

Bad for lungs and mind

Air pollutants potentially present in the workplace could affect employees' creativity, research reveals.

Air pollutants potentially present in workplaces could impair employees' creativity, according to a study by researchers at a Singapore university.

They state that "this could have serious consequences for industries that rely on creativity for the bulk of their work."

The World Health Organisation (WHO) estimates that more than three million people will die each year from indoor air pollution in 2020.

In a report dated December 2022, the health authority indicates that this type of pollution may be responsible for an increased risk of non-communicable diseases such as stroke, ischemic heart disease, chronic obstructive pulmonary disease (COPD) and lung cancer. While air quality in the home is most often cited, company premises are not spared, and the impact appears not to be limited to workers' physical health.

A study by a team of researchers at Singapore's Nanyang Technological University has looked into the matter, suggesting that high levels of volatile organic compounds (VOCs), chemicals released by certain products, can impair employees' creativity.

Published in the journal

Scientific Reports, this research is based on a specific technique, Serious Brick Play, inspired by the Lego Serious Play method. This technique is commonly used in seminars, training courses and even meetings to improve business performance by stimulating reflection, imagination and communication using Lego bricks.

Eighty-seven undergraduate and postgraduate students took part in the six-week study. In a controlled environment reminiscent of an indoor workspace, they were asked three times to read a summary of a global issue, such as climate change or mental health, and then to propose a solution using the Serious Brick Play method, detailing it in writing.

This took place in an environment where air quality varied, notably for carbon dioxide and VOCs, thanks to a partnership with global air filter manufacturer Camfil. The Lego models, like the descriptions, were subject to a scoring system based on originality, fluency and build.

Pollution hampers creativity

The researchers found that high levels of VOCs affected the



The study suggests that high levels of volatile organic compounds, chemicals released by certain products, can impair employees' creativity. — AFP

creativity of the study participants. The scientists report that a 72% reduction in TVOCs (total volatile organic compounds) could improve a participant's creative potential by 12%. VOCs can be much more prevalent in workplaces than you might think, since they can originate from detergents, pesticides, perfumes, paints, or even aerosols.

"While most people would correctly associate indoor air quality with effects on the lungs, especially since we just emerged from a pandemic, our study shows that it could also have an impact on the mind and creative cognition, or the ability to use knowledge in an unconventional way. Our findings suggest that relatively low TVOC levels, even if well within the accepted threshold, could impact an individual's creative potential," reads a statement from Assistant Professor Ng Bing

Feng, who co-led the research.

Some sectors are obviously more impacted than others, as the researchers point out, but this study highlights the need for companies to improve indoor air quality.

"This could have serious consequences for industries that rely on creativity for the bulk of their work. For instance, artists often use paints and thinners that release high levels of volatile organic compounds and may not know they need adequate ventilation to clear them from their workplace."

"The findings also point to how making minor adjustments in the office, such as reducing the use of aroma diffusers or ensuring adequate ventilation, could positively impact employees and their productivity," concludes study co-author, Associate Professor Wan Man Pun. — AFP Relaxnews

Making minor adjustments in the office, such as reducing the use of aroma diffusers or ensuring adequate ventilation, could positively impact employees and their productivity.

Wan Pan Mun