

Light, Restorativeness and Performance in the Workplace: A Pilot Study

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Abstract : Background: the present study explores the role of light and restorativeness on work. According with the Attention Restoration Theory (ART) and a Model of Work Environment, the main idea is that some features of environment, i.e., lighting, influences the direct attention, and so, the performance. Restorativeness refers to the presence/absence level of all the characteristics of physical environment that help to regenerate direct attention. Specifically, lighting can affect level of fascination and attention in one hand; and in other hand promotes several biological functions via pineal gland. Different reviews on this topic show controversial results. In order to bring light on this topic, the hypotheses of this study are that lighting can affect the construct of restorativeness and, in the second time, the restorativeness can affect the performance. Method: the participants are 30 workers of a mechatronic company in the North Italy. Every subject answered to a questionnaire valuing their subjective perceptions of environment in a different way: some objective features of environment, like lighting, temperature and air quality; some subjective perceptions of this environment; finally, the participants answered about their perceived performance. The main attention is on the features of light and his components: visual comfort, general preferences and pleasantness; and the dimensions of the construct of restorativeness; fascination, coherence and being away. The construct of performance per se is conceptualized in three level: individual, team membership and organizational membership; and in three different components: proficiency, adaptability, and proactivity, for a total of 9 subcomponents. Findings: path analysis showed that some characteristics of lighting respectively affected the dimension of fascination; and, as expected, the dimension of fascination affected work performance. Conclusions: The present study is a first pilot step of a wide research. These first results can be summarized with the statement that lighting and restorativeness contribute to explain work performance variability: in details perceptions of visual comfort, satisfaction and pleasantness, and fascination respectively. Results related to fascination are particularly interesting because fascination is conceptualized as the opposite of the construct of direct attention. The main idea is, in order to regenerate attentional capacity, it's necessary to provide a lacking of attention (fascination). The sample size did not permit to test simultaneously the role of the perceived characteristics of light to see how they differently contribute to predict fascination of the work environment. However, the results highlighted the important role that light could have in predicting restorativeness dimensions and probably with a larger sample we could find larger effects also on work performance. Furthermore, longitudinal data will contribute to better analyze the causal model along time. Applicative implications: the present pilot study highlights the relevant role of lighting and perceived restorativeness in the work environment and the importance to focus attention on light features and the restorative characteristics in the design of work environments.

Keywords : lighting, performance, restorativeness, workplace

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