

Occupational Risk Assessment in Workplace

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A workplace risk assessment is an assessment of the potential hazards that a hazard can pose to a person in the work environment. In addition to the probability of occurrence, the evaluation considers possible scenarios and outcomes [1]. The five hazards to consider are safety, chemical, biological, physical, and ergonomic hazards. Risks at work can have very bad consequences. It is especially dangerous if a person is exposed to the same danger on a daily basis. To protect our employees, we must first be aware of the danger and its severity. Occupational risk assessments provide this information and allow you to set safe levels. Adhering to appropriate standards protects the well-being of employees.

The key terms in risk management are the terms risk and hazard. Hazard is a cause, situation, or behavior that can cause injury, health hazard, or a combination of these. Therefore, hazards can be anything that exists in the workplace that can cause injury to workers due to either occupational accidents or occupational illnesses. Examples of physically dangerous situations include working on ladders, handling chemicals, and walking on wet floors. Examples of psychosocial risk situations include work content, work anxiety, isolation, bullying, and harassment. Employee health is affected by awareness and experience of the organization of work, as well as other related factors [2]. Risk is a combination of the potential for a dangerous event or exposure and the severity of the injury or illness that the event or exposure can cause. From a psychosocial point of view, risk is the probability that psychosocial factors, through their perception and experience, will have a dangerous impact on the health of employees and the severity of health disorders that may be caused by their exposure. It is defined. Another important concept in risk management is risk acceptance. There are two parts that need to be done to properly assess the hazard. First, there must be an "exposure assessment" that measures the likelihood and degree of contact with the worker. Second, it is necessary to perform "risk characterization" to measure the potential and severity of possible health risks. The information collected is used to estimate health risks at various exposure levels. The purpose is to make sure that employees are not suffering from health or dysfunction.

Assessment:

The first step in a workplace risk assessment is to identify hazards that are conditions, causes, or behaviors that can cause harm, whether injured or ill. At work, there are risks that can harm employees [3].

However, identifying hazards does not just mean knowing that something can create a risk. You need to understand the impact and know who is at risk. To accurately estimate safe concentrations, we need to know all the cofactors, including the conditions and uncertainties that change the effect. An important part of risk assessment is dose-response assessment. This is an assessment that determines the relationship between the amount of substance ingested by a worker and the effects of that ingestion [4]. This second step in risk assessment is to find the amount of substance that has little or no effect, called the baseline (PoD). Statisticians need to create models for estimating PoD using toxicological information in addition to epidemiological data. This task is often complicated by data errors and choosing the right model. Sensitivity analysis is performed to reduce errors. These take into account other risk assessment approaches, shortcomings or

assumptions made. This analysis provides some possible approximations of dose-response relationships. The final step in occupational risk assessment is risk characterization. Here, we combine the collected data to create a safe value estimate approximately the dangers that workers may be exposed to in the workplace include the potential for events and the severity of adverse health effects [5]. Occupational risk assessments are just estimates and should be performed in a logically coherent way using probabilities. Due to the introduction of data that is differentiated from assumptions, risk assessment should be careful to find a safe level that balances overestimation and underestimation. Comprehensive research is very important to achieve this goal and must meet the objectives of the assessment while showing "transparency, clarity, consistency, and validity".

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