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Ergonomics management with a proactive focus

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Abstract

Ergonomics programs tend to be reactive when considering employees' complaints, absence from work, quantity of work accidents and occupational diseases. When organizations do not anticipate future occurrences with a proper model of risk management, they become vulnerable. In order to organize the Ergonomics Program of a household appliance company in Joinville, a team of 9 persons was structured, and two committees were reactivated. The technical committee discussed ergonomic solutions with the engineering department to adequate workplaces and new projects. The employees' complaints were discussed by the medical committee in order to analyze the causal nexus based on ergonomic evaluations of the problem. The proactive demand was identified by an ergonomic planning of all manufacturing workplaces which led to the prioritization of ergonomic evaluations considering risk classification. Several training courses were conducted aiming to spread out the values of ergonomics principles. Then, the resilience engineering principles (learning/responding/monitoring/anticipation) were proposed to ergonomics management, making it possible to monitor the ergonomic processes and create integrated indicators. The implementation of the model developed in this study has already achieved two meaningful awards in the ergonomics area: the gold award for the best case study of ergonomics and the award for the best case study of the South Region of Brazil. Besides, the model has brought many advantages for both company and employees, providing success in the management of ergonomic risks, promoting employees' health and decreasing absenteeism.

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1. Introduction

Companies are increasingly employing proactive and participatory programs in order to detect, assess and control the risks present in the workplaces that are prone to cause occupational accidents and diseases that could lead to absenteeism, prolonged treatment and the replacement of the injured employees. These programs seek to minimize the risks through understanding the impact to the business, and reduce the costs involved.

Ergonomics programs are used in companies aiming at reducing absenteeism, complaints and reporting work accidents caused by musculoskeletal diseases. Consequently, the companies reduce the negative impact of these problems to their business and improve the corporate image, reducing compensations due to labor claims. However, if the program focus solely on reactive actions, when adverse events happen in the company, the program tends to fail once there is no support to deal with them. Whenever there is not a management system directed to prevention, the company undergoes the consequences, because occupational diseases can result from an inappropriate management system [1]. Therefore, a mature ergonomics program should be developed, aligning the ergonomic processes with the strategic objectives of the company, since its implementation until its running [2].

This paper approaches the stages of an ergonomics program implemented in a household appliance company, whose management is based on the principles of resilience engineering, and gives the characteristic of a proactive approach in order to make it sustainable, robust and flexible. In addition, some preliminary results are presented. This approach focus on anticipating the actions before undesirable events happen and effectively promotes a culture of prevention. Besides the health and safety areas, the company is benefited from the principles of resilience because of the promotion of learning and the ability to see opportunities amid problems [3]. Some advantages can be highlighted when applying these principles, mainly because it enables the development of capabilities for setting and monitoring of the system by the ergonomics management [4].

The application of resilience engineering concepts is seen as essential for the development of an effective management system with flexible capabilities, and at the same time robust ones, of adapting to different situations for intervention, monitoring and anticipation of risks. Also the resilience engineering favors the process of culture change, making prevention an organizational value.

2. Resilience engineering

Resilience is the ability to prevent or reduce the effects caused by adversity [5]. A resilient organization should be safe and match four skills [6]:

- Ability to learn: A resilient organization must be able to learn from experience in order to understand the situation and be able to draw the appropriate lesson from that. This ability adds value to what is factual. Future performance can only be improved if there is a change in behavior from the results of an experiment. Then, learning is noted and proven from the change in behavior, but changes to the wrong direction also result in wrong lessons to be learned [6]. Therefore, it is necessary to stimulate the learning of all hierarchical levels aiming at leveling information and continuous improvement considering the processes, procedures and standards [5]. It is also emphasized that learning is not only important when accidents happen, but through every day work, always seeking ways to improve it safer.
- Ability to respond: It has to do with responding to regular and irregular variations, disorders and opportunities. The organization should know what to do and when to do it, detecting the situation occurred, recognizing it, and classifying it as important as the response. This ability adds value to what is real [6].
- Ability to monitor: The organization should monitor what happens, know what to focus on, and develop the ability to address a critical value.
- Ability to anticipate: The organization should develop the ability to anticipate possible events and any changes that may affect the operating capacity of organizations either positively or negatively. This ability adds value to what is potential. When dealing with the potential, one necessarily recognizes that the future is uncertain and new ways of thinking should be considered. There are few organizations that make efforts to monitor the critical, especially when there is a long period of stability, and no efforts to anticipate the potential [6].

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