

Health Reports: The association between ambient air pollution concentrations and psychological distress

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A new study that looked at air pollution and psychological distress in four provinces has found higher distress scores associated with exposure to greater concentrations of fine particulate matter. The *Health Reports* article, released today, describes associations between self-reported distress and measures of three air pollutants—fine particulate matter (PM_{2.5}); nitrogen dioxide (NO₂); and ozone (O₃)—in Quebec, Ontario, Alberta, and British Columbia.

The association was small but positive in all four provinces for PM_{2.5}. Similar associations were observed for nitrogen dioxide in Ontario and Quebec, and for ozone in Quebec. After adjusting for individual and neighbourhood socioeconomic factors and behaviours, associations between distress and air pollution were still observed in Quebec.

These associations suggest that air pollution may be linked to psychological distress, even after adjusting for other factors that are related to distress, such as low income or unemployment. The findings also provide an important context for understanding how distress may exacerbate associations between air pollution and other negative health outcomes.

Note to readers

The study is based on samples of respondents to an optional content module of the Canadian Community Health Survey.

Respondents were provided a formal assessment of the K10, a 10-item self-reported measure of symptoms of depression and anxiety that occurred during the previous month. Respondents were assigned yearly annual measurements of air pollution from national air pollution models corresponding to the year that the survey occurred.

Definitions, data sources and methods: survey number 3226.

The article "[The association between ambient air pollution concentrations and psychological distress](#)" is now available in the July 29, 2020 online issue of *Health Reports*, Vol. 31, no. 7 ([82-003-X](#)).

This issue of *Health Reports* also contains the article "[International population-based health surveys linked to outcome data: A new resource for public health and epidemiology.](#)"

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