

Tripod Beta Methodology as Root Cause Analysis Tools in Investigating Workplace Musculoskeletal Disorder (WMSD)

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ABSTRACT

Objective: The Tripod Beta methodology is primarily an analysis tool used for incident investigation. The methodology is also useful and structured tools to investigate WMSDs especially in identifying underlying causes or root causes within the organization. It helps the organization to investigate any WMSDs not only on ergonomic factors but also analyzing on organizational factors as well on human behavior factors. **Method:** The framework of root cause analysis in investigating WMSDs is to describe what had happened that cause WMSDs, how the WMSDs happened and why the WMSDs happened. It involves investigation team formation, fact findings through site inspection and interview, establishing valid sequence of events, barrier analysis (failed, missing, inadequate barrier), causation path (immediate cause, pre-condition, underlying cause) and recommendations for improvement at workplace. **Results:** The benefit of using tripod beta in investigating are structured tools in identifying root causes, able to investigate multifactorial causes, identify deficiencies in ergonomic controls and promoting continuous improvement in managing ergonomic hazards. **Conclusion:** In summary, while the Tripod Beta methodology may not be specifically designed for investigating WMSDs, its structured and systematic approach is able to provide valuable insights and contribute to the prevention of WMSDs in the workplace.

Keywords: WMSD, Root cause analysis, Ergonomic
