ABSTRACT

The current study utilized the Attention Restoration Theory to investigate whether plants in an office context produced restorative effects that enable employees to perform better. The Attention Restoration Theory asserts that individuals will experience increased concentration after spending time in or viewing nature. This study was one of the first attempts to empirically investigate the effect of indoor plants on experiences of performance outcomes and perceptions of Indoor Environmental Quality (IEQ) within South Africa. The researcher aimed to assess whether the individual's nature identity moderated the impact of the plants. Most previous studies on the outcomes of indoor plants have been conducted in Western, Northern hemisphere contexts. In this experimental study, 120 participants were randomly assigned to one of three conditions: (1) no plants or pictures of plants; (2) only plants; (3) only canvas pictures of plants. The rooms were identical in every other respect. Participants completed two tasks (a card-sorting task and a reading task) and two questionnaires, namely the connectedness to nature scale to assess participant's nature identity and a previously developed questionnaire that aimed to assess task performance. Additionally, SE controls IEQ monitors were positioned in each office to measure fluctuations of air quality (i.e. temperature, humidity and carbon dioxide levels) in order to assess IEQ. The results from a series of ANOVA's demonstrated a reduction in participants' errors ($F_{(2, 117)} = 7.137$, $p = 0.001$), a positive reaction to the given task ($F_{(2, 117)} = 8.904$, $p = 0.000$), as well as a reduction in participants' task completion time ($F_{(2, 117)} = 43.422$, $p = 0.000$) in the plants condition. These results demonstrated a statistically significant effect on performance in the presence of plants as well as an improvement in air quality through a reduction of carbon dioxide ($F_{(2, 117)} = 6.429$, $p = 0.000$). The results revealed that the plants condition was statistically significantly different from that of the pictures of plants and the control condition with regards to the performance outcomes. The result from the two-way ANOVA's demonstrated that nature identity did not moderate the above relationships (*Errors:* $F_{(1, 114)} = 2.060$, $p = 0.132$; *Completion time:* $F_{(1, 114)} = 0.967$, $p = 0.383$; *Reaction to the task:* $F_{(1, 114)} = 0.017$, $p = 0.983$). This study enhances knowledge regarding indoor plants within the South African context as well as practically influencing working environments where employees are expected to be productive.

KEY WORDS