

# Poor air quality found to affect mental health in many ways

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Credit: AI-generated image ([disclaimer](#))

Poor air quality affects mental health in many ways, according to a new review of evidence published in the *British Journal of Psychiatry*.

Led by Professor Kam Bhui at the University of Oxford's Department of Psychiatry, researchers in the BioAirNet program, analyzed existing

studies looking at the effects of both indoor and [outdoor air pollution](#) across the life course, from birth and pregnancy, to adolescence and adulthood.

They found evidence that exposure to [air pollutants](#) may lead to depression, anxiety, psychoses, and perhaps even neurocognitive disorders, such as dementia. There were also indications that children and adolescents might be exposed to air pollution at critical stages in their [mental development](#) making them at risk of the most severe impact and significant future [mental health](#) problems.

Additional risk factors included poor housing, over-crowding, poverty, a lack of green spaces as well as individual social and psychological vulnerabilities, such as lack of access to support, caregivers or safe spaces.

Professor Bhui said, "Air pollution and mental health are both major challenges that the world must grapple with now and for years to come. This makes this area of research a vital public health priority.

"Our review shows that there is emerging evidence of links between poor air quality and poor mental health, as well as links to specific mental disorders.

"In particular, polluting air particles, including bioaerosols, have been implicated. Particulate matter forms part of a complex set of environmental risk factors including geography, deprivation, biology and individual vulnerabilities.

"We need more research to understand these webs of causation and to investigate a number of other critical knowledge gaps such as the mechanisms by which particles matter and bioaerosols may cause and worsen health conditions. There is less research on [indoor air quality](#) and

how it affects health, and little on bioaerosols specifically.

"We need better ways to measure exposure to pollution and understand how climate change affects air pollution. We also call for more longitudinal studies to understand the effects on children and young people as they grow."

Poor air quality has already been associated with poorer physical health and the development of diseases including some types of cancer, but so far little attention has been given to how air pollutants may affect mental health too.

Professor Bhui adds, "Modifying exposure to [poor air quality](#) indoors and outdoors could reduce levels of poor health in general.

"But, given the high levels of serious mental illness in places where air pollution is greatest, in poorer and [urban areas](#) especially, and the links between, for example, cancer and [serious mental illness](#), there may be common causes and risk factors that need to be understood and addressed."

**More information:** Kamaldeep Bhui et al, Air quality and mental health: evidence, challenges and future directions, *BJPsych Open* (2023). [DOI: 10.1192/bjo.2023.507](https://doi.org/10.1192/bjo.2023.507)

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