

Analysis of the Impact of Lean Manufacturing Practices on the Operational Performance of Pharmaceutical Manufacturing Industry

Ratnajeewa, D. R.¹ and Liyanaarachchi, B. P. T.²

The objective of this research is to analyze the impact of lean manufacturing practices on the operational performance of pharmaceutical industry. Case study method is used and the operational performance of the manufacturing process before and after implementation of lean manufacturing is measured. Hypothesis testing was done to find out whether there is a significant change before and after implementation of lean manufacturing. Data was collected from the system on wastage and downtime for eleven months including pre-implementation and post-implementation. The t-test was used for analysis and hypothesis was tested at 95% confidence level using SPSS. Findings show that there is a significant improvement between the mean bulk wastage, jar wastage mean value, mean batch change over downtime, mean label reel change over downtime and total mean downtime before lean manufacturing implementation and afterwards ($p < 0.05$). Therefore, it can be concluded that there is a significant improvement of operational performance after implementation of lean manufacturing and further implementation of lean manufacturing practices for other pharmaceutical organizations is recommended.

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¹General Sir John Kotelawala Defense University, Sri Lanka (dilanirr@gmail.com)

²CINEC Maritime Campus, Sri Lanka (lbuddhika@yahoo.com)