Indoor Air Quality Linked to Individual Creativity, Says NTU Study

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A groundbreaking study from Nanyang Technological University (NTU), Singapore, published in Nature Scientific Reports, has found a significant correlation between indoor air quality and individual creativity. The research evaluated the impact of indoor air quality on adult performance and the development of innovative and energy-efficient clean air solutions. In particular, researchers identified high volatile organic compounds (VOC) in office air as a detriment to creativity.

Impact of VOC on Creativity

VOC, originating from products like detergents, pesticides, perfumes, aerosol sprays, and paints, were found to impair individual creativity while performing tasks, such as creating 3D models out of LEGO blocks. Both undergraduate and postgraduate students were found to have diminished creativity when exposed to high VOC concentrations.

Reducing VOC to Boost Creativity

Statistical analysis in the study showed that reducing total VOC (TVOC) by 72 percent could potentially enhance a person's creative potential by 12 percent. The research underscores the importance of maintaining indoor air quality to support an individual's cognitive functions, especially in the context of creativity.

Relevance to Creative Industries

Professors Ng Bing Feng and Wan Man Pun, the research team leaders, explained that the findings are highly relevant to the creative industries, where workers are often exposed to VOCs from paints and other materials. They suggest that simple adjustments such as adequate ventilation could have a positive impact on employees and their productivity.

Other Research on Indoor Air Quality

Separate research led by the University of East Anglia found that air cleaning systems like filtration, germicidal lights, and ionisers are not effective in real-world settings in improving indoor air quality or preventing illness. The researchers emphasized the need for public health decision makers to have a comprehensive picture of the effectiveness of air treatment technologies. Additionally, the study on indoor formaldehyde purification has shown that photocatalytic technology can degrade formaldehyde into harmless small molecules and avoid secondary pollution.