

RISK ANALYSIS REGARDING HEALTH AND SAFETY AT WORK

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ABSTRACT: *The work was created according to the provisions of the work safety legislation in force, regarding the obligation of the management of the economic agents to correctly determine the risk factors in order to ensure the measures for prevention of accidents and professional illnesses. The analysis presents the main aspects of the frequent mistakes that may arise in the risk assessment. So, it has been concluded that risks are inevitable in business, and that each activity is unique, as well as the risks from one activity to another or from one group of activities to another. Under these circumstances, it has been established that the success of an enterprise depends on how the risks were managed.*

Keywords: risks, occupational health, occupational safety, occupational illnesses

1. Introduction

Safety and health at work is generally defined as the science of anticipating the assessment and management of danger that occur in work systems and that can affect the health and well-being of workers. Its field of study is very extensive, summing up a significant number of disciplines requiring a large spectrum of structures, skills, knowledge, skills and analytical capacities [1, 2].

Correct understanding and assimilation of the fundamental concepts of professional risk assessment, knowledge of concepts and models on which work methods are based on, correct perception of the way of application and interpretation of the obtained results, possession of competences regarding identification, evaluation and managing professional risks, assimilation of methods of preventing occupational accidents and diseases as well as the techniques of training and development of skills regarding preventive behavior represent not only mandatory benchmarks, but also distinct priorities in the professional training of specialists in the field [3, 4].

Occupational risk assessment is an essential step in implementing responsible health and safety at work approaches. Work must meet the minimum legal security requirements in force before an occupational risk assessment at the workplace is carried out.

When performing a risk assessment, a systematic review of all aspects of the work should be carried out in order to establish the following factors [5]:

- the causes of possible injuries;
- the possibilities of eliminating hazards and the prevention or protection measures that are or must be implemented to control the risks.

There are several steps to be followed when assessing the risks [6]:

- identifying the hazards and the persons exposed to them;
- risk assessment and classification according to priority;
- establishing risk prevention actions;
- taking concrete measures and ensuring the realization resources;
- monitoring and review.

Optimizing work to prevent accidents at work and / or occupational illnesses has as its starting point the assessment of the risks of injury and professional illness.

2.Risk evaluation

The basis for the risk assessment principle is to take into account two parameters:

- frequency of accidents;
- the gravity of the foreseeable maximum consequence.

The purpose of the risk assessment is to provide the opportunity to know the real situation at each job, from the point of view of the work safety, in order to take the most appropriate prevention measures. By turning from possibility into reality, the action of risk factors becomes an effective threat to the performer, which can either lead to violent bodily harm, by damaging anatomic integrity, causing the cancellation of one or more of the physiological functions, or to body affections. If such events occur, it means that the risk factors have constituted real causes of injury or professional illness. However, it is not possible to determine very rigorously the two categories. Under certain conditions, the specific difference is only given by the level and the duration of exposure of the human body, so that a disease factor can become an injury factor and vice versa.

For example, up to a certain level noise is a disease factor producing diseases of the auditory body, its sudden appearance at a very high intensity leads to work accidents either in the form of trauma to the hearing organ, or by covering an important technological signal, causing an unintentional reaction by the performer. In relation to risk factors - causes according to the deterministic conception in the objective reality there is nothing without being caused by a cause. Any cause is the effect of another cause and also causes other effects. The surrounding reality in a continuous transformation thus presents itself as a multitude of cause-effect connections. Occupational accidents and occupational diseases are the final moments, the effects of unwanted causal connections.

When undertaking a risk assessment, both employers or their representatives, as well as their employees or their representatives with specific responsibilities in the field of occupational safety and health, respectively, of the Occupational Health and Safety Committees (CSSM) must be involved. Workers' consultation should be part of the professional risk assessment process. They should also be informed of the conclusions regarding the evaluation and the prevention measures to be taken.

Risk assessment aims to continuously improve working conditions and therefore adequate and sustained documentation needs to be developed. When performing such an assessment, various errors may occur, such as:

- not involving a team in risk assessment or non-involvement of employees with practical knowledge of the work processes or even of the occupational medicine physician. The occupational medicine physician has an important role in identifying risk factors at work. The occupational medicine physician should supervise the health of employees in accordance with the particularities of exposure to risk factors. The occupational medicine physician must regularly go to the workplaces he oversees, making recommendations about work organization, how to work ergonomically, and assigning work tasks, taking into account the ability and ability of employees to execute them. As a result of the assessments, the occupational medicine physician draws up precise and complete reports to the employer, employees and authorities.

- lack of a competent and experienced person to properly assess the risks. Each job has

its own specific character and therefore it is necessary to make a fair assessment at the job, not an analysis based on a lists with general risks. The specialist assessor will have to choose a method or rating technique folded to the job evaluated. Experts in risk assessment need to know the working places well.

- non-consideration of the psychosocial and organizational factors in the long run. Psychosocial risk factors, as psychological stressors, are the result of the interaction between professional factors (workload through content and its characteristics, work environment, interpersonal relationships, management practices, promotion conditions, maintenance) and factors (capacity, abilities, needs, aspirations, education level, culture, etc.). When these two categories of factors are in balance, the effects are beneficial for both professional success, performance, job satisfaction and the safety and health of workers. If the balance between the two categories of factors does not exist, or when the professional requirements and working conditions do not correspond to individual capacities, abilities and aspirations, the psychosocial risks and their negative effects on professional performance as well as on the health and safety of workers arise.

- the lack of equal importance of secondary jobs. The risk assessor must treat every job with the same importance no matter how simple that job looks like.

- non-consideration of risks specific to risk-sensitive groups (pregnant women, young people, people with disabilities, the elderly). According to European statistics, the risk of having to deal with work accidents is much higher for young workers than for the elderly, young workers are immature, inexperienced and require additional protection. They often work in sectors and high-risk circumstances such as construction, agriculture, hotels, catering, temporary contracts and weekend jobs. Therefore, they must carry out safe and appropriate activities, appropriate to their mental and physical abilities.

- during the assessment process, no account is taken of the history of the accidents, of the hazardous incidents that have taken place and of the declared occupational diseases.

- the influence of the working environment and the microclimate factors are not taken into account. A microclimate is what inspires most people, a sense of environmental satisfaction identified with the term "environmental quality" or simply "comfort". Workplace microclimate factors such as temperature, humidity, lighting, noise, clothing, and the intensity of physical activity can cause employees a variety of biological responses ranging from a state of well to a state of discomfort and even stress. Microclimate is the component of the physical work environment consisting of all the conditions of temperature, humidity and noise at work.

- organizing effective working time and rest breaks. Following the daily demands of the body by human activity, the state of fatigue appears. The fatigue state has an objective basis determined by the energy consumption during the activity that it is compensated by eating and resting.

Causes that determine fatigue are related to:

- human factor (physiological deficiency, negative affective states);
- working machine, tool (functional characteristics, degree of automation);
- environmental characteristics (temperature, noise, humidity, social environment);
- work load (working regime, labor monotony, overworking of high responsibilities);

3. Conclusions

Risk analysis can establish measures to prevent accidents and occupational illnesses. Risks are inevitable in business, and because each activity is unique, the risks from one activity to another or from one group of activities to another.

The main risks to health and safety at work are:

- Inappropriate organization of effective working time and rest breaks;
- influence of the working environment and of the microclimate factors;
- failure to take into account the risks specific to sensitive groups;
- the lack of equal treatment of secondary jobs;
- not taking into account in the long term the risk identification of the psychosocial and organizational factors;
- not involving a team in risk assessment or non-involvement of employees with practical knowledge of work processes.

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