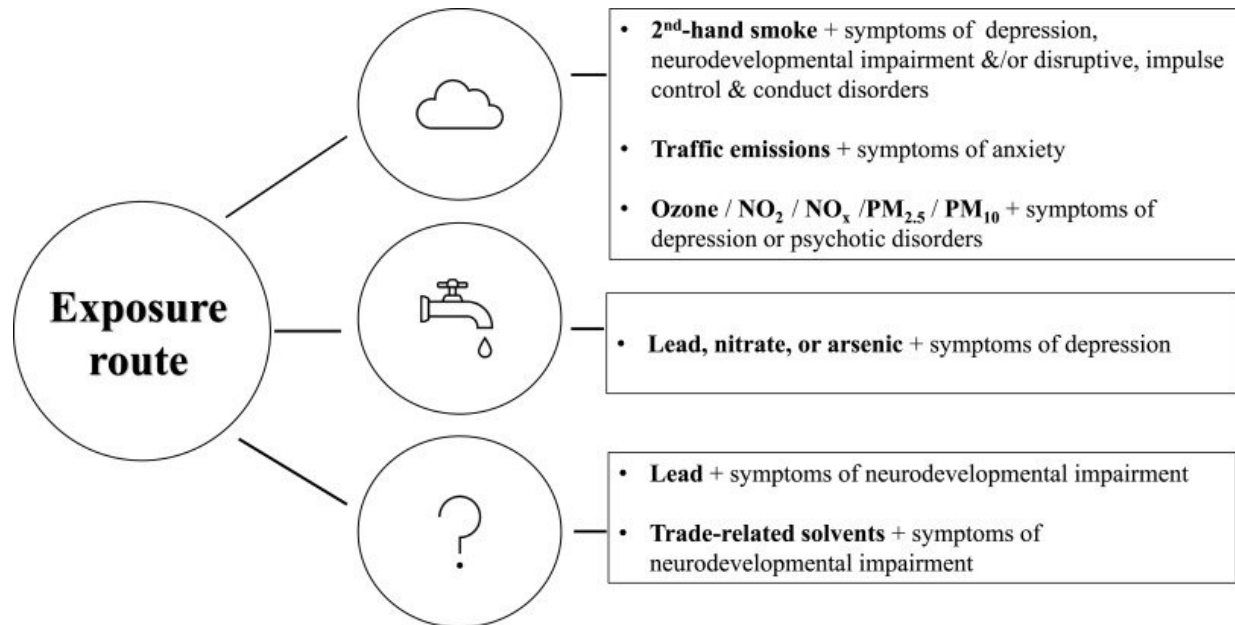


Pollution and teenage mental health

February 17 2022



Credit: DOI: 10.1016/j.jpsychires.2021.12.012

There is strong evidence that pollution has negative effects on the physical health of children, adolescents, and adults. We also know that many aspects of young people's lives, including family, school and social life can affect their mental health. However, research on how pollution exposure impacts teenage mental health is scarce. To examine this a systematic review was conducted by researchers from the Trinity Centre for Global Health, along with international partners, to bring together the evidence that does exist and to highlight gaps in our knowledge. The review, A systematic review of the mental health risks and resilience

among pollution-exposed adolescents, is published in the current edition of the *Journal of Psychiatric Research*.

The research team looked at relevant academic journals from the U.S., Europe, Asia and the Middle East for [empirical studies](#) (published up to April 2020) that examined the [mental health](#) of adolescents exposed to pollutants. In the interest of the review, 'mental health' included symptoms of anxiety; depression; disruptive, impulse-control, and conduct disorders; neurodevelopmental disorders; psychosis; or substance abuse in adolescents, aged 10 to 24.

Key findings of the review

- Exposure to air and water pollution was associated with elevated symptoms of depression, generalized anxiety, psychosis, and/or disruptive, impulse control and conduct disorder.
- Exposure to lead and solvents was associated with neurodevelopmental impairments.
- Good quality research on the links between pollution exposure and mental health was scarce. Quite a bit is known about how different pollutants are related to [adolescent](#) physical health but there is little known about how pollution impacts adolescent mental health.
- Most studies neglected factors that could have supported the mental health resilience of adolescents exposed to pollution.

This review examines and collates all research on pollution impacts on adolescents' mental health. The team found very little evidence on this subject in general. The limited evidence that does exist, while 'low quality', suggests that young people's mental health is negatively impacted by pollution exposure.

High-[quality research](#) is urgently required, including the factors and

processes that protect the mental health of pollution-exposed adolescents. Studies with adolescents living in low- and lower middle-income countries and the southern hemisphere must be prioritized.

Dr. Kristin Hadfield, Trinity Centre for Global Health, School of Psychology, Trinity College and co-lead researcher said: "These findings point to the potential importance of pollution exposure to young people's mental health. Our results suggest that if we want to prevent and improve adolescent mental health, one way to do that may be through reducing the amount of air and water pollution to which adolescents are exposed. The evidence is still lacking, but based on what we know so far, politicians who want to protect teenagers' mental health might consider stronger environmental regulations for our air, water, and land.

"Our findings suggest that if we are truly interested in trying to prevent young people from developing mental health problems, then we need to work to reduce their exposure to pollution while simultaneously collecting more data to understand just what the impacts are."

Professor Linda Theron, Department of Educational Psychology, Faculty of Education, University of Pretoria, South Africa and co-lead researcher said: "Adolescent mental health is a pressing concern. Too little attention is paid to the ecological factors, such as [pollution](#), that impact adolescent mental [health](#). This [systematic review](#) redresses that inattention."

More information: Linda C. Theron et al, A systematic review of the mental health risks and resilience among pollution-exposed adolescents, *Journal of Psychiatric Research* (2021). [DOI: 10.1016/j.jpsychires.2021.12.012](https://doi.org/10.1016/j.jpsychires.2021.12.012)

Provided by Trinity College Dublin

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