# Study reveals link between moving to polluted areas and increased risk of mental health issues



A new study from the UK sheds light on the relationship between air pollution and mental health, raising critical questions about the environments that vulnerable communities inhabit. Prof. Rosie McEachan, director of NHS Born in Bradford, articulated a profound dilemma: “Do already unhealthy communities, who are often poorer members of our society, end up in unhealthier environments because no one else wants to live there; or is it the places themselves that are making people ill?” This inquiry serves as the backdrop for research that scrutinised the mental health implications for individuals relocating within Bradford.

Utilising the Connected Bradford database, which includes anonymised health records from over 800,000 residents since 1970, the researchers focused on 14,800 individuals who moved within the city early in 2021. This comprehensive analysis aligns with escalating evidence suggesting that air pollution significantly detrimentally impacts mental health. Among the participants who initially had no prescriptions for mental health medications, those who moved to areas with elevated levels of particulate air pollution experienced an 11% increased risk of developing mental health issues within a year.

Dr. Mikel Subiza-Pérez, the study’s lead author, elaborated on the methodology, indicating that the research accounted for socioeconomic variables such as income, education, and crime rates. Notably, the findings emphasised that relocating to neighbourhoods with increased green space can alleviate the need for mental health prescriptions, but this effect was contingent upon the quality of those green spaces. Subiza-Pérez stated, “It appears that living close to poor quality green spaces can worsen mental health,” underscoring the necessity for urban spaces that are not only accessible but also inviting and safe for community use.

Prof. McEachan highlighted a concern prevalent among individuals with mental health challenges: their tendency to relocate to areas with poorer environmental standards. This tendency may complicate their recovery journeys, as accessing quality resources becomes increasingly difficult in these environments. The broad implications of moving to more polluted areas extend beyond mental health. Previous studies, including a decade-long investigation in Southern California, have shown that children moving to less polluted areas demonstrated improved lung growth, while those relocating to more polluted environments faced adverse effects. Additionally, research encompassing over 10 million older adults in the United States confirmed that shifts in air quality could influence longevity.

The urgency of these findings resonates in the context of environmental policy. McEachan emphasised the need for targeted investment in areas most in need, advocating that “policy makers should consider initiatives to reduce pollution and improve the quality of public realm space in inner-city areas via investment in regeneration, public transport, and traffic reduction.” As discussions surrounding air quality and mental health evolve, experts continue to underscore the importance of adopting a holistic approach to urban planning that prioritises both mental well-being and environmental health.

Supplementing this narrative, other studies have unveiled alarming effects of air pollution on cognitive function, particularly among older adults. Research from University College London identified a troubling link between long-term exposure to nitrogen dioxide (NO₂) and fine particulate matter (PM₂.₅) and declines in cognitive abilities, with language skills notably impacted. Similarly, a study from the Universities of Birmingham and Manchester found that even brief exposure to high particulate pollution impairs cognitive functions, including focus and emotional recognition.

The interconnected nature of these findings suggests a growing consensus among researchers: air pollution poses a significant threat not only to physical health but also to mental well-being. As the body of evidence mounts, the call for regulatory reinforcements to combat air quality degradation grows louder, prompting discussions about its wider implications for societal health and equity.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.theguardian.com/environment/2025/jun/13/how-does-air-pollution-affect-mental-health-new-study-aimed-to-find-out), [[4]](https://www.ucl.ac.uk/news/2019/dec/depression-and-suicide-risk-linked-air-pollution)
* Paragraph 2 – [[1]](https://www.theguardian.com/environment/2025/jun/13/how-does-air-pollution-affect-mental-health-new-study-aimed-to-find-out), [[2]](https://www.ucl.ac.uk/news/2025/apr/exposure-air-pollution-may-harm-brain-health-older-adults), [[5]](https://inews.co.uk/news/health/air-pollution-depression-suicide-mental-health-university-college-london-health-environment-376665)
* Paragraph 3 – [[3]](https://www.birmingham.ac.uk/news/2025/air-pollution-clouds-the-mind-and-makes-everyday-tasks-challenging), [[6]](https://pubmed.ncbi.nlm.nih.gov/35263348/)

