

## ABSTRACT

Good lighting is one of the environmental factors that can increase productivity whereas poor lighting can result in eye strain as well as decreased productivity. The objective of the study were to analyze the differences in productivity levels before and after localized lighting was given in the sewing area at Star Nine Collection.

This Research was a kind of quasi experimental research, and using one group pre and posttest design. The number of sample was 23 workers (female n=12; male n=11) that had match with the given criteria (Age of workers 20-40 years, duration of works 8 hours in one day, work in sewing area, don't have refractive disorders, and don't have sore eyes). Data were collected by means of interview, measurement, and observation. Independent variable in this study was lighting intensity and the dependent variable was workers productivity. Data obtained were analyzed using Linier Regression and Paired Sample t test by means of computer programme.

The result of the study showed that light intensity of all work sewing area at Star Nine Collection had not been in compliance with the standard established by PMP no.7 tahun 1964, and the maturity all responden complained of getting eye fatigue with this poor lighting intensity. Productivity was significantly affected by lighting intensity ( $p < 0,05$ ). There was also significant difference in work productivity before and after treatment was given.

It can be concluded that increasing light intensity level from 126 lux to 354 lux result in increased productivity of 9,48%. Based on the results of the study, it is recommended that Star Nine Collection provide reflector and didiffusing screen on each lighting fixture and pay attention to the cleanliness of lamps, floor, ceiling, and walls in the workplace.

**Keywords :** light intensity, localized lighting, productivity