

Air pollution affects young people's psychiatric health

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New research from Umeå University indicates that dispensed medication for psychiatric diagnosis can be related to air pollution concentrations. The study covers a large part of the Swedish population and has been published in the journal *BMJ Open*.

More and more studies show that the brain and human cognitive development are affected by pollution.

In a new study conducted by a research team at Umeå University, the correlation between exposure to [air pollution](#) in residential areas and children' and adolescents' psychiatric health was studied. The study was performed by looking at register-based data, where dispensed medications of all Swedes are registered, together with Swedish National Register data of air pollution concentrations. The entire population under 18 in the Swedish counties of Stockholm, Västra Götaland, Skåne and Västerbotten were studied.

Stockholm, Västra Götaland and Skåne counties are located in the more densely populated parts in the south and contain the three largest cities in Sweden with a population density of between 68 and 338/km² whereas Västerbotten County lies the north of Sweden with a population density of 5/ km². The four counties are different not just in terms of geographic location, size and population density but also with respect to migration, socioeconomic characteristics, urbanisation, and air pollution concentrations.

The results show that air pollution increased the risk of having dispensed medication for at least one psychiatric diagnosis for children and adolescents, the risk increased with nine percent with a 10 microgram per cubic meter increased concentration of nitrogen dioxide even after socioeconomic and demographic factors were taken into account.

"The results can mean that a decreased concentration of air pollution,

first and foremost traffic-related air pollution, may reduce psychiatric disorders in children and adolescents," says researcher Anna Oudin, the Unit for Occupational and Environmental Medicine at the Department of Public Health and Clinical Medicine, who led the study.

More information: Anna Oudin et al. Association between neighbourhood air pollution concentrations and dispensed medication for psychiatric disorders in a large longitudinal cohort of Swedish children and adolescents, *BMJ Open* (2016). [DOI: 10.1136/bmjopen-2015-010004](https://doi.org/10.1136/bmjopen-2015-010004)

Provided by Umea University

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