

# Can Indoor Air Pollution Impact Creativity? Here's What Study Suggests

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Representative Image | File

Good indoor air quality is not only beneficial for your lungs but will also boost your creativity levels, according to a study. Scientists at Nanyang Technological University (NTU), Singapore have found that high levels of volatile organic compounds, as from common indoor products such as detergents, pesticides, perfumes, aerosol sprays and paint, may affect your creativity at work affects people's creativity.

## **Reducing TVOC by 72% could improve student's creativity**

Using a statistical analysis, the team estimated that reducing total volatile organic compounds (TVOC) by 72 per cent could improve a student's creative potential by 12 per cent. TVOC is an indicator that refers to the volume of volatile organic compounds in the air. Indoor VOCs are emitted from interior decoration sources such as paints and carpets and household products such as detergents and air fresheners.

## **Research sheds light on indoor air quality**

The findings shed light on the importance of indoor air quality on our creative cognition, said the research team led by Assistant Professor Ng Bing Feng and Associate Professor Wan Man

<https://www.freepressjournal.in/health/can-indoor-air-pollution-impact-creativity-heres-what-study-suggests>

Pun, Cluster Directors for Smart and Sustainable Building Technologies at the NTU's Energy Research Institute.

"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," Ng said.

"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," Wan added.

### **Research outcome proved otherwise**

For the study, published in the journal Scientific Reports, the team asked 87 undergraduate and postgraduate students in a controlled environment simulating an indoor workspace to build 3D models with LEGO bricks. Researchers varied the air quality of the workspace using different combinations of air filters. This varied the level of pollutants in the air, including carbon dioxide, PM2.5 (air pollutants less than 2.5 micrometres in diameter), and TVOC. The team found that participants tended to turn in creative solutions with lower scores -- an indicator of lower creative potential -- when the workspace had higher TVOC levels.