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## Bibliography

1. <https://www.theguardian.com/environment/2025/jun/13/how-does-air-pollution-affect-mental-health-new-study-aimed-to-find-out> - Please view link - unable to able to access data
2. <https://www.ucl.ac.uk/news/2025/apr/exposure-air-pollution-may-harm-brain-health-older-adults> - A study led by UCL researchers found that long-term exposure to high levels of air pollution may harm the brain health of older adults in England. The research, published in The Journals of Gerontology: Series A, found that exposure to nitrogen dioxide (NO₂) and fine particulate matter (PM₂.₅) is linked to lower scores in key cognitive abilities, particularly language skills. The study analysed data from 1,127 adults aged 65 and over and found that individuals residing in areas with the highest levels of NO₂ and PM₂.₅ performed worse on cognitive tests compared to those living in areas with average pollution levels. The researchers suggest that increased air pollution exposure is most strongly associated with impairment in the temporal lobe, which is essential for language and semantic fluency. Further research is needed to understand these links.
3. <https://www.birmingham.ac.uk/news/2025/air-pollution-clouds-the-mind-and-makes-everyday-tasks-challenging> - A study from the Universities of Birmingham and Manchester revealed that even brief exposure to high concentrations of particulate matter (PM) air pollution can impair a person’s ability to focus on tasks and interpret emotions. The researchers exposed participants to either high levels of air pollution or clean air and tested cognitive abilities before and four hours after exposure. The tests measured working memory, selective attention, emotion recognition, psychomotor speed, and sustained attention. The study found that selective attention and emotion recognition were negatively affected by air pollution, regardless of whether subjects breathed normally or only through their mouths. The experts suggest that inflammation caused by pollution may be responsible for these deficits, noting that while selective attention and emotion recognition were affected, working memory was not. This indicates that some brain functions are more resilient to short-term pollution exposure.
4. <https://www.ucl.ac.uk/news/2019/dec/depression-and-suicide-risk-linked-air-pollution> - A systematic review and meta-analysis led by UCL found that people exposed to higher levels of air pollution are more likely to experience depression or die by suicide. The study, published in Environmental Health Perspectives, reviewed data from 16 countries and found that reducing global average exposure to fine particulate matter (PM₂.₅) air pollution from 44 micrograms per cubic metre (µg/m³) to 25 µg/m³ could result in a 15% reduction in depression risk worldwide. The researchers also found evidence of a connection between short-term changes in coarse particulate air pollution (PM₁₀) exposure and the number of suicides, with a 2% increase in suicide risk for each 10 µg/m³ increase in the average coarse particulate pollution level over a three-day period.
5. <https://inews.co.uk/news/health/air-pollution-depression-suicide-mental-health-university-college-london-health-environment-376665> - An analysis led by UCL found that exposure to higher levels of air pollution is linked to an increased risk of depression and suicide. The study found that being exposed to small airborne pollutants known as PM₂.₅ was associated with a greater chance of depression, while exposure to slightly larger particulate matter known as PM₁₀ was linked to an increased risk of suicide. The World Health Organisation (WHO) guidelines recommend that PM₂.₅ should be kept under 10 micrograms per cubic metre. People living in UK cities are exposed to around 12.8 micrograms per cubic metre of average particulate matter. The researchers found an increase of 10 micrograms per cubic metre of PM₂.₅ was associated with an approximately 10% increase in the odds of depression.
6. <https://pubmed.ncbi.nlm.nih.gov/35263348/> - A study published in the International Journal of Environmental Health Research found that higher odds of poor mental well-being were observed with every 10 µg/m³ increase in NO₂, SO₂, PM₁₀, and PM₂.₅ pollutants at both Lower Super Output Areas (LSOAs) and local-authority levels in the UK. The study highlighted the negative effect of air pollution on individuals' mental well-being and suggested that environmental policies to reduce air pollution emissions could improve the mental well-being of people in the UK. However, there was inconclusive evidence on the moderating effect of ethnicity.