryngeal and bladder cancer in women.

Exposure to dusts and fibres The exposure of workers to dusts from material such as silk, cotton, wool, flax, hemp, sisal, and jute can occur during weaving, spinning, cutting, ginning, and packaging. Division of tasks along gender lines may mean that women are exposed to organic dusts more than men, with respiratory diseases being diagnosed more often in women than men. Exposure to fibres and yarns may cause nasal or bladder cancer.

In some activities, such as carding and willowing, workers may be exposed to biological agents such as anthrax, clostridium tetani (the causative agent for tetanus), and coxiella burnetti (which causes Q fever). Exposure to biological agents can result in allergies and respiratory disorders. **Exposure to physical agents** Workers may be exposed to noise and vibrations, for example during weaving, spinning, sewing, twisting, and cutting.

Exposure to loud noise can result in permanent hearing damage such as noise-induced hearing



loss and tinnitus. Exposure to vibration, particularly together with risk factors for MSDs, can lead to long-term harm. Electromagnetic fields may also be found in some workplaces in the textiles sector. Accidents in the textiles sector The textiles sector has many hazards that can cause injury to workers, from transport in the workplace (lift truck), dangerous large work equipment and plant, to the risk of slips from a wet working environment. Workers being struck by objects, such as moving machinery parts and vehicles are a significant cause of injury in the sector. There also exists the risks of fire and explosions, for example from heating plants used for vapour generation. Psychosocial issues in the textiles sector Work-related stress has been defined as being experienced when the demands of the work environment exceed the workers' ability to cope with or control them. Work-related stress may be an issue in some areas of the textiles sector, being associated for example with repetitive and fast paced work, and where the worker has no influence on how the job is done. This is a series of directives made up of council directive 89/391 (the "framework directive") and its "daughter directives" on a range of more specific subjects such as noise, chemical agents, and manual handling. The directives, transposed into law in all Member States set minimum standards, so check with the relevant national enforcing authorities. These directives take the same approach to prevention; risk assessment followed by prevention measures based upon the following common principles of prevention:

- avoiding risks
- evaluating the risks which cannot be avoided
- combating the risks at source
- adapting the work to the individual
- replacing the dangerous by the non-dangerous or the less dangerous
- developing a coherent overall prevention policy
- giving collective protective measures priority over individual protective measures
- giving appropriate instructions to the workers.

The legal requirement for risk evaluation or assessment applies to all employers. The process for carrying out a risk assessment can be broken down into a series of steps: Looking for those things at work that have the potential to cause harm, and identifying workers who may be exposed to the hazards. Using workers' knowledge helps to ensure hazards are spotted and workable solutions implemented. Consultation encourages workers to commit themselves to health and safety procedures and improvements.

Evaluate how likely it is that the hazard will lead to harm or injury, and how severe that injury is likely to be. Consider what control measures are in place and whether they are sufficient. It is essential that the work to be done to eliminate or prevent risks is prioritised. The focus for cost-effective and sustainable risk management should be on collective protection and preventative measures.

Identifying the appropriate measures to eliminate or control the risks. List the preventive measures needed in order of priority, then take action, involving the workers and their



representatives in the process. Targeting the underlying problems is the most cost-effective method of risk management.

Risk assessment is the first step to successful risk management. Put in place the preventive and protective measures through a prioritisation plan (most probably all the problems cannot be resolved immediately) and specify who does what and when, when a task is to be completed, and the means allocated to implement the measures.

The assessment should be reviewed at regular intervals to ensure it remains up to date. It has to be revised whenever significant changes occur in the organisation or as a result of the findings of an accident or “near miss” investigation.

Conclusion. The textiles sector presents a wide range of occupational health and safety challenges, with musculoskeletal disorders remaining the most common work-related problem due to manual handling, repetitive tasks, awkward postures, and prolonged physical strain. In addition to ergonomic risks, workers face significant exposure to hazardous chemical, biological, and physical agents, which may result in respiratory diseases, skin disorders, hearing loss, long-term disability, and increased cancer risk. Workplace accidents, including those involving machinery, transport equipment, fire, and explosions, further contribute to the sector’s high injury rates. Psychosocial factors such as repetitive, high-paced work and limited job control also play an important role in workers’ overall well-being.

Effective prevention depends on systematic risk assessment and the implementation of comprehensive control measures in line with the principles established by Council Directive 89/391/EEC and its related directives. Prioritizing collective protective measures, adapting work to the individual, eliminating hazards at their source, and actively involving workers in safety processes are essential strategies for reducing risks. Continuous monitoring and regular review of risk assessments ensure that preventive measures remain effective and responsive to workplace changes. Ultimately, a proactive and integrated approach to occupational health and safety is crucial to safeguarding the health, safety, and well-being of workers in the textiles industry.

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