P75: Cost-benefit analysis of a job rotation program: Identification and applicability of key indicators.

Ana Sá[1], Bibiana Martins[2], Matilde A. Rodrigues[1]

[1]Department of Environmental Health, Research Centre on Health and Environment, School of Allied Health Technology of Polytechnic Institute of Porto, Vila Nova de Gaia, Portugal
[2]DELFINGEN PT – Porto, Vila Nova de Gaia, Portugal

Presenting author: anasa_ts@hotmail.com

Introduction: Musculoskeletal disorders (MSDs) due to repetitive work are common in the automotive industry. In order to reduce the risk of MSDs, new strategies of work organization can be implemented, such as a job rotation program. However, in some cases, employers and workers are little receptive to this measure, being important to demonstrate its efficacy through a cost-benefit analysis.

Objectives: This work aims to identify and to test the applicability of the indicators that better explain the cost-benefit impacts of a job rotation program in an automotive components plant.

Materials and Methods: The study was developed in an automotive components plant. The key indicators for a cost-benefit analysis were identified: production level, junkyard, absenteeism, number of occupational accidents, pain and discomfort, motivation and satisfaction, and training. Its applicability was tested through a two-month case study, where a job rotation program was implemented in eight workstations.

Results and Discussion: In general, results showed that the identified indicators are applied to the company in study. Low differences in production data were found before and during the job rotation program. Important improvements were found in pain, discomfort, motivation and satisfaction after the implementation of this program. Junkyard and occupational accidents not suffered any change. Training costs were also determined, and found to be a good indicator of costs for this study. Absenteeism was not possible to quantify due to the lack of comprehensible records.

Conclusion: The analyzed indicators are adequate for a cost benefit analysis of a job rotation program. However, it is important the company ensure better records.

References

1. Falck, A., Örtengren, R., Högberg, D. (2009). The Impact of Poor Assembly Ergonomics on Product Quality: A Cost–Benefit Analysis in Car Manufacturing. Human Factors and Ergonomics in Manufacturing & Service Industries, 20 (1), 24-